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1 of 3 - Environmental Analysis (Part 1)

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Southern California Edison Company's Applicatio

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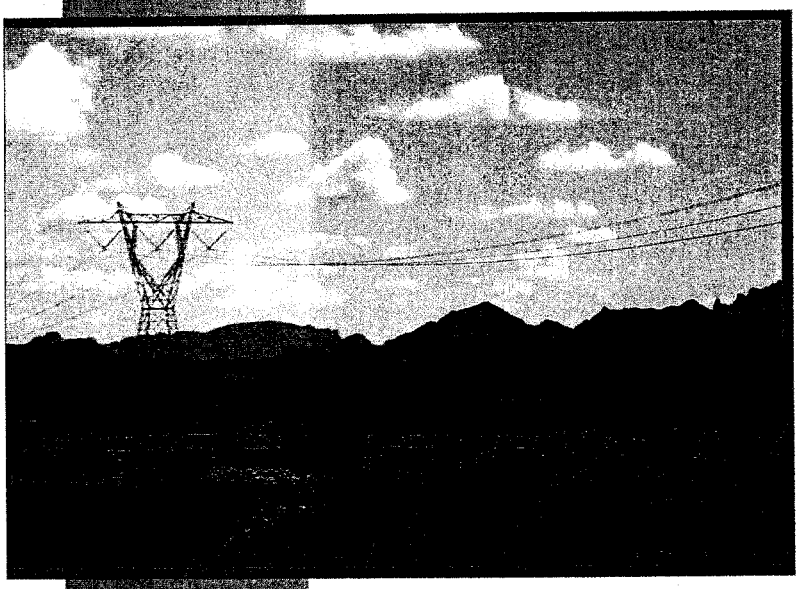

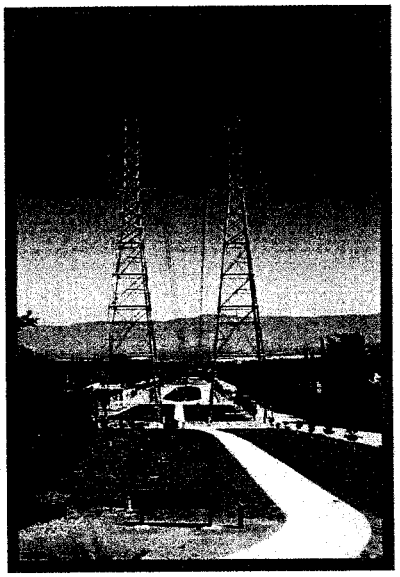

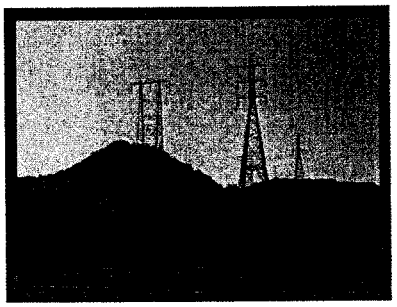

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October 2

Final

Environmental Impact Report/ Environmental Impact Statement

Southern California Edison Company's
Application for the

Devers–Palo Verde No. 2 Transmission Line Project

SCH #2005101104

EIS No. CA-660-06-32

Volume 1 of 3
Environmental Analysis (Part 1)

California Public Utilities Commission
and
U.S. Department of Interior
Bureau of Land Management

Prepared by
Aspen Environmental Group

October 2006

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Executive Summary

ES.1 Introduction/Background

Southern California Edison (SCE) filed an application (Application Number A.05-04-015) for a Certificate of Public Convenience and Necessity (CPCN), accompanied by its Proponent's Environmental Assessment (PEA), with the California Public Utilities Commission (CPUC) on April 11, 2005 for the Devers–Palo Verde 500 kV No. 2 (DPV2) Transmission Line Project (Proposed Project). The CPUC identifies the DPV2 Project as Application A.05-04-015. A Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) for the DPV2 project was published in May 2006.

This ~~Draft~~ Final Environmental Impact Report/Environmental Impact Statement (~~Draft~~ Final EIR/EIS) has been prepared by the California Public Utilities Commission as Lead Agency under the California Environmental Quality Act (CEQA) and the U.S. Department of the Interior, Bureau of Land Management (BLM) under the National Environmental Policy Act (NEPA) to inform the public and to meet the needs of local, State, and federal permitting agencies to consider the project proposed by SCE (or "the Applicant").

The Proposed Project would traverse federal BLM land in both California and Arizona, as well as private land and lands under various other jurisdictions. Although the Proposed Project would be located primarily within SCE's existing easement for the existing Devers–Palo Verde No. 1 (DPV1) transmission line, there may be some areas where additional ROW would need to be acquired. Therefore, SCE has also submitted an application for a Right-of-Way Grant Permit from BLM to implement the project and comply with NEPA. In addition, because approximately 106 miles of the proposed alignment would traverse lands in Arizona (the majority of which would be on BLM lands and under federal jurisdiction), pursuant to Arizona Revised Statute 40-360 et seq., the Arizona Corporation Commission (ACC) must issue a Certificate of Environmental Compatibility (CEC) to SCE based on environmental review and an analysis of purpose and need in order for SCE to construct a transmission line. ~~Therefore, SCE has stated its intention to file its~~For this process, SCE filed an application for a CEC with the ACC in ~~late April~~ early May 2006. This application ~~would~~ serves the same general purpose as the PEA submitted to the CPUC.

Environmentally Superior/Preferred Alternative. A discussion of the Environmentally Superior/Preferred Alternative is included in Section 5.2 of this Executive Summary and in Section E of the Final EIR/EIS. Alternatives in the areas near Palo Verde Nuclear Generating Station and the Alligator Rock ACEC are found to environmentally superior/preferred. In the West of Devers segment, the Proposed Project is environmentally superior/preferred, but it may not be feasible.

Proposed Project and Historical Background

The DPV2 project as ~~currently~~ proposed by SCE includes a new 230-mile 500 kV line from the Harquahala Substation (in Arizona, near the Palo Verde nuclear power plant) to SCE's Devers Substation (in North Palm Springs, California). The 500 kV portion would follow the existing SCE 500 kV transmission line, Devers–Palo Verde No. 1 (DPV1).

The DPV2 project also includes upgrades to an additional 50 miles of 230 kV transmission lines west of the Devers Substation, called the "West of Devers" portion of the project. Forty miles of 230 kV transmission line from Devers Substation to San Bernardino Junction at the western end of San Timoteo Canyon would be

reconfigured and two separate 230 kV corridors, from San Bernardino Junction to SCE's ~~Mountain View~~San Bernardino Substation and from San Bernardino Junction to SCE's Vista Substation would be reconductored (see Figure ES-1).

As mentioned above, the proposed route for the Devers-Harquahala portion of the Proposed Project is located generally parallel to SCE's existing DPV1 transmission line route. Electrical systems and siting studies were conducted prior to construction of the DPV1 line. A regional siting study was conducted by SCE in 1976-1977 to identify routes between Devers Substation and the Palo Verde Nuclear Generating Station (PVNGS) within a 6,000-square-mile area and the DPV1 Draft Environmental Impact Statement (DEIS) was then prepared by the U.S. Department of the Interior, Bureau of Land Management (BLM) and Nuclear Regulatory Commission (NRC) (BLM and NRC, July 1978). These agencies selected the preferred route for the DPV1 transmission line that was constructed in 1982 following State approvals by the CPUC and the Arizona Corporation Commission (ACC).

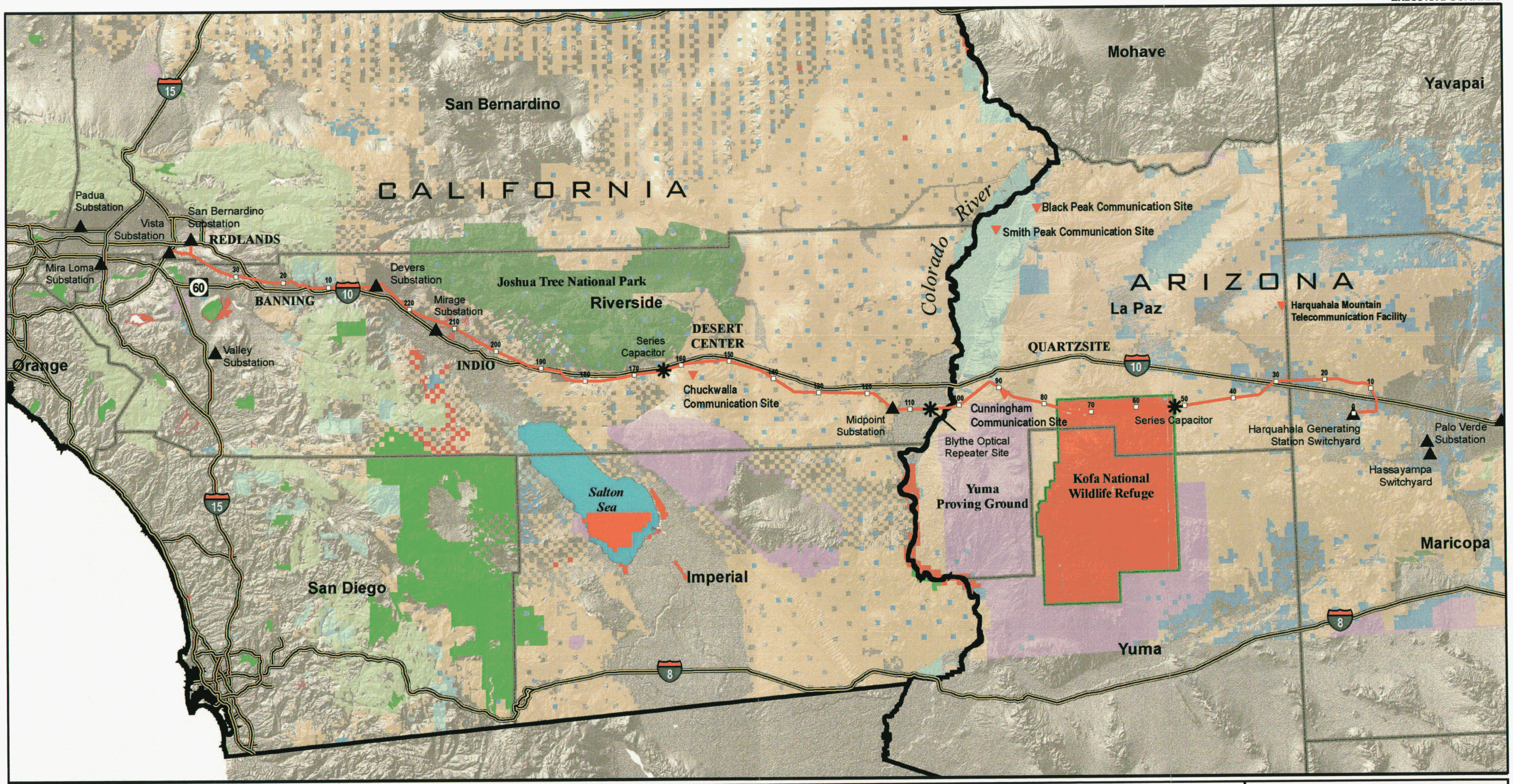
After construction of the DPV1 line, applications to construct the DPV2 line between Devers Substation and PVNGS were submitted by SCE in 1985. Following reviews of SCE's PEA (1985) and the CPUC EIR (1987) in compliance with the California Environmental Quality Act (CEQA) and subsequent filing and review of SCE's 1988 Amended Application and PEA (SCE, 1988), the CPUC issued a decision approving the DPV2 project as then proposed. The Interim Order issued in December 1988 granted a CPCN to SCE that allowed construction of the project, conditioned upon compliance with an environmental mitigation program and other conditions as specified in the CPUC Final EIR (1987).

The BLM approved the DPV2 project and the proposed route following completion of a Final Supplemental EIS (BLM, 1988) in compliance with NEPA, which included the route in Arizona, and issued a Record of Decision in 1989. Later that year, the BLM issued a Right-of-Way Grant to SCE for the construction, operation, and maintenance of DPV2 across federal land, pursuant to Title V of the Federal Land Policy and Management Act of 1976. In 1989, the U.S. Fish and Wildlife Service issued a Certificate of Right-of-Way Compatibility for the portion of the DPV2 route that crosses the Kofa National Wildlife Refuge in Arizona, but a Right-of-Way Permit was never issued. In 1997, intervening events, including electric industry restructuring, led SCE to request abandonment of construction of the DPV2 project, and the CPUC granted SCE's request.

Proposed Project Purpose and Need

SCE's stated objectives for the Proposed Project are fourfold:

- **Increase California's Transmission Import Capability.** According to SCE, DPV2 will increase California's transmission import capability by 1,200 MW providing greater access to sources of low-cost energy currently operating in the Southwest.
- **Enhance the Competitive Energy Market**. SCE states that DPV2 is expected to enhance competition amongst energy suppliers by increasing access to the California energy market, providing siting incentives for future energy suppliers, and providing additional import capability.
- **Support the Energy Market in the Southwest**. DPV2 would expand the Western Electricity Coordinating Council (WECC) interstate regional transmission network and would increase the ability for California and the Southwest to pool resources, and provide emergency support in the event of generating unit outages or natural disasters.
- **Provide Increased Reliability, Insurance Value, and Operating Flexibility.** DPV2 would improve the reliability of the regional transmission system, providing insurance against major outages such as the loss of a major generating facility or of another high-voltage transmission line.



PREPARED BY Aspen Environmental Group

Proposed Project
Mileposts

0 10 20 30 40 50 Miles

OWNERSHIP/JURISDICTIONS (unincorporated areas)

- BLM
- Fish and Wildlife Service
- Indian Lands
- Military
- State Parks & Recreation
- National Park Service
- Forest Service
- Nature Conservancy
- State Fish and Game
- State
- Private

- Substations
- Series Capacitor
- Construction Yard
- Communications Site

Devers-Palo Verde No. 2 Transmission Line Project

Figure ES-1
Regional Overview Map

The CAISO conducted an independent review of DPV2 and also found the DPV2 project to be a necessary and cost-effective addition to the CAISO controlled grid.[1] The CAISO Board approved the DPV2 project on February 24, 2005 and directed SCE to proceed with the permitting and construction of the transmission project, preferably to be completed by the summer of 2009. However, ~~because the project is designed to provide economic benefits and it is not primarily a reliability enhancement project,~~ SCE did not present a specific project objective related to the date of project operation.

1.1 CEQA and NEPA Process

A joint Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) ~~has been~~was ~~prepared~~ published in May 2006 by the CPUC and BLM in compliance with CEQA and NEPA requirements. This document constitutes the Final EIR/EIS on the Proposed Project. The CPUC is the State lead agency, responsible for compliance with the California Environmental Quality Act (CEQA) for the CPCN application. The Final EIR/EIS will be used by the CPUC as part of its CPCN approval process, which includes selecting project alternatives, adopting mitigation measures, and reviewing project costs.

1.1.1 CPUC Process

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of investor-owned public utilities, including SCE. The CPUC is the lead State agency for CEQA compliance in evaluation of the SCE's proposed DPV2 Project, and along with BLM has directed the preparation of this EIR/EIS. This EIR/EIS will be used by the Commission, in conjunction with other information developed in the Commission's formal record, to act on SCE's application for a Certificate of Public Convenience and Necessity (CPCN) for construction and operation of the Proposed Project. Under CEQA requirements, the CPUC will determine the adequacy of this Final EIR/EIS and, if adequate, will certify the document as complying with CEQA. The CPUC will also act on SCE's application for a CPCN. If it approves a project with significant and unmitigable impacts, it must state why in a "Statement of Overriding Considerations," which would be included in the Commission's decision on the application.

The CPUC has assigned Administrative Law Judge (ALJ) Charlotte TerKeurst to oversee the hearings on the Proposed Project, and Commissioner Diane Grueneich is the Assigned Commissioner for the CPCN application. The ALJ, in accordance with her Scoping Memo, will issue a Proposed Decision on the project in November 2006. The ALJ's proposed Decision will cover issues of project need, project cost, and other considerations. The CPUC expects a final decision on the DPV2 Project from the Commission in early 2007.

1.1.2 BLM Process

Because the proposed transmission line would cross approximately 110.5 miles of federal land managed by the Bureau of Land Management (BLM), the project would also require a Right-of-Way (ROW) Grant from the BLM for the portion of the project across BLM land. Therefore, SCE would be required to apply for a Right-of-Way Grant Permit from BLM to implement the project. The issuance of a Right-of-Way Grant Permit is considered a proposed action and would trigger the National Environmental Policy Act (NEPA) process. Therefore, the BLM is the federal Lead Agency for the preparation of this EIS/EIR in compliance with the requirements of the NEPA, the Council on Environmental Quality (CEQ) regula-

[1] http://www.caiso.com/docs/09003a6080/34/e4/09003a608034e440.pdf.

tion for implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508), and the BLM NEPA guidance handbook (H-1790-1). NEPA mandates that federal agencies consider the environmental consequences of a wide variety of proposed actions. Specifically, NEPA requires federal agencies to prepare an EIS for "proposals for legislation and other major federal actions significantly affecting the quality of the human environment." When the federal agency determines that a proposed action may "significantly affect the quality of human environment," production of an EIS is required (42 U.S.C 4332 (2)(c)). According to the Council on Environmental Quality's (CEQ) NEPA Regulations (40 C.F.R. 1502.14), an EIR/EIS must present the environmental impacts of the proposed action and alternatives in comparative form, defining the issues and providing a clear basis for choice by decision-makers and the public.

Unlike under CEQA, after the Final EIS is prepared, the federal lead agency must circulate the Final EIS for at least 30 days prior to making a decision on the proposed action. Once the Final EIS is published, it must be filed with the U.S. EPA's Office of Federal Activities for notification in the Federal Register.

BLM will issue a press release announcing the Final EIS/EIR, which will be available to the public for 30 days. BLM may only make a decision on the Proposed Project after completion of the 30-day availability period.

The 30-day time period for public review of a Final EIS is measured from the date of the publication in the Federal Register. The lead agency may adopt an EIS only after it determines that the EIS meets the standards for EIS adequacy under NEPA. After EIS has been adopted, the lead agency should make a decision on the proposed action, which may not be made until 90 days after publication of the NOI for the Draft EIS or 30 days after EPA has published the notice that the Final EIS has been filed, whichever is later. After preparing and adopting the EIS, and after making a decision on the proposed action, the lead agency must prepare a Record of Decision (ROD) explaining why the lead agency has taken a particular course of action. The BLM expects a decision in October or November 2006.

1.1.3 Arizona Corporation Commission Process

Approximately 106 miles of the proposed 500 kV alignment would traverse lands in Arizona, the majority of which would be on BLM lands. This portion of the alignment would extend from the State border at Blythe to switchyards in Hassayampa and Harquahala. Although Arizona does not have an equivalent to the CEQA process, the ACC, which governs electrical transmission line siting, requires environmental analysis to be performed for new transmission lines.

The Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) and the ACC are responsible for the environmental review on State-jurisdictional land in Arizona, and the BLM has jurisdiction for environmental review for federal land. Pursuant to Arizona Revised Statute 40-360 et seq., the ACC is conducting the environmental review of the Arizona portion of the project.

The ACC must issue a Certificate of Environmental Compatibility to an applicant, such as SCE, before the applicant can construct a transmission line. To begin the Certificate of Environmental Compatibility process, in May 2006, SCE prepared and submitted an application to the ACC to build the transmission line. The ACC is currently reviewing the project for compliance with Arizona environmental laws and analyzes purpose and need.

The application has been distributed to the members of the Siting Committee. This committee has 180 days from the date the application is filed to come to a decision, unless the applicant allows an extension of that time period. The Siting Committee has held public hearings in June, August, and October

for the project, at which testimony and exhibits from the applicant and interveners has been presented. Witnesses for the parties are also cross-examined at the hearing and committee members may also ask questions of the witnesses. After the Siting Committee has received all of the information regarding the project, committee members consult on the project and vote to grant or deny the Certificate of Environmental Compatibility and then forward their recommendations onto the ACC.

If the Certificate of Environmental Compatibility is granted by the Siting Committee, the certificate is then forwarded to the ACC for review and action. The ACC must confirm, deny, or modify the certificate granted by the Siting Committee. Even if the Siting Committee refuses to grant a Certificate of Environmental Compatibility, the ACC, as final decision-maker, may still issue a certificate. Decisions on certificates are also made in open meetings with opportunities for additional public comment.

1.1.4 Other Agencies

Several other State and federal agencies will rely on information in this EIR/EIS to inform them in their decision over issuance of specific permits related to project construction or operation. In addition to the CPUC, BLM, and ACC, California State agencies such as the Department of Transportation, Department of Fish and Game, Regional Water Quality Control Board, and Office of Historic Preservation would be involved in reviewing and/or approving the project. On the federal level, agencies with potential reviewing and/or permitting authority include the U.S. Fish and Wildlife Service, Advisory Council on Historic Preservation, and the Occupational Safety and Health Administration.

No local discretionary (e.g., use) permits are required, since the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of SCE facilities in California. SCE would still have to obtain all ministerial building and encroachment permits from local jurisdictions, and the CPUC's General Order 131-D requires SCE to comply with local building, design, and safety standards to the greatest degree feasible to minimize project conflicts with local conditions. The CPUC's authority does not preempt special districts, such as the South Coast Air Quality Management District, or other State agencies or the federal government.

1.1.5 EIR/EIS as an Informational Document

The EIR/EIS discloses the environmental impacts expected to result from the construction and operation of SCE's Proposed Project and mitigation measures, which if adopted by the CPUC or other responsible agencies, could avoid or minimize significant environmental effects. In accordance with CEQA guidelines, the EIR/EIS also evaluates alternatives to the Proposed Project that could avoid or minimize the significant environmental effects. The EIR/EIS provides a comparison of the environmental effects of the Proposed Project and the alternatives, and identifies the Environmentally Superior Alternative/Environmentally Preferable Alternative.

The DPV2 project EIR/EIS is an information document only; and does not make a recommendation regarding the approval or denial of the project. The purpose of the EIR/EIS is to inform the public on the environmental setting and impacts of the Proposed Project and alternatives. The EIR/EIS will be used by the CPUC in conducting the proceeding to determine whether to grant SCE's requested CPCN for the California portion of the project and by the BLM to determine whether to grant SCE a ROW Grant on BLM-administered land in California and Arizona in its Record of Decision. Finally, the Arizona Corporation Commission (ACC) must issue a Certificate of Environmental Compatibility to an applicant, such as SCE, before the applicant can construct a transmission line. Thus, for a project that traverses State and federal land in California and Arizona, the CPUC and ACC will conduct permitting

processes within their respective states, while the BLM will conduct permitting on federal land in both states. This Executive Summary (ES) provides an overview of the Proposed Project and alternatives considered, and the environmental findings and mitigation measures of the EIR/EIS.

1.2 Summary of ~~Draft~~ Final EIR/EIS Conclusions

This EIR/EIS analyzes the environmental impacts of SCE's Proposed Project as well as alternatives that were developed as a result of public and agency input during the scoping process. Full analysis is presented in the EIR/EIS for seven alternatives to the Devers-Harquahala segment of the Proposed Project, including one project alternative and one alternative to the upgrades proposed west of Devers Substation. As documented in detail in the Alternatives Screening Report (Appendix 1 to the ~~Draft~~ Final EIR/EIS), 26 additional alternatives were also considered but eliminated from detailed consideration.

Based on comparison of the environmental impacts of the Proposed Project and alternatives, the Environmentally Superior Alternative/Environmentally Preferable Alternative is identified. Based on comparison of the environmental impacts of the Proposed Project and alternatives, the Environmentally Superior Alternative/Environmentally Preferable Alternative has been identified as follows (see additional detail in Section ES.5 of this Executive Summary):

- Harquahala Junction Switchyard (the project would begin at this point)
- Proposed Project route from Harquahala Junction Switchyard to east of Alligator Rock
- Alligator Rock–North of Desert Center Alternative to west of Alligator Rock
- Proposed Project route from west of Alligator Rock to Devers Substation
- Proposed West of Devers upgrades unless determined to be infeasible, in which case the Devers-Valley No. 2 Alternative would be constructed.

The following sections provide the reader with a brief description of the Proposed Project and alternatives (including alternatives analyzed in detail and those eliminated from detailed consideration), a summary of environmental impacts in each environmental issue area, a summary of the comparison of alternatives, and tables listing all impacts identified in the ~~Draft~~ Final EIR/EIS.

1.3 Description of the Proposed Project

SCE proposes to construct a new 230-mile, 500 kV electric transmission line between Devers Substation in California and Harquahala Generating Substation in Arizona (referred to as "Devers-Harquahala" or D-H) and also to replace 48.2 miles of 230 kV transmission lines in California (referred to as "West of Devers" or WOD upgrades). The upgraded lines would connect directly to the Devers 230 kV bus. The entire project would span 278 miles, with approximately 176 miles in California and 102 miles in Arizona. Section B presents a detailed description of the Proposed Project; the general location is illustrated in Figure ES-1.

The proposed route for the DPV2 transmission line is located generally parallel to SCE's existing DPV1 transmission line route. The majority of the proposed Devers-Harquahala 500 kV transmission line would be constructed within the 130-foot-wide ROW on public land granted in perpetuity to SCE for the DPV2 project by the BLM in 1989. The ROW was granted for a total of 149.9 linear miles of public land between Devers and PVNGS, 57.2 miles in California and 92.7 miles in Arizona, including land managed by the BLM, USFWS, U.S. Department of Defense (DOD), and U.S. Bureau of Reclamation (BOR). Each of the components is described below.

1.3.1 Devers-Harquahala

The 230-mile 500 kV segment of the project includes the following components:

- Construction of a 500 kV transmission line from the Harquahala Generating Station switchyard, located near the Palo Verde Nuclear Generating Station (PVNGS) west of Phoenix, Arizona, to SCE's Devers Substation, located near Palm Springs, California
- Construction of the Midpoint Substation approximately 10 miles southwest of Blythe, California and adjacent to the proposed Devers-Harquahala 500 kV transmission line (this is an optional component of the Proposed Project that SCE may not construct)
- Construction of a new optical repeater facility 3 miles west of Blythe, California, within the DPV2 ROW
- Construction of two series capacitor banks, each adjacent to an existing DPV1 series capacitor bank: one in Arizona approximately 55 miles west of the Harquahala Switchyard and one in California approximately 64 miles east of Devers near I-10
- Installation of a dead-end structure, circuit breakers, and disconnect switches at the Harquahala and Devers Switchyards
- Construction and installation of telecommunication systems related to the Proposed Project, including a new telecommunications facility on Harquahala Mountain and a new Optical Ground Wire (OPGW) on the Devers–Harquahala transmission line towers.

1.3.2 West of Devers

The48-mile 230 kV upgrade portion of the project includes the following components:

- Replacement of two existing 230 kV lines with a new double-circuit 230 kV line and reconductoring of a third 230 kV line[2] for a distance of 40 miles between Devers Substation and San Bernardino Junction in San Bernardino County, California
- Reconductoring of 4.8 miles of 230 kV transmission line between San Bernardino Junction and Vista Substation, also located in San Bernardino County, California
- Reconductoring of 3.4 miles of 230 kV transmission line between San Bernardino Junction and San Bernardino Substation located in San Bernardino County, California.

1.3.3 System Improvements

Other improvements that would be required include:

- Construction of a 500 kV shunt line reactor bank, a static VAR compensator and two shunt capacitors ~~and associated disconnect switches~~ within Devers Substation
- Installation of Special Protection Scheme (SPS) relays at the Devers, Padua, and Vista Substations in California, and the PVNGS, Hassayampa, and Harquahala Switchyards in Arizona.

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[2] Reconductoring involves removal of the existing conductors on an existing tower, and installation of new, larger capacity conductors. This is generally done with no change to the tower itself, although in some cases towers need to be strengthened or replaced.

1.3.4 Environmental Setting of the Proposed Project

The Proposed Project and alternatives are located within or pass adjacent to the planning boundaries of a variety of federal and local jurisdictions, including the U.S. Bureau of Land Management (BLM) and U.S. Fish and Wildlife Service (USFWS), Maricopa and La Paz Counties in Arizona, Riverside and San Bernardino Counties in California, and numerous cities.

The ROW is located within a region that is characterized by a diversity of sensitive and unique types of native vegetation communities, including perennial and ephemeral streams, riparian habitat, desert dunes and washes, oak woodland, Riversidean alluvial fan sage scrub/Riversidean sage scrub, and coastal sage scrub. The ROW is also located in a region of varying topography that ranges from mountain ranges to relatively flat valleys and low desert areas.

Arizona Environmental Setting

The Arizona portion of the Proposed Project would be located within southwestern Arizona, which is a relatively undeveloped area of the western Sonoran Desert. Mountains, hills, canyons, valleys, bajadas, and washes are all part of the landscape within this area. This region of southwestern Arizona consists of mostly native desert habitats, including uplands, xeroriparian, and riparian vegetation communities. Disturbed areas are also present along the route, including agricultural areas, pipeline and power pole infrastructure, mining activities, canals, roads (dirt and paved), grazed areas, and recreational activities. Elevations within the Arizona portion of the Proposed Project range from approximately 249 feet above mean sea level (msl) to approximately 2,182 feet above msl. In Arizona the Proposed Project would traverse many small and a few large ephemeral washes, but only one permanent watercourse, the Colorado River, would be crossed.

Within southwestern Arizona, the Proposed Project would traverse western Maricopa and southern La Paz Counties. The proposed route would begin in Maricopa County south of Interstate (I-10) in the Harquahala Plain and north of Saddle Mountain, and would proceed east, until it would turn north and cross over I-10 and the Central Arizona Project (CAP) canal. Next the route would proceed west through the southern end of the Big Horn Mountains where it would cross over and parallel the CAP canal. The route would then turn southwest crossing over I-10 again, and would continue across the Harquahala Plain through the northern end of the Eagletail Mountains until it would enter into La Paz County. At this point, the route would proceed through the Ranegras Plain and enter the northern portion of the Kofa National Wildlife Refuge (NWR), south of the New Water Mountains and north of the Kofa Mountains. The route would then traverse the La Posa Plain and State Highway 95, just clip the northeastern corner of the Yuma Proving Grounds (YPG), and proceed northwest through the central portion of the Dome Rock Mountains. The route would then turn southwest, and cross the Colorado River and the Arizona–California state line.

California Environmental Setting

In California, the ROW for the Proposed Project is located within Riverside and San Bernardino Counties. The ROW would generally parallel I-10 between the Town of Blythe, at the California-Arizona border in Riverside County, and the Vista Substation in San Bernardino County. Except for the western end of the proposed route, the majority of the route would be located in Riverside County. A large portion of the proposed route is located within the Colorado Desert, which is the western extension (and subdivision) of the Sonoran Desert that covers southern Arizona and northwestern Mexico. The Colorado Desert is a desert of much lower elevation than the Mojave Desert to the north, and much of the land lies below 1,000 feet in elevation. Common habitat communities within the Colorado Desert include

sandy desert, scrub, palm oasis, and desert wash. Summers are hot and dry and winters are typically cool and moist. The proposed route would cross several topographic and geographic features, public lands, private lands, and Indian land including, but not limited to, the Colorado River, City of Blythe, Palo Verde Valley, Chuckwalla Valley, Coachella Valley, Morongo Indian Reservation land, and San Timoteo Canyon.

In the western portion of the proposed ROW, the route would cross urbanized areas, canyons, and foothills, and traverse unincorporated areas of Riverside and San Bernardino Counties, and portions of the Cities of Banning, Beaumont, Calimesa, Redlands, Loma Linda, Colton, and Grand Terrace.

1.4 Summary of Public Involvement Activities

To this point there have been extensive public participation efforts on the DPV2 project as follows:

Public Involvement During Scoping

- The CEQA 30-day scoping process for the DPV2 Transmission Line Project began with the CPUC's issuance of the Notice of Preparation (NOP) of an EIR on October 25, 2005. Likewise, the NEPA scoping process began with the BLM's publication of the Notice of Intent (NOI) to prepare an EIS in the Federal Register on December 7, 2005 (Volume 70, Number 234, pages 72845-72846).
- The NOP was mailed on October 25, 2005, to 2,100 members of the general public; 80 representatives of over 40 different agencies; 120 environmental groups; 50 private organizations; 60 tribal government representatives; and 20 elected officials including 12 Assembly Members and State Senators. Copies of the NOP were available at 26 local repositories.
- The NOI was published on December 7, 2005 in the Federal Register. A Notice of Public Scoping Meetings was mailed to over 2,500 members of the general public; 80 representatives of over 40 different agencies; 120 environmental groups; 50 private organizations; 60 tribal government representatives; and 20 elected officials including 12 Assembly Members and State Senators, and 2,100 private citizens including those within 300 feet of the project corridor. Copies of the NOI were also available at 26 local repositories.
- Notice of the eight scoping meetings also appeared on the CPUC and BLM's project websites. Newspaper advertisements appeared in four regional newspapers on October 23, 2005 for the NOP scoping meetings and in five local newspapers between January 5 and 15, 2006 for the NOI meetings.
- In November 2005 and January 2006 the CPUC and BLM held a total of eight public scoping meetings to collect input for the scope and content of the EIR and for alternatives and mitigation measures to consider.
- An estimated 38 members of the public and representatives from organizations and government agencies attended the November 2005 meetings in California and approximately 85 members of the public and representatives from organizations and government agencies attended the January 2006 meetings in Arizona. The CPUC and BLM attended six consultation meetings with agencies and local jurisdictions to discuss the Proposed Project and hear any comments or concerns.
- Approximately 35 comments on the NOP were received from public, private, and tribal agencies and from members of the public. In December 2005, a comprehensive Scoping Report was issued and 106 copies of the Scoping Report were distributed to agencies, parties on the CPUC's Service List, and individuals who requested copies. The Scoping Report was available for review at 26 repositories, on

the Internet, and by mail to agencies, parties on the CPUC's Service list, and individuals who requested copies.

- Approximately 82 comments were received after publication of the NOI from public, private, and tribal agencies and members of the public. In February and March 2006, an Addendum to the Scoping Report was issued and 141 copies of the Addendum were distributed to agencies, parties on the CPUC's Service List, and individuals who requested copies. The Addendum was available for review at 26 repositories, on the Internet, and it was mailed to agencies, parties on the CPUC's Service list, and individuals who requested copies.
- An EIR/EIS e-mail address was created along with a telephone hotline for project information, as well as an Internet site, used to post all the public environmental documents (including this ~~Draft~~ Final EIR/EIS) and to announce upcoming public meetings.

Public Involvement During Comment Period on Draft EIR/EIS

- **Draft EIR/EIS.** The CPUC issued the Draft EIR/EIS on May 4, 2006, including a detailed analysis of impacts in 13 environmental disciplines, and an evaluation of alternatives to the Proposed Project, including the No Project/Action Alternative. Copies of the full Draft EIR/EIS and Appendices were sent to 170 interested parties and agencies, and to 26 libraries used as document repositories. One hundred and sixty-two (162) copies of the Executive Summary and 79 CDs with the text of the Draft EIR/EIS were also sent out. Additional copies of the Executive Summary and of the CDs with the text of the Draft EIR/EIS were distributed at the Informational Workshops in June and July 2006. The public comment period for the Draft EIR/EIS ended August 11, 2006.
- **Notice of Availability.** A Notice of Availability (NOA) of the Draft EIR/EIS was mailed to over 4,347 interested parties, agencies, county and city departments, special districts, property owners, and occupants on or adjacent to SCE's Proposed Project route in May 2006 at the time the Draft EIR/EIS was released. The NOA included information on how to gain access to the Draft EIR/EIS, information on the Proposed Project, the dates, times and locations for the CPUC's Informational Workshops and Public Participation Hearings and how to comment on the Draft EIR/EIS. A second NOA was mailed to 5,191 people to correct a mailing error, to announce that the Devers-Valley No. 2 Alternative had become SCE's preferred route, and to announce an additional public meeting in July 2006.
- **Newspaper Notices**, including information on the Draft EIR/EIS, the project website address, and the dates and times of the Informational Workshops and Public Participation Hearings were printed at least once and up to three times in May and July 2006 in the following papers: Hemet Valley Chronicle; The Press Enterprise; The San Bernardino Sun; Redlands Daily News; The Desert Sun; The Arizona Republic; West Valley View; Palo Verde Times; The Palo Verde Times/Quartzsite Times; and the Yuma Daily Sun.
- **Public Meetings.** Six Informational Workshops and three Public Participation Hearings were held in June and July 2006. Forty-three (43) members of the public, including representatives of organizations and government agencies were documented in attendance at the CPUC Informational Workshops and Public Participation Hearings.
- **Project Website.** An Internet site was used to post all the public environmental documents (including the Draft EIR/EIS) and to announce upcoming public meetings.

1.5 Areas of Controversy / Public Scoping Issues

Private citizens and homeowners provided the majority of the comments during the Scoping process. In addition to private individuals, comments were received from organizations and government agencies. The issues raised during the public scoping process are described in detail in the Scoping Report (available on the CPUC's CEQA Project website), and are summarized below.

Issues of Concern During CEQA Scoping Process

Human Environment Issues and Concerns in California. Some public comments focused on the potential effect of the project on the human environment, including the health and safety impacts of electric and magnetic fields (EMFs) from increased EMF emissions, impacts to property values, safety and fire risk issues, noise, construction impacts, and conflicts with planned uses.

EMF. Health and safety-related issues resulting from increased EMF emissions were a primary concern of some members of the public. Comments expressed concerns about electric fields and shock hazards.

Construction Impacts. Residents expressed concern that construction of the DPV2 project would cause an increase in traffic, safety hazards, and noise; destruction of habitat; offense to aesthetic values; conflict with other land uses; and a worsening impact in combination with coinciding development projects.

Safety Issues and Fire Risk. In addition to the safety issues associated with EMF emissions, one property owner expressed concern about the risk of accidental electrocution and falling towers and cables due to mechanical failure or vehicle collision.

Impacts to Property Values. Residents and the Harquahala Valley Irrigation District expressed concern that an alternative to the DPV2 project would be detrimental to the value of their land.

Conflicts with Existing or Planned Land Uses. Residents and agencies including Riverside County Transportation and Land Management and the City of Cathedral City expressed concern about land use conflicts with the project including those with a proposed State Park, right-of-way (ROW) setbacks, future development of Paradise Valley, cropland, and new development projects.

Physical Environment Issues and Concerns in California. Comments expressed concerns with the potential impacts that the DPV2 project may have on the physical environment, particularly to biological and cultural resources and traffic and transportation. Most of the concern centered on the impact of the project on biological resources. For that resource area, conservation concerns varied from long-term landscape and habitat value to the Western Riverside County Multiple Species Habitat Conservation Plan. Comments also requested that wildlife resources be analyzed in the EIR/EIS.

Alternatives. Several comments expressed preferences for alternative routes.

Cumulative Impacts. A Glorious Land Company representative suggested that the cumulative effects on safety and reliability of the transmission lines Devers–Palo Verde No. 1, Devers–Palo Verde No. 2, Desert Southwest Transmission Project, and a Southern California Edison 230 kV line in the middle of the future development Paradise Valley would be mitigated by distancing the Proposed Project from the existing towers.

Environmental Review and Decision-Making Process: Public Involvement. Members of the public suggested different means of communication for project information. The Harquahala Valley Irrigation

District, the Harquahala Valley Power District, and Harquahala Valley Farms criticized a lack of outreach in Arizona.

Issues of Concern During NEPA Scoping Process

The categories below summarize issues of concern in the Addendum to the Scoping Report.

Human Environment Issues and Concerns. Some public comments focused on the potential effect of the project on the human environment, including the health and safety impacts of electric and magnetic fields (EMFs) from increased EMF emissions, impacts to property values, safety and fire risk issues, noise, construction impacts, and conflicts with planned uses.

EMFs. Public water works agencies expressed concern that the transmission line would cause materials in the irrigation distribution infrastructure to degrade. Other comments expressed concern that the transmission line would carry strong electric voltages dangerous to people, livestock, and wildlife.

Construction Impacts. Many comments indicated that construction of the DPV2 project would cause negative environmental impacts through work in wilderness areas, work around new tower sites, and effects of transportation on and near ROWs.

Safety Issues and Fire Risk. One comment states that the DPV2 project would place a high priority and reliance on nuclear power generation, which includes hazardous materials, dangerous processes, and the increased production of nuclear waste.

Impacts to Property Values. Various comments, including the City of Scottsdale Water Resources Department, expressed concern about negative impacts to existing and future property values, especially those properties in the Harquahala Valley region.

Conflicts with Existing or Planned Land Uses. With regard to the traversal of Kofa National Wildlife Refuge, comments asserted the project's incompatibility with the mission of the National Wildlife Refuge System to conserve fish, wildlife, plant resources, and habitat for the benefit of the general public. Many comments expressed concerns that the Harquahala-West Alternative may interfere with farming practices. Maricopa County objected to the same alternative while the City of Calimesa objected to the Proposed Project in anticipation of future development.

Physical Environment Issues and Concerns

Biological Resources Issues. Many comments expressed concern about potential impacts to wildlife, habitats, and the pristine nature of the desert landscape. Some comments requested mitigation for the combined threat of the Proposed Project and the existing DPV1 toward wildlife migration and avian behavior. The Arizona Game and Fish Department stated that the Proposed Project and subalternate routes traverse habitats of special status species and important wildlife, in particular, SCE's Subalternate Route 2 in the Plomosa and Dome Rock Mountains.

Cultural Resources Issues. Three tribal governments commented that the DPV2 project could impact cultural resources and recommended some mitigation measures.

Visual Resources Issues. Many comments criticized visual impacts both of the Proposed Project and of alternatives in combination with existing lines and in wilderness landscapes.

Water Resources Issues. The California Department of Fish and Game (CDFG) expressed concern regarding the elimination of watercourses or wetlands and requested mitigation measures.

Purpose and Need. A majority of the comments, particularly from private citizens and nonprofit groups such as the Maricopa Audubon Society, Sierra Club Grand Canyon Chapter, and the Arizona Wilderness Coalition, questioned the purpose and need for the DPV2 project. Reasons included growth in Arizona, the environmental stressor of transmission, clean energy policy abuse, environmental justice, and misrepresentation of energy demand and production.

Alternatives Issues. Comments from one NGO and three individuals expressed preference for a range of alternatives including the No Project Alternative, local generation, demand reduction, and alternative routes.

Environmental Review and Decision-Making Process. State and utilities agencies recommended information databases and methods for EIR/EIS analysis. Many comments also recommended focused study of several issue areas including energy conservation programs.

Public Involvement. Imperial County and some individuals requested improved communication about scoping meetings and the comment period.

Regulatory Compliance. Several State, regional, and tribal agencies identified permits required of SCE. SCE's Subalternate Route 3 would require amendment to the Palo Verde Community Area Plan.

ES.2 Alternatives

2.1 CEQA and NEPA Requirements for Alternatives

Both CEQA and NEPA provide guidance directing the selection of a reasonable range of alternatives for evaluation in an EIR and EIS, and the requirements are similar. This alternatives screening and evaluation process satisfies both State and federal requirements. The CEQA and NEPA requirements for selection of alternatives are described below.

Alternatives to the proposed DPV2 Project are identified and evaluated in accordance with CEQA Guidelines. CEQA Guidelines (Section 15126(a)) state:

> *An EIR shall describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.*

CEQA Guidelines (Section 15364) define feasibility as:

> *. . . capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.*

In addition, according to the Council on Environmental Quality's (CEQ) NEPA Regulations (40 C.F.R. 1502.14), an EIS must present the environmental impacts of the proposed action and alternatives in comparative form, defining the issues and providing a clear basis for choice by decision-makers and the public. The alternatives section shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

The CEQ has stated that "[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense rather than simply desirable from the standpoint of the applicant." (CEQ, 1983).

In addition to the CEQ NEPA regulations, CEQ has issued a variety of general guidance memoranda and reports that concern the implementation of NEPA. One of the most frequently cited resources for NEPA practice is CEQ's *Forty Most Asked Questions Concerning CEQ's NEPA Regulations* (Forty Questions). Although a reviewing federal court does not always give the Forty Questions the same deference as it does the CEQ NEPA Regulations, in some situations the Forty Questions have been persuasive to the judiciary. In general, alternatives are discussed in Forty Questions Nos. 1 through 7. Question No. 5b asks if the analysis of the "proposed action" in an EIS is to be treated differently than the analysis of alternatives. The response states:

> *The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the "proposed action." Section 1502.14 is titled "Alternatives, including the proposed action" to reflect such comparable treatment. Section 1502.14(b) specifically requires "substantial treatment" in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives.*

Alternatives Screening

Alternatives to the Proposed Project were suggested during the scoping period (October 25 to November 28, 2005 and December 7, 2005 to January 20, 2006) by the general public, and federal, State and local agencies after SCE filed its Application for a CPCN. Other alternatives were developed by EIR/EIS preparers or presented by SCE in its PEA. In total, 35 alternatives were identified, ranging from minor routing adjustments to SCE's Proposed Project location, to entirely different transmission line routes, to alternative energy technologies, as well as non-wires alternatives.

Unlike CEQA's requirements, NEPA does not require screening of alternatives based on their potential to avoid or lessen significant environmental effects. However, to assure that the alternatives considered in the EIR/EIS would meet the requirements of both CEQA and NEPA, the stricter requirements of CEQA have been applied as the screening methodology. As such, a reasonable range of alternatives has been considered and evaluated as to (1) whether they would meet most of the basic project objectives; (2) whether they would be feasible considering legal, regulatory and technical constraints; and (3) whether they have the potential to substantially lessen any of the significant effects of the Proposed Project. Other factors considered, in accordance with CEQA Guidelines (CEQA Guidelines Section 15126.6(f)), were

site suitability, economic viability, availability of infrastructure, general plan consistency, other regulatory limitations, jurisdictional boundaries, and proponent's control over alternative sites. Economic factors or costs of the alternatives (beyond economically feasible) were not considered in the screening of alternatives since CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives or would be more costly" (CEQA Guidelines Section 16126.6(b)).

The detailed results of the alternatives screening analysis are contained in Appendix 1 of the EIR/EIS (Alternatives Screening Report). A summary description of the alternatives considered and the results of screening are provided below. Figures ES-2 and ES-3 illustrate the geographic locations of all alternatives considered for and eliminated from EIR/EIS analysis.

2.2 Alternatives Fully Evaluated in the EIR

The eight alternatives listed below have been chosen for detailed analysis in this EIR/EIS through the alternative screening process. These alternatives are briefly described in Section C.4 and in greater detail in Section 4 of Appendix 1. The preliminary conclusions generated during the screening process are presented briefly below and each of these alternatives is evaluated within each environmental issue area of Part D of this EIR/EIS. The alternatives are illustrated on Figure ES-2 and an individual map of each alternative is presented in Section 4 of Appendix 1 of this EIR/EIS.

2.2.1 Transmission Line Route Alternatives: Devers-Harquahala

SCE Harquahala-West Alternative

Description. As described in SCE's 2005 PEA and shown in Figure ES-2, the "Harquahala-West Subalternate Route" would begin at the Harquahala Generating Station Switchyard. Rather than departing the Harquahala Switchyard to the east paralleling the existing Harquahala-Hassayampa 500 kV towers, the Harquahala-West Alternative would depart the Harquahala Generating Station Switchyard to the west and follow section lines due west for approximately 12 miles through private and State lands to the El Paso Natural Gas Pipeline corridor. This portion of the route parallels Courthouse Road approximately one mile to the north along section lines to the pipeline corridor. At the pipeline corridor, the transmission line would proceed northwesterly along the pipeline corridor for approximately 9 miles to the intersection with the DPV1 transmission line, immediately north of the El Paso Wendon Pump Station. The length of the Harquahala-West Alternative between the Harquahala Switchyard and the junction with the DPV1 line and the proposed route is 21 miles.

Rationale for Full Analysis. This alternative would meet project objectives and would be feasible. This alternative would avoid passing adjacent to the Big Horn Mountains Wilderness Area and two crossings of I-10. It would also avoid one mile of impacts to agricultural resources along Thomas Road. Most importantly the route would be 14 miles shorter than the proposed route, thereby eliminating the temporary and permanent impacts associated with construction of a 500 kV transmission line and towers.

SCE Palo Verde Alternative

Description. Under the Palo Verde Alternative (see Figure ES-2), the DPV2 line would terminate at the Palo Verde Nuclear Generating Station (PVNGS) Switchyard instead of Harquahala Generating Station switchyard as is currently proposed. As presented in the 2005 PEA, the Palo Verde Alternative

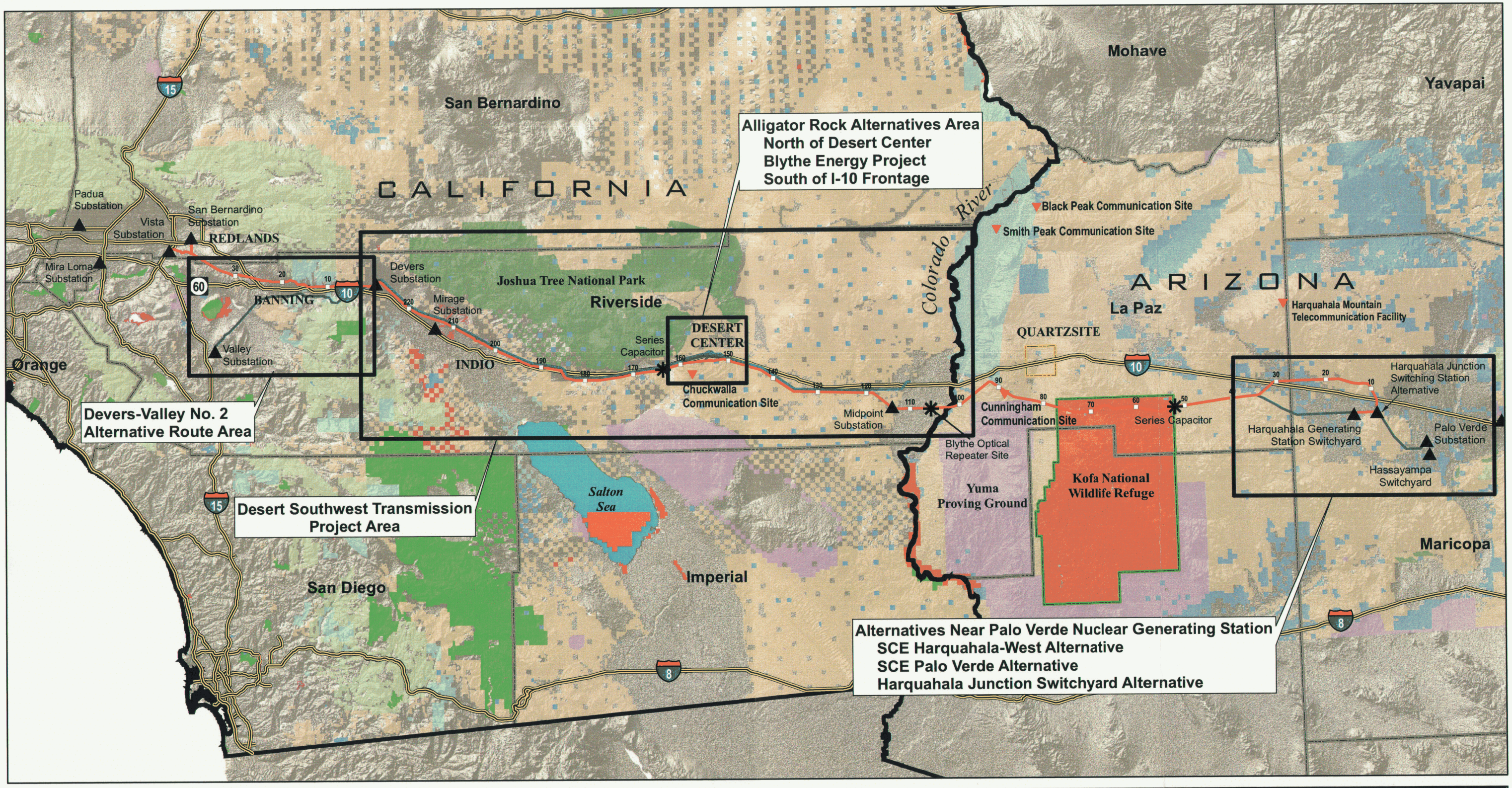
would require construction of a new 500 kV transmission line parallel to the DPV1 transmission line for an additional approximately 14.7 miles to the PVNGS Switchyard. Rather than leave the existing DPV1 transmission corridor and follow the existing Harquahala-Hassayampa 500 kV transmission line west to the Harquahala Switchyard, this alternative route would cross from the western side of the DPV1 transmission line to the east, and continue south, parallel to the existing DPV1 and Harquahala-Hassayampa 500 kV lines. This alternative would avoid the need to construct the proposed 5-mile segment from the Harquahala Generating Station Switchyard to the Harquahala Junction. This route would serve as a backup if SCE's contract to use Harquahala Generating Station as the termination point and acquire the existing Harquahala-Hassayampa 500 kV transmission line falls through and SCE has to build a new line to the PVNGS Switchyard.

Rationale for Full Analysis. This alternative would meet project objectives and would be feasible. The Palo Verde Alternative would have largely similar environmental impacts to the Proposed Project and it would reduce impacts to agricultural resources and biological impacts to the burrowing owl. Environmental impacts would be largely similar or reduced overall and depending on the outcome of contract negotiations, this alternative may be the only feasible option for SCE.

Harquahala Junction Switchyard Alternative

Description. This alternative would require construction of a new switching station east of the Harquahala Generating Station, at the point where the existing Harquahala-Hassayampa and DPV1 transmission lines diverge (a location called "Harquahala Junction"), which would be the eastern termination point of the Proposed Project. This alternative would avoid the need to construct the 5-mile segment of the Proposed Project from Harquahala Junction to the Harquahala Generating Station Switchyard. Under this alternative, the Harquahala Junction Switchyard would be built on a site of between 6 and 40 acres in the southwest quarter of Section 25, Township 2 North, Range 8 West, near the intersection of 451st Avenue and the Thomas Road alignment in unincorporated Maricopa County, Arizona (see Figure ES-2). The land is undisturbed desert open space.

Rationale for Full Analysis. This alternative would meet project objectives and would be feasible. This alternative would eliminate or defer the need for almost 20 total miles of new 500 kV transmission line segments (5 miles of the Proposed Project from Harquahala Junction to the Harquahala Generating Station Switchyard would be eliminated and 14.7 miles of the TS-5 Project 500 kV line between Harquahala Junction and the PVNGS or Duke Arlington Power Plant could be deferred). Overall, the alternative would lessen impacts to wildlife and habitat, vegetation, noxious weeds, and agriculture in comparison to the Proposed Project. Other impacts would be similar or marginally less than the Proposed Project, with the exception of visual impacts which could be marginally greater under the alternative.



PREPARED BY Aspen Environmental Group

Proposed Project
Mileposts
Alternatives Considered

0 10 20 30 40 50 Miles

OWNERSHIP/JURISDICTIONS (unincorporated areas)

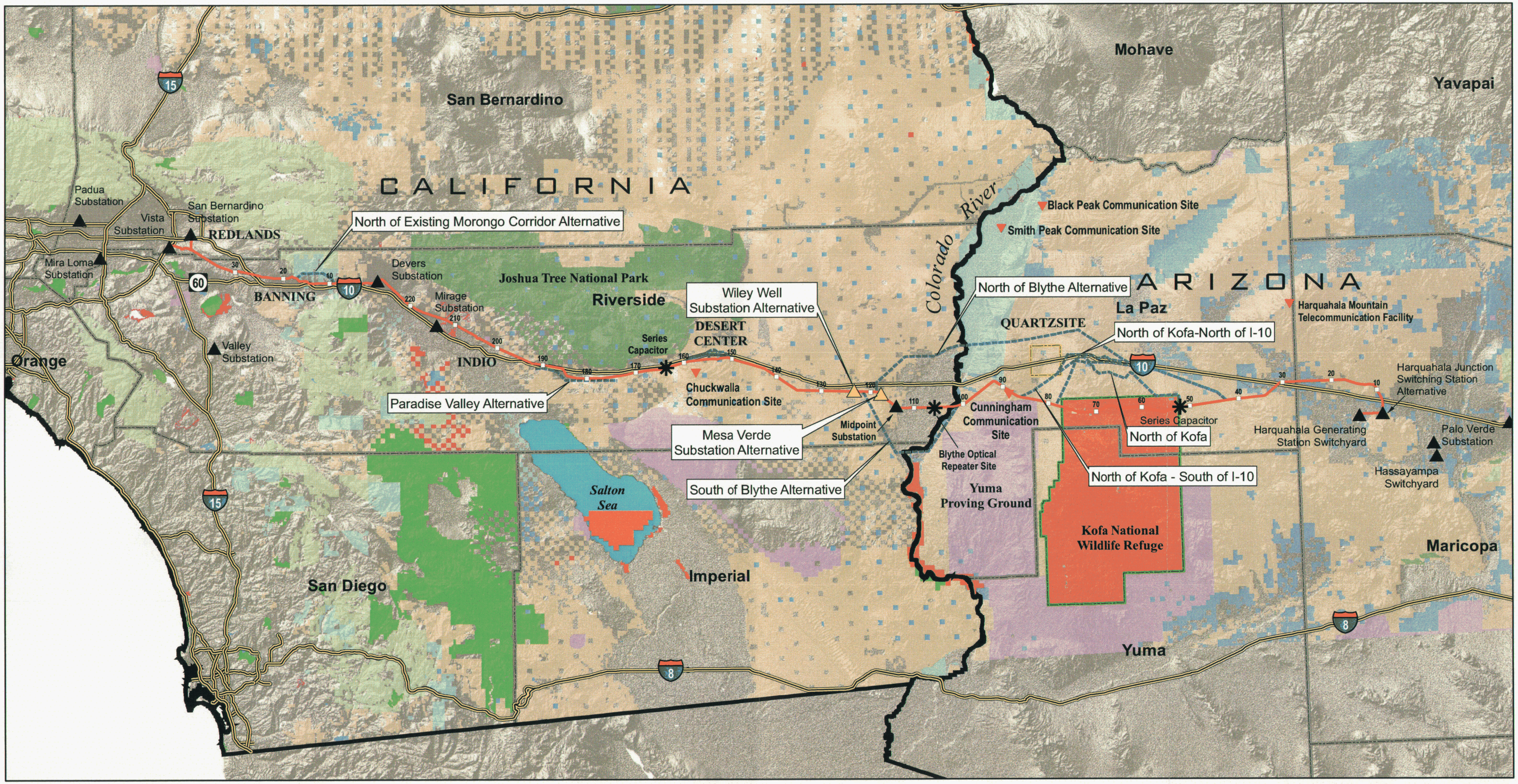
- BLM
- Fish and Wildlife Service
- Indian Lands
- Military
- State Parks & Recreation
- National Park Service
- Forest Service
- Nature Conservancy
- State Fish and Game
- State
- Private

- Substations
- Series Capacitor
- Construction Yard
- Communications Site

Devers-Palo Verde No. 2 Transmission Line Project

Figure ES-2

Alternatives Considered



PREPARED BY Aspen Environmental Group

Proposed Project
Mileposts
Alternatives Eliminated
Substations Eliminated

0 10 20 30 40 50 Miles

OWNERSHIP/JURISDICTIONS (unincorporated areas)

- BLM
- Fish and Wildlife Service
- Indian Lands
- Military
- State Parks & Recreation
- National Park Service
- Forest Service
- Nature Conservancy
- State Fish and Game
- State
- Private

- Substations
- Series Capacitor
- Construction Yard
- Communications Site

Devers-Palo Verde No. 2 Transmission Line Project

Figure ES-3

Alternatives Eliminated

Alligator Rock Alternatives

There are three potential reroutes around the Alligator Rock area that may reduce impacts to cultural and biological resources; they are described in the following sections. A fourth route was eliminated after preliminary screening. Figure ES-2 shows the location of the Alligator Rock Alternatives.

Alligator Rock–North of Desert Center Alternative

Description. Approximately 5 miles east of Desert Center (between MPs 149 and 150), the Alligator Rock–North of Desert Center Alternative route would diverge from the Proposed Project route and would head northwest for approximately 1.5 miles before crossing I-10 to the north and continuing for 1.1 miles to an unnamed east-west dirt road along the section line. The route would then turn to the west and would parallel the roadway for approximately 1.4 miles before turning again to the northwest for 0.6 miles. The route would then turn west along another east-west section line, staying just within BLM land (north of private land at Desert Center) for another 0.6 miles before heading southwest for 1.5 miles to Ragsdale Road. The route would parallel Ragsdale Road and I-10 to the north for 3.6 miles before crossing back to the south of Ragsdale Road and I-10 to rejoining the proposed route 1.5 miles later. The 11.8-mile route would be entirely on BLM land. The Proposed Project for this segment would be 10.6 miles long.

Rationale for Full Analysis. This alternative is feasible and would meet project objectives. The Alligator Rock–North of Desert Center Alternative would avoid impacts to the highly sensitive biological and cultural area of Alligator Rock ACEC and would be located in a less sensitive area in terms of biological and cultural resources.

Alligator Rock–Blythe Energy Transmission Route Alternative

Description. This route would diverge from the Proposed Project route approximately 3.5 miles east of Desert Center and would avoid much of the Alligator Rock ACEC by following its northern edge near I-10. This alternative would follow the proposed Blythe Energy Project Transmission Line Project (BEPTL) by diverging from DPV1 to the north bringing this new alignment close to Aztec Avenue, an existing El Paso Natural Gas Pipeline/access road, which would be used for construction access. Because the proposed new alignment would be close to the pipeline access road, each of the spur roads to the tower sites would be from this existing access road. The alternative route would be approximately 4.6 miles long and the Proposed Project would be approximately 3.95 miles long in the same segment.

Rationale for Full Analysis. The alternative would be feasible and would meet project objectives. The Blythe Energy Transmission Line route would be preferred to the Proposed Project for cultural and biological resources.

Alligator Rock–South of I-10 Frontage Alternative

Description. This alternative route is the same as the route proposed for the Desert Southwest Transmission Project (see below). The South of I-10 Frontage Alternative would diverge from the Proposed Project approximately 3.5 miles east of Desert Center and would follow the Alligator Rock–Blythe Energy Transmission Route Alternative route for 3.25 miles to the point at which the BEPTL Alternative turns southwest, just east of Alligator Rock. After passing between the northern end of Alligator Rock and the I-10 itself, this alternative would continue in a westerly direction, immediately south of I-10 and Aztec Avenue for 6.5 miles. It would rejoin the Proposed Project route between MP 160 and 161. The

Alligator Rock–South of I-10 Frontage Alternative would be 9.77 miles long and the proposed route would be 9.2 miles long in the equivalent segment.

Rationale for Full Analysis. This alternative would be feasible (if not constructed in addition to DPV2) and meets project objectives. Biological and cultural impacts in the Alligator Rock ACEC would be reduced under this alternative and it would avoid steeper rocky terrain farther south at the base of the mountains.

2.2.2 Transmission Line Route Alternatives: West of Devers

Devers-Valley No. 2 Alternative

Description. The Devers-Valley No. 2 Alternative (D-V Alternative) would be a new 41.6-mile 500 kV line following the existing SCE Devers-Valley No. 1 500 kV transmission line corridor, with each new alternative tower being located about 130 feet south of the existing D-V towers, where feasible (see Figure ES-2). The route would traverse a small portion of the San Bernardino National Forest (SBNF) and the Santa Rosa and San Jacinto Mountains National Monument (National Monument). It would cross the Pacific Crest National Scenic Trail (PCT). The USDA Forest Service would need to determine whether the D-V Alternative would be consistent with management direction in the governing Forest Plan. Based on this determination the alternative could require amendments to the SBNF Land Management Plan, the National Monument Proposed Management Plan, and an existing MOU between BLM, Forest Service, and the Pacific Crest Trail Association (PCTA). While a portion of the corridor is within a designated wilderness area, the SCE transmission corridor was specifically excluded from wilderness by Congress.

Rationale for Full Analysis. This alternative would meet the project objectives and is feasible. The Devers-Valley No. 2 Alternative would avoid impacts associated with traversing high-density residential areas and tribal lands. Due to the potential legal feasibility challenges of the West of Devers segment over Morongo tribal lands and because the impacts of all West of Devers upgrades would be eliminated, this alternative was retained for full evaluation in the EIS/EIR.

2.2.3 Other Project Alternatives

Desert Southwest Transmission Project Alternative

Description. The Desert Southwest Transmission Line Project (DSWTP) Final EIS/EIR, published by the Imperial Irrigation District (IID) and BLM in October 2005, analyzes a proposed new 118-mile 500 kV line between Blythe and SCE's Devers Substation (see Figure ES-~~3~~2). The BLM issued a Record of Decision on the project on September 15, 2006. The line would originate at a new 25-acre Keim Substation/Switching Station east of the center of Blythe near the Blythe Energy Project power plant. In addition, the DSWTP would include a new Midpoint Substation/Switching Station, located at the eastern intersection of the proposed line with the existing DPV1 line.[3] The new line from the new Keim

[3] A proposed new substation in the Blythe area is referred to as "Midpoint" by both DSWTP and SCE in their respective applications; however, the actual locations of their respective Midpoint Substations differ and DSWTP's Midpoint Substation would be approximately 5 miles northwest of SCE's proposed Midpoint Substation location. In a comment on the Draft EIR/EIS, the DSW proponents asked that the CPUC and BLM consider designation of this substation location as an acceptable location for SCE to interconnect with the DSW transmission line from the Blythe power plants. As stated in Section E.2.1.3 (Proposed Project vs. Desert Southwest

Substation/Switching Station to the new Midpoint Substation/Switching station would be constructed as a double-circuit line or two parallel lines.[4] Also, in the future, a new substation could be built near Indio west of Dillon Road, adjacent to the existing transmission line facilities, to connect the proposed transmission line to IID's existing Coachella Substation.

Much of this alternative route would be in the same corridor as SCE's DPV1 transmission line, the proposed DPV2 line, and the proposed Blythe Energy Project Transmission Line Modifications (BEPTL). For the purposes of this alternatives analysis, the DSWTP differs from the Proposed Project in the following respects:

- DSWTP includes the construction of three new substation/switching stations (Keim, Midpoint, and on Dillon Road) that would not be required with the DPV2 Proposed Project (although DPV2 includes an option to construct the Midpoint Substation).
- DSWTP requires construction of one double-circuit 500 kV line or two parallel 500 kV transmission lines for 8.8 miles from Keim Substation to Midpoint Substation.
- DSWTP would diverge from the DPV1 corridor to the north (closer to I-10) in the vicinity of Alligator Rock for approximately 9.5 miles.

Rationale for Full Analysis. This alternative project would meet project objectives and would be feasible. Overall, the impacts would be very similar to those of the proposed DPV2 Project. The DSWTP route would reduce impacts to biological and cultural resources in the vicinity of Alligator Rock ACEC.

2.2.4 No Project Alternative

Consideration of the No Project Alternative is required by Section 15126.6(e) of the CEQA Guidelines, and NEPA requires the consideration of a No Action Alternative (40 C.F.R. 1502.14(c)). The analysis of the No Project Alternative must discuss the existing conditions at the time the Notice of Preparation was published (October 21, 2005), as well as: "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" [CEQA Guidelines Section 15126.6 (e)(2)]. The requirements also specify that: "If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed" [CEQA Guidelines Section 15126.6 (e)(3)(B)].

The No Action Alternative required under NEPA serves as a basis for comparison even if it would not satisfy the proposed action's purpose and need. The definition of the No Action Alternative depends on the nature of the project and in the case of the proposed DPV2 project the No Action Alternative describes what would occur without the federal agency's (BLM) approval. This EIR/EIS uses the CEQA term No Project Alternative to describe the No Action Alternative required by NEPA.

Transmission Project Alternative), the two substation sites are considered to be comparable and equally environmentally superior/preferable.

4 Figure B-8 in the Project Description illustrates the design and dimensions of a double-circuit 500 kV line; two parallel lines would require a ROW of at least 300 feet.

Economic Issues Affecting the No Project Alternative

The No Project Alternative has been studied by SCE and the CAISO as part of the economic evaluation of DPV2 (CAISO, 2005). The economic studies demonstrated that there were sufficient economic and transmission system reliability benefits to pursue the Proposed Project over the No Project Alternative. In choosing the Proposed Project over the No Project Alternative, the CAISO showed that although there would be some reliability benefits, substantial economic benefits could occur for California ratepayers with DPV2.

Power Supply Issues Affecting the No Project Alternative

The economic studies done by CAISO for DPV2 show that by generally improving the efficiency of the transmission grid, the power supplied to California customers would come from different generators as a result of the Proposed Project (CAISO, 2005). Reducing generation from older and less efficient power plants in California and increasing generation from higher-efficiency power plants outside of California would provide an air emissions decrease in California, but an emissions increase in Arizona. Under the No Project Alternative, these power supply changes and emission benefits would not occur.

No Project Alternative Scenarios

Under the No Project Alternative, construction and operation of DPV2 would not occur. The baseline environmental conditions for the No Project Alternatives are the same as for the Proposed Project. The baseline conditions would continue to occur into the future, undisturbed, in the absence of project-related construction activities.

The objectives of the Proposed Project would remain unfulfilled under the No Project Alternative. For example, 1,200 MW of transmission import capability into California would not be added, and the additional market competition and improved system reliability and operating flexibility associated with the Proposed Project would not occur.

The absence of the Proposed Project may lead SCE or other developers to pursue other actions to achieve the objectives of the Proposed Project. The events or actions that are reasonably expected to occur in the foreseeable future without DPV2 include the following:

- The existing transmission grid and power generating facilities would continue to operate.
- Continued growth in electricity consumption and peak demand within California is expected. To serve this growth, additional electricity would need to be internally generated or imported into California by existing facilities.
- A continuation of baseline *demand-side* or *supply-side* actions may be expected to occur. *Demand-side* actions include additional energy conservation or load management. *Supply-side* actions can include accelerated development of generation, such as conventional, renewable, and distributed generation, or other major transmission projects.

2.3 Alternatives Eliminated From Further Consideration

This EIR/EIS presents two categories of alternatives eliminated from detailed EIR/EIS consideration. Certain alternatives were eliminated because they clearly did not meet project objectives or were infeasible; these alternatives that were assessed and eliminated after preliminary screening are listed below. Other alternatives required more detailed consideration in order to determine whether they should be eliminated; these are listed below as well and are described briefly herein.

Alternatives Eliminated After Preliminary Screening

The following 11 alternatives were eliminated after a preliminary alternatives screening process for the following reasons, which are discussed in more detail in Section 3.2.1 of Appendix 1 of this EIR/EIS:

- **EOR 9000+ Project**. Would not achieve the project objective of adding 1,200 MW of transmission import capability into California.
- **Granite Construction Company**. Moving the proposed route of DPV2 to avoid the active mines in this area would be difficult because of the topography of the area, adjacent Indian Reservation land, and several named faults near the site. In addition, SCE has a Permanent and Exclusive ROW on the property, which allows SCE to construct and enlarge its current use of the corridor. Therefore, a reroute around or within the property would not be necessary.
- **New 230 kV Line West of Devers**. SCE has stated that the addition of only one new 230 kV circuit under this alternative would not satisfy the project objective of increasing the import capability by 1,200 MW. Also, the addition of a fifth 230 kV circuit in the existing west of Devers ROW would result in increased ground disturbance and visual impacts relative to the Proposed Project, which would remove towers to consolidate and rebuild the existing 230 kV circuits.
- **Southwest Power Link 500 kV No. 2 Transmission Line**. Due to congestion at Miguel Substation, the general lack of adequate transmission on the San Diego Gas and Electric (SDG&E) system to move the power to the north, and need for additional ROW, the alternative was not found cost effective by SCE and it would not meet the project objectives of increasing California's transmission import capability from the Southwest and enhancing and supporting the competitive energy market in the Southwest without additional upgrades in San Diego County.
- **Path 49 Upgrade Project.** Does not qualify as an alternative to the proposed DPV2 project because some of the upgrades have already been implemented, which means that DPV2 would provide 1,200 MW in addition to, not as a substitute to, the 505 MW provided by the Path 49 Upgrade Project.
- **New Imperial Valley–Devers 500 kV Transmission Line**. Would not, by itself, increase access to generation in the Southwest U.S. or add 1,200 MW of additional transmission import capability into California, because additional transmission projects would be needed in Arizona and/or California to bring power to Imperial Valley and ultimately to Devers.
- **Double-Circuit 500 kV Line (Devers-Harquahala)**. Would fail to satisfy the project objective for increasing reliability, insurance value against extreme events, and operational flexibility because in the event that a tower failed both DPV1 and DPV2 circuits would be lost. Construction of the new DCTL would create greater short-term construction impacts than the Proposed DPV2 line due to the construction of larger towers and the requirement to remove existing towers.
- **New Devers–Mira Loma 500 kV Transmission Line**. An outage of new Devers–Mira Loma 500 kV portion in the West of Devers corridor would overload the remaining existing circuits, and so this alternative would not meet the basic project objective of adding 1,200 MW of transmission import capability. This alternative could require expanding the West of Devers ROW which is constrained in some areas due to adjacent development, and it would have technical feasibility limitations because it would not increase the overload capability on the West of Devers 230 kV system.
- **Combination of New Imperial Valley–Devers 500 kV Line and Path 49 Upgrade Project**. As discussed above, portions of the Path 49 Upgrade Project were considered by SCE and CAISO to be part of the system that exists as the baseline for measuring economic benefits derived from the addition of 1,200 MW of new import capacity that would occur with DPV2. Additionally, the re-

maining primary component of this alternative (i.e., the new Imperial Valley–Devers 500 kV line) has already been eliminated from analysis in this EIR/EIS after preliminary screening.

- **Modify DPV1 Compensation**. Increasing the compensation of the DPV1 above 50 percent resulted in subsychronous resonance (SSR) concerns for the Palo Verde nuclear generating units. This would cause prohibitive operating conditions for the Palo Verde generators and would not be technically feasible. This alternative also would not add 1,200 MW of transmission import capability into California.
- **Alligator Rock–South of DPV2 Corridor Alternative**. The magnitude of the impacts of the alternative would be greater because the length of this alternative through less disturbed native habitat/ tortoise habitat and through a sensitive cultural resources area would be greater than with the Proposed Project. This alternative would not reduce any impacts of the Proposed Project without creating greater impacts of its own.

Alternatives Eliminated After Detailed Screening

The 16 alternatives listed below were evaluated for their potential to meet CEQA and NEPA requirements but were ultimately eliminated from consideration in the EIR/EIS. Figure ES-2 depicts the location of each route alternative addressed in this section. A more detailed description of each alternative and the rationale for its consideration and elimination is presented in Draft EIR/EIS Appendix 1, Alternatives Screening Report.

2.3.1 Transmission Line Route Alternatives: Devers-Harquahala

SCE North of Kofa NWR–South of I-10 Alternative

Description. The North of Kofa NWR–South of I-10 Alternative would diverge from the proposed DPV2 route approximately 42.5 miles from its origin at Harquahala Switchyard. The route would head northwest approximately 1.5 miles before turning west-northwest towards I-10, and crossing north of Kofa NWR and the New Water Mountains, south of I-10, and eventually rejoining the proposed DPV2 route 0.5 miles north of Yuma Proving Ground and 8 miles west of Kofa NWR. The North of Kofa NWR–South of I-10 Alternative would be 3.4 miles longer than the proposed route (see Figure ES-3 in this EIR/EIS and Figure Ap.1-2 in Appendix 1 on the enclosed CD).

Rationale for Elimination. The alternative would result in similar or greater impacts to resources outside of Kofa NWR. The alternative would traverse similar habitat for biological resources as the Proposed Project, but would result in substantially more permanent ground disturbance and habitat lost. The alternative's route through the La Posa Recreation Areas would impact a greater number of recreation users than the Proposed Project's route through Kofa NWR. Views from I-10 and residences and recreation areas along Highway 95 and along the La Posa Plains would be impacted by the new transmission corridor created by the alternative and would reduce the scenic quality of these views.

SCE North of Kofa NWR–North of I-10 Alternative

Description. This alternative is similar to the North of Kofa NWR–South of I-10 Alternative (see above), except it would cross I-10 twice and Arizona U.S. Highway 60 once to follow the Celeron/All American Pipeline corridor north of I-10 (see Figure ES-3 and Figure Ap.1-2 in Appendix 1 on the enclosed CD). Approval of this alternative would require an amendment to the BLM's Lower Gila South RMP.

Rationale for Elimination. With this alternative it may not be feasible to obtain the required amendment to the Lower Gila South RMP, which currently prohibits overhead transmission lines. It would likely result in greater impacts to resources outside of Kofa NWR than with the Proposed Project within the Kofa NWR. The route would traverse similar habitat for biological resources as the Proposed Project, within a designated wildlife refuge. It would result in substantially more permanent ground disturbance and a large amount of habitat lost, resulting in significant impacts to sensitive bighorn sheep or desert tortoise populations. The alternative route through the La Posa Recreation Areas would impact a greater number of recreation users than the Proposed Project's route through Kofa NWR, and would impact more users than the North of Kofa NWR–South of I-10 alternative. Views from I-10 and residences and recreation areas along Highway 95 and along the La Posa Plains would be impacted by the new transmission corridor created by the alternative and would reduce the scenic quality of these views.

North of Kofa NWR Alternative

Description. This 37-mile alternative would diverge from the proposed route at the series capacitor just east of the Kofa NWR. It would replace a proposed route segment that is approximately 27 miles long by traveling north of Kofa NWR and south of I-10. It would rejoin the Proposed Project approximately 1.25 miles west of the boundary of Kofa NWR and south of Quartzsite (see Figure ES-3 in this EIR/EIS and Figure Ap.1-2 in Appendix 1 on the enclosed CD).

Rationale for Elimination. The North of Kofa Alternative would avoid impacts to resources within Kofa NWR. However, it would create a new corridor with associated ground disturbance (there are few usable access roads and the route would be 10 miles longer than the portion of the Proposed Project it would replace). As a result, it would have substantially greater impacts to bighorn sheep, impacts on undisturbed biological resources, and would create potentially significant visual impacts through previously undisturbed land.

SCE North of Blythe Alternative

Description. This alternative was included in SCE's 2005 PEA as Subalternate 2 (North of Blythe through Colorado Indian Reservation) and would depart the proposed DPV2 route approximately 1.5 miles west of Eagletail Mountains and 3 miles south of Salome Emergency Airfield. The route would then traverse in a northwesterly then westerly direction crossing the Colorado River. After traversing west to a point 4 miles north of Blythe Airport, the route would turn in a southwesterly direction for approximately 7 miles, where it would cross I-10 and rejoin the proposed route one mile south of I-10 (see Figure ES-3 as well as Figure Ap.1-3 in Appendix 1 on the enclosed CD). The North of Blythe Alternative would cross agricultural land and would pass through a portion of the Colorado River Indian Tribe (CRIT) Reservation. It would be 3.3 miles longer than the proposed route.

Rationale for Elimination. This alternative would be legally feasible only if the CRIT would agree to the lines being placed on their land. The regulatory feasibility of the route is questionable, because BLM approval of an amendment to the Resource Management Plan would be required. The alternative would result in greater impacts to biological resources and substantially greater impacts to visual and cultural resources. Overall, the North of Blythe Alternative would have more visual impacts than the Proposed Project segment that it would replace, because of the greater impacts on views from I-10, U.S. 60, dispersed recreation areas north of I-10 in Arizona, the Colorado River, and U.S. 95, as well as views of the McCoy Mountains west of Blythe. Given the sacred nature of the sites along the northern alternative and the need to cross the CRIT Reservation, this alternative has much higher cultural resources sensitivity than the Proposed Project.

SCE South of Blythe Alternative

Description. The South of Blythe Alternative would begin 2 miles south of the city of Blythe and would cross the Palo Verde Valley in California, about 10 miles south of the DPV1 route, crossing through a portion of Imperial County. The route would continue west 1.5 miles from the Colorado River and would then turn in a northwesterly direction for approximately 15 miles towards the proposed route. This alternative would rejoin the Proposed Project approximately 1.5 miles south of I-10 and 15 miles west of Blythe (note that this alternative would rejoin the DPV1 route west of the location of the Midpoint and Mesa Verde Substation sites). The South of Blythe Alternative would be 11.5 miles longer than the proposed route (see Figure ES-3 as well as Figure Ap.1-4 in Appendix 1 on the enclosed CD).

Rationale for Elimination. This alternative would be feasible, although a different substation location for the connection to the DPV corridor would have to be defined. The overall impact resulting from ground disturbance would be greater with this alternative and the route would establish a new transmission corridor. The route would traverse much more sensitive biological habitat near the Colorado River and Cibola Wildlife Refuge. The South of Blythe Alternative would cause greater visual impacts on views from (a) the Colorado River and East Levee road, (b) the BLM Oxbow Recreation Site, and (c) Imperial County Palo Verde Park. The South of Blythe Alternative also has a much higher cultural sensitivity than the proposed route especially to geoglyphs, circles, and alignments of special value to the Native Americans in the Ripley Intaglio and two other major intaglio groups and in the Colorado River terraces (on Arizona side of the river), Mule Mountain ACEC, and the Palo Verde Mesa.

Paradise Valley Alternative

Description. GLC Enterprises, LLC (Glorious Land Company or "GLC") submitted a protest letter on May 13, 2005 and a scoping letter on November 14, 2005 regarding SCE's application to the CPUC to construct the DPV2 Project. The letters contend that if the new 500 kV transmission line is constructed as proposed that it would have significant impacts on GLC's proposal to develop 6,400 acres of property where they plan to develop a new mixed-use community.[5] GLC has also requested a land exchange with BLM to make the project area more rectangular in shape and to allow for water pipeline access. The protest suggests that the transmission line should be constructed immediately to the south and west of the current proposed alignment and the proposed area of development to avoid impacting GLC's project. The scoping letter suggests that both the DSWTP and DPV2 be located in the same new power corridor (see Figure ES-3, as well as Figure Ap.1-6 in Appendix 1 on the enclosed CD). However, DSWTP is entirely separate and independent of the Proposed Project; an EIR/EIS for that project has been completed so issues related to it are not addressed here.

The Paradise Valley project area is bounded on the south by the Congressionally designated Mecca Hills and Orocopia Mountains Wilderness Areas, and on the north by the Joshua Tree National Park.

Rationale for Elimination. The Paradise Valley Development and the movement of the utility corridor would not be feasible if the suggested land exchange were not approved by BLM. Movement of the entire existing utility corridor (DPV1) could not legally be pursued under CEQA/NEPA. If the DPV1 line remains it its current location, the construction of the DPV2 line farther to the south from I-10 would create greater construction and permanent impacts in a new corridor to visual, biological, and cultural resources.

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[5] The property owned by GLC includes the following Assessor's Parcel Numbers: 71306001, 2, 3, and 4; 713072001; 713050002; 713032001; 713031004, 5, and 6; 713040002, 3, 4, 5, 6, and 7.

Substation Alternatives

SCE's PEA states that the Midpoint Substation may be required as a component of the DPV2 project if the DSWTP is completed. This is considered as an optional project component that may or may not be constructed in conjunction with the rest of the project. The PEA includes the evaluation of two alternative sites for the substation that would be located south and west of Blythe, California.

Mesa Verde Substation Alternative

Description. This alternative site is located approximately 4.5 miles northwest of the Midpoint Substation site, also north of and adjacent to the DPV1 right-of-way on private land in the northwest quarter of Section 8, Township 3 North, Range 21 East, about 1.5 miles south of I-10. It is located northeast of DPV1/DPV2 ROW at the point where the corridor turns from northwest-southeast to east-west. This substation alternative would require a 5-mile access road (as opposed to 3 miles with the proposed Midpoint Substation location).

Rationale for Elimination. This alternative would require 5.5 miles of heavy-duty access road construction to reach the substation site from the Midpoint Substation area or if access is from Wiley Well Road creating much greater ground disturbance and related impacts. It would be located in habitat for the Mojave fringe-toed lizard. This alternative substation location would also have greater visibility from I-10 and the Mesa Verde area (approximately one mile south of I-10).

Wiley Well Substation Alternative

Description. This site is approximately 9 miles northwest of the proposed Midpoint Substation and 5 miles due west of the Mesa Verde site, also north of and adjacent to the DPV1 right-of-way, about 17 miles west of Blythe. The site would be constructed in Section 5, Township 3 North, Range 20 East, about 0.5 miles east of Wiley Well Road on BLM land within the BLM Designated Utility Corridor K. The alternative substation would be accessed via Wiley Well Road, an existing paved two-lane roadway with an exit off of I-10, and therefore, would require only a 100-foot access road (as opposed to 3 miles required for the proposed Midpoint Substation).

Rationale for Elimination. This alternative substation site would have much greater visibility from Wiley Well Road and I-10, greater recreational impacts due to its proximity to Chuckwalla Valley Dune Thicket ACEC, and greater biological impacts to sensitive habitat and wildlife species, such as Mojave fringed-toed lizard and desert tortoise.

2.3.2 Transmission Line Route Alternatives: West of Devers

North of Existing Morongo Corridor Alternative

Description. This 8.9-mile alternative would diverge from the proposed route approximately 0.25 miles east of the eastern edge of the Morongo Indian Reservation. From there the route would head to the northwest for approximately 3 miles before heading west to parallel the proposed route for 4 miles, approximately 2 miles to the north of the existing corridor. The route would then turn to the southwest for 1.5 miles before rejoining the Proposed Project at the City of Banning. The Proposed Project would be approximately 7.5 miles long in this segment. If requirements resulting from the tribal negotiation would require implementation of this alternative, the four existing lines would also be removed from the existing corridor and rebuilt in this corridor.

Rationale for Elimination. Based on the Morongo Tribe's consultation statements during the scoping period and because the feasibility of this alternative would hinge on approval by the Morongo Tribe (removal and rebuilding of the lines within the Reservation), there are legal feasibility concerns. There could also be technical feasibility issues with siting the four circuits in or at the base of the San Bernardino Mountains, north of the existing corridor. Moving the corridor farther north into a less developed area away from I-10 would create far greater impacts to biological and cultural resources, as well as much greater construction time and ground disturbance.

Composite Conductor Alternative

Description. This alternative would include the replacement of existing conductors in the West of Devers 230 kV system with Aluminum Conductor Composite Reinforced (ACCR) or Aluminum Conductor Composite Core (ACCC) wires. Composite conductors have recently been developed and are being tested to provide roughly two to three times the transmission capability (ampacity) of the standard proposed Aluminum Conductor Steel Reinforced (ACSR) conductors, at somewhat higher but undisclosed costs. The composite conductors could be used to reconductor all or portions of the West of Devers 230 kV system. In contrast to the Proposed Project, which would involve removing 40 miles of a single-circuit wood H-frame 230 kV line and a single-circuit lattice steel 230 kV line, this alternative would make use of existing structures in the corridor. This alternative could also involve reconductoring the existing 40-mile double-circuit 230 kV steel tower line with ACCR to increase the capability of these circuits.

Rationale for Elimination. This alternative would utilize the existing single-circuit 230 kV towers for the conductor conversion. This poses a risk to SCE achieving its system capacity goals for West of Devers because of the age of the existing structures and their outmoded design. In this case, use of the outmoded existing structures under this alternative would leave the West of Devers corridor incapable of meeting the basic project objective of adding 1,200 MW of transmission import capability. Higher costs would make the economic objectives of the Proposed Project less likely to be achieved. Finally, because reconductoring the existing towers would not remove the existing single-circuit wood H-frame and lattice steel structures in the Devers–San Bernardino Junction segment, the existing towers would remain and the visual benefit of reducing the number of tower lines in the corridor would not be achieved. Also, these structures are aged and could require slightly more frequent maintenance than the new towers that would be installed under the Proposed Project.

2.3.3 Other Project Alternatives

Convert DPV1 from AC to HVDC Transmission Line

Description. This alternative would modify the existing DPV1 500 kV transmission line to convert DPV1 from an AC line to a high-voltage direct-current (HVDC) line. Based on the preliminary power flow and stability studies, the project scope of the HVDC Alternative was identified as follows:

- Palo Verde Substation: Install a converter and associated filters for 3,000 MW
- Devers Substation: Install a converter and associated filters for 3,000 MW HVDC operation
- Build a new Devers-Valley #2 500 kV transmission line
- Build a new Valley-Serrano # 2 500 kV transmission line
- Drop load at eight SCE A bank stations
- Drop generation in Arizona for the loss of HVDC line

Rationale for Elimination. The alternative would not meet all project objectives (except increasing California's transmission import capability from the Southwest and enhancing and supporting the competitive energy market in the Southwest). An outage of this HVDC line would force SCE to drop load at a number of substations, which would require imposing SPS or RAS measures, which would conflict with Project Objectives of increased reliability, insurance value against extreme events, and flexibility in operating the grid. There would also be reduced likelihood of achieving the economic objectives.

Underground Alternative

Description. In order to construct an underground 500 kV transmission line, insulated power cables would be placed underground along specific high-impact segments or the entire transmission line alignment from Harquahala Substation to Devers Substation. There are four underground technologies for 500 kV that are commercially available: High-Pressure Fluid (HPFF) Cables; Self-Contained Fluid-Filled (SCFF); Solid Dielectric (XLPE) Transmission Cables; and Compressed Gas Insulated Transmission Lines (CGTL). Regardless of the underground technology used, a transition structure would be required at the ends of the underground segment, as well as two transition structures at each substation, to support the underground cable terminations and to connect the underground cable to the overhead bus within the substations.

Undergrounding a 230 kV line for the West of Devers segment would be feasible. ~~and has been completed by~~ SCE currently has about one circuit-mile of underground 230 kV line within its system. ~~and~~ Other utilities have longer segments of underground 230 kV lines within their systems [e.g., Pacific Gas and Electric (PG&E) for the Jefferson-Martin 230 kV Transmission Project (23.5 miles) and the Tri-Valley Capacity Increase Project (11.8 miles), and by San Diego Gas and Electric (SDG&E) for the Otay Mesa Power Purchase Agreement Transmission Project (10 miles)]~~;~~ ~~however~~However, each circuit would require a 3-foot-wide continuous trench creating much greater construction and habitat disturbance impacts than with the overhead Proposed Project.

Rationale for Elimination. Three of the four technologies would be feasible. If a short underground 500 kV segment were considered and not the entire Devers-Harquahala line (e.g., to avoid a specific high impact area), these technologies may not be cost prohibitive to construct. However, underground construction requires a continuous trench in which to install duct banks that would carry the electrical cables. This amount of trenching would create significant impacts to soils/erosion, cultural resources, biological resources as well as a longer construction time and the need for transition structures. Operational impacts would also be greater associated with maintenance and access to the lines. Repair times would be much longer as well. With the exception of permanent visual resource impacts that would be eliminated, underground construction of either a 230 kV or a 500 kV would cause much greater impacts to most issue areas than the Proposed Project.

2.3.4 Non-Transmission Alternatives

New Conventional Generation

Description. New power generation facilities could be developed in southern California as an alternative to the Proposed Project. The specific configuration of new generation would vary depending on a number of uncontrollable factors (e.g., need, market forces), but the new facilities would likely be installed in a location with convenient and economical access to fuel supplies, existing transmission facilities, major existing substations, and load centers. Construction and operation of new generation facilities would be subject to separate permitting processes that would need to be completed in advance of construction.

At this point, it is assumed that SCE would need to take an integrated approach to procure 1,200 MW of power for its customers before 2009 under this alternative.

For the New Conventional Generation Alternative, it is assumed that the most likely method of providing new power generation would be through the construction of combined cycle natural gas-fired turbine power plants. This, however, does not preclude the potential use of alternative energy technologies such as renewable resources, which are discussed in a separate section below. For the purposes of this analysis, new generation facilities are assumed to be the following:

- **Near the Devers Substation.** A new power plant could be developed similar to the 456 MW Ocotillo Energy Project, which was proposed by InterGen in May 2001 but never approved for construction, or an expanded generation facility could be installed at the 135 MW Indigo Energy Facility operated by Wildflower LLP near to the Devers Substation.
- **Near the Etiwanda Substation.** Etiwanda is northwest of the Vista Substation. New facilities could be installed at or near the 770 MW Etiwanda Generating Station (currently owned by Reliant Energy) or that facility could be repowered to create a state-of-the-art facility.
- **Near the Valley Substation.** New or expanded generation could occur at the Inland Empire Energy Center, now under construction. The Inland Empire Energy Center was originally proposed by Calpine Corporation in August 2001 and approved for 810 MW in June 2005.

Rationale for Elimination. The New Conventional Generation Alternative would not satisfy the following project objectives: adding transmission import capability into California and providing access to low-cost energy, providing additional transmission infrastructure, and improving the reliability and flexibility of the region's transmission system. The long-term operational environmental impacts of power plants (i.e., air emissions, water usage) can be balanced against the impacts of long transmission lines.

Renewable Generation Resources

Description. The principal renewable electricity generation technologies that could serve as alternatives to the Proposed Project and do not burn fossil fuels are geothermal, solar, hydroelectric, wind, and biomass. Transmission of the power generated by these technologies would also be required.

Rationale for Elimination. These technologies also would cause environmental impacts and have feasibility problems. Use of renewable generation technologies would avoid the specific impacts associated with the construction and operation of the proposed DPV2 project, but new transmission would still be required from the renewable generation locations, creating impacts similar to those of the Proposed Project, which is proposed to transmit power from an already *existing* generation source. In addition to the reliability and feasibility issues discussed above, use of renewable resources would be inconsistent with the objectives of the proposed DPV2, which are focused on creating the ability for DPV2 to increase California's transmission import capability from the Southwest and enhance and support the competitive energy market in the Southwest.

Conservation and Demand-Side Management

Description. Demand-side management programs are designed to reduce customer energy consumption. Regulatory requirements dictate that both supply-side and demand-side resource options should be considered in a utility's plan to acquire lowest cost resources. One goal of these programs is to reduce overall electricity use. Some programs also attempt to shift such energy use to off-peak periods.

Rationale for Elimination. Demand-Side Management. Demand response represents a small fraction of the total capacity requirement needed to meet SCE's import and supply reliability objectives. As a stand-alone alternative to DPV2, these programs cannot meet the growing electricity demands of California for two main reasons. First, SCE's 2004 Long Term Procurement Plan (LTPP) already includes the maximum amount of approved demand response investments over the next ten years, amounting to approximately 1,400 MW of peak load reduction by 2014. Even with the amount of demand response SCE is planning to implement, SCE has stated that the economic analysis on purpose and need has shown that DPV2 is still a cost-effective project in addition to approved and projected demand-side management investments (SCE, 2005a). Second, demand response programs are resources that are designed to primarily provide capacity benefits and not low-cost energy benefits such as DPV2.

Conservation. SCE's 2004 LTPP already includes the maximum reliably achievable amount of cost effective energy efficiency, amounting to nearly 6 billion kWh reduction in sales over and above what is currently implemented over the next ten years and therefore is not an alternative to DPV2. For similar reasons as the DSM alternative discussed above, the energy efficiency alternative does not meet the project's objectives and was excluded from further evaluation.

Distributed Generation

Description. Distributed Generation (DG) is defined as "generation, storage, or demand-side management devices, measures, and/or technologies connected to the distribution level of the transportation and distribution grid, usually located at or near the intended place of use" and could include technologies such as microturbines, internal combustion engines, combined heat and power (CHP) applications, fuel cells, photovoltaics and other solar energy systems, wind, landfill gas, digester gas and geothermal power generation technologies. To the extent that it is established, DG either can act to reduce the load on the SCE system or can be applied as additional system generation.

Rationale for Elimination. DG would not provide a means for SCE to meet its objectives for the project because of the comparatively small capacity of DG systems and the relatively high cost. A number of serious barriers, including technical issues, business practices, and regulatory policies, make interconnection to the electrical grid for small generators difficult. Broad use of distributed resources would likely require regulatory support and technological improvements. Lengthy local permitting processes would make it unlikely to construct sufficient quantities of DG within the timeframe required for the Proposed Project.

ES.3 Electric and Magnetic Fields

Recognizing that there is a great deal of public interest and concern regarding potential health effects from exposure to electric and magnetic fields (EMFs) from power lines, the EIR/EIS provides information regarding EMF associated with electric utility facilities and the potential effects of the Proposed Project related to public health and safety. Potential health effects from exposure to ***electric fields*** from power lines (effect produced by the existence of an electric charge, such as an electron, ion, or proton, in the volume of space or medium that surrounds it) are typically not of concern since electric fields are effectively shielded by materials such as trees, walls, etc., therefore, the majority of the following information related to EMF focuses primarily on exposure to ***magnetic fields*** (invisible fields created by moving charges) from power lines. However, the EIR/EIS does not consider magnetic fields in the context of CEQA or NEPA and determination of environmental impact. This is because (a) there is no agreement among scientists that EMF does create a potential health risk, and (b) there are no defined or adopted CEQA or NEPA stan-

dards for defining health risk from EMF. As a result, EMF information is presented for the benefit of the public and decision-makers.

After several decades of study regarding potential public health risks from exposure to power line EMF, research results remains inconclusive. Several national and international panels have conducted reviews of data from multiple studies and state that there is not sufficient evidence to conclude that EMF causes cancer. Most recently the International Agency for Research on Cancer (IARC) and the California Department of Health Services (DHS) both classified EMF as a *possible* carcinogen. The information included in EIR quantifies existing EMF exposures within the community — these exposures are widespread and cover a very broad range of field intensities and duration.

Presently there are no applicable regulations related to EMF levels from power lines. However, the California Public Utilities Commission has implemented a decision (D.93-11-013) requiring utilities to incorporate "low-cost" or "no-cost" measures for managing EMF from power lines up to approximately 4 percent of total project cost. Using the 4 percent benchmark, SCE has incorporated low-cost and no-cost measures to reduce magnetic field levels ~~near schools~~ along the proposed route (including ~~deeper burial of underground lines~~combining several existing 230 kV circuits onto double-circuit transmission line structures and changing phase configuration). There are additional potential measures for reducing magnetic fields, mostly beyond the no-cost/low-cost parameters (including increasing distance from conductors, reducing conductor spacing, converting single-phase to split-phase circuits, or placing proposed transmission lines underground~~and minimizing current~~), which are described for the benefit of the public and decision-makers in reviewing the Proposed Project.

Most recently the CPUC issued Decision D.06-01-042, on January 26, 2006, affirming the low-cost/no-cost policy to mitigate EMF exposure from new utility transmission and substation projects. This decision also adopted rules and policies to improve utility design guidelines for reducing EMF. The CPUC stated "at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences." The CPUC has not adopted any specific limits or regulation on EMF levels related to electric power facilities.

3.1 Proposed Project

Devers-Harquahala 500 kV Segment. In the DPV2 Project area, the magnetic field levels at the edge of the ROW for the existing DPV1 line range from 8.3 milliGauss (mG) in Riverside County near Thousand Palms to 72.9 mG in Copper Bottom Pass, which is located in the Dome Rock Mountains in Arizona. For the Devers-Harquahala segment, field levels are expected to be reduced on the side of the ROW where the existing DPV1 line is located by approximately -0.8 to -37.9 mG. On the side of the ROW where the new line would be installed, magnetic field levels would increase by approximately +0.0 to +30.0 mG.

West of Devers (230 kV Upgrade) Segment. West of Devers, the existing magnetic field at the edge of the ROW ranges from 4.1 mG in Grand Terrance to 38.5 mG in the Loma Linda area. With the completion of the Proposed Project, field levels are estimated to be reduced at the edge of the ROW by approximately 1.0 to 18.1 mG from the existing field levels for all areas west of Devers Substation.

3.2 Alternatives – Electric and Magnetic Fields

The alternatives evaluated in this EIR/EIS are all 500 kV alternatives, so they would involve similar levels of EMFs to those described above for the Proposed Project's Devers-Harquahala segment depending upon whether the alternative is adjacent to existing transmission circuits.

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. This alternative would involve construction of a new 500 kV transmission line in a corridor where no line currently exists. Therefore, there is no existing magnetic field from transmission lines. If the alternative were implemented, field levels would increase approximately +11.3 to +46.5 mG at the edge of the ROW.

SCE Palo Verde Alternative. This alternative would involve construction of a new 500 kV transmission line in an existing corridor between Harquahala Junction and the PVNGS, adjacent to the DPV1 line. Field levels at the left edge of the ROW would be reduced from 56.1 to 33.6 mG and the right edge of the ROW would be increased from 13.6 to 39.3 mG.

Harquahala Junction Switchyard Alternative. This alternative would be constructed on an approximately 40-acre undeveloped site with no sensitive receptors in the immediate vicinity. Existing field levels would increase with the construction of a new switchyard adjacent to the existing DPV1 transmission line.

Desert Southwest Transmission Project Alternative. In general the DSWTP Alternative would be similar to the Proposed Project segment from Blythe to Devers Substation, adjacent to DPV1. In the Alligator Rock ACEC area, the DSWTP Alternative would involve construction of the transmission line in a corridor where no line currently exists. An additional small community of residences is located near the proposed Keim Substation/Switching Station and a rural residence exists along Aztec Avenue in the Desert Center area of unincorporated Riverside County (south of I-10).

Alligator Rock Alternatives. These alternatives would involve construction of a new 500 kV transmission line in a corridor where no line currently exists. Therefore, there is no existing magnetic field from transmission lines; field levels would increase approximately +11.3 to +46.5 mG at the edge of the ROW with construction of any of these alternatives.

West of Devers Alternative

Devers-Valley No. 2 Alternative. The Devers-Valley No. 2 Alternative would be installed adjacent to the existing Devers-Valley No. 1 500 kV line, so baseline magnetic fields would range from about 14 to 63 mG (depending on which side of the ROW is considered). With installation of the new transmission line, magnetic fields would increase by 22 to 28 mG on the side where the new line would be installed and fields would decrease by 16 to 19 mG on the side where the existing line is located.

No Project Alternative

Under the No Project Alternative, the proposed DPV2 project would not be constructed, so changes in EMF levels associated with operation of the project would not occur. The first component of the No Project Alternative is the continuation of ongoing demand-side actions, including energy conservation and distributed generation. These actions would result in limited or no changes related to EMF. The second component of the No Project Alternative is the continuation of supply-side actions, resulting in potentially increased generation within California or increased transmission into California to serve anticipated growth in electricity consumption. The effects of new power plants and new transmission related to EMF would be approximately the same, depending on the locations of the projects, as those that would occur under the Proposed Project.

ES.4 Summary of Impacts and Mitigation Measures

4.1 Biological Resources

4.1.1 Proposed Project

Devers-Harquahala 500 kV Segment. The Proposed Project could result in temporary disturbance and/or permanent loss of sensitive vegetation communities and listed and sensitive plant and animal species. Temporary disturbance includes short-term impacts associated with construction, such as placement of new transmission towers and removal of existing towers, construction of new access roads and improvements to existing access roads, and work at conductor tensioning/splicing and staging/laydown areas. Permanent loss involves long-term impacts associated with permanent project features (e.g., new transmission towers and substations) that would remain throughout the life of the project.

These activities would cause some removal of existing vegetation and disturbance of surface soils. In addition, permanent loss of habitat would occur where new tower or pole foundations are installed, where substations and series capacitor banks are constructed, and where access and spur roads are constructed. Surface disturbance could occur during construction, operation, and maintenance of the Proposed Project especially when vehicles are driven over existing vegetation that has not been intentionally and regularly cleared to maintain utility access roads or firebreaks. Impacts would be related to movement of equipment and project personnel for monthly or annual project maintenance and during line-stringing/cable pulling.

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

Impacts to listed and sensitive wildlife and plant species, such as desert tortoise and bighorn sheep, may occur as a result of removal of habitat and direct mortality resulting from construction and operational activities. Examples of areas of sensitive biological resources in the Devers-Harquahala segment include Kofa National Wildlife Refuge, Copper Bottom Pass, Chuckwalla Valley Dune Thicket ACEC, and Alligator Rock ACEC. Mitigation measures identified in the Biological Resources analysis, such as preparation and implementation of a Habitat Restoration/Compensation Plan, pre-construction surveys, monitoring, and coordination of tower placement with USFWS/BLM, would reduce all impacts resulting from construction and operation of this segment to less than significant levels

West of Devers (230 kV Upgrade) Segment. Similar to the Devers-Harquahala segment, the West of Devers segment would potentially impact biological resources during construction and operation of the Proposed Project. Removal of existing 230 kV single-circuit transmission lines, construction of a new 230 kV double-circuit transmission line, upgrades of 230 kV transmission lines, and establishment of construction staging and laydown areas all have the potential to result in temporary impacts to sensitive vegetation communities and wildlife. The mitigation measures identified for the Devers-Harquahala segment would be applicable to the West of Devers segment, and would serve to reduce impacts to less than significant levels.

4.1.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. The SCE Harquahala-West Alternative would travel through the same types of habitat as the Harquahala to Kofa NWR segment of the Proposed Project. This alternative would consist of undisturbed desert upland and xeroriparian vegetation typical of the Creosote–White Bursage series with some fallow and alfalfa agricultural fields. A portion of the alternative would also follow a previously disturbed pipeline corridor and unpaved access road for 9 miles. Although the SCE Harquahala-West Alternative would result in a shorter transmission line (total distance of 216 miles instead of 230 miles) and fewer transmission towers (48 fewer 500 kV towers), a new access road would be required, resulting in about 5.28 acres of additional ground disturbance. Similar to the Proposed Project, this alternative could create significant impacts to biological resources during construction and operation. Mitigation measures, as described for the Devers-Harquahala segment, would be applicable to this alternative and would serve to reduce impacts to less than significant levels.

SCE Palo Verde Alternative. The SCE Palo Verde Alternative would travel through similar types of habitat as the Harquahala to Kofa NWR segment of the Proposed Project. This alternative would consist of generally undisturbed desert upland and xeroriparian vegetation typical of the Creosote–White Bursage series where it would follow existing transmission lines. Construction and operation of the SCE Palo Verde Alternative would create similar direct and indirect impacts as those for the Proposed Project, Harquahala to Kofa NWR segment. The SCE Palo Verde Alternative would result in a longer transmission line (total distance of 240 miles instead of 230 miles) that would require the construction of more transmission towers and would result in additional ground disturbance and a loss of native desert scrub habitat. Mitigation measures, as described for the Devers-Harquahala segment, would be applicable to this alternative and would serve to reduce impacts to less than significant levels.

Harquahala Junction Switchyard Alternative. The Harquahala Junction Switchyard Alternative site would be located within the Creosote–White Bursage habitat series and is primarily undisturbed. The proposed site contains typical species associated with the Desert scrub community, and several ephemeral washes are present in the area. Several special status plant and wildlife species have potential to occur on the Harquahala Junction Switchyard Alternative site and include several bats, reptiles, an invertebrate, and cacti and woody plants protected by the Arizona Native Plant Law. Additionally, migratory birds, burros, and bighorn sheep have potential to occur on the site. Construction and operation of the Harquahala Junction Switchyard Alternative would result in similar direct and indirect impacts as those described for the Proposed Project in the area. The Harquahala Junction Switchyard Alternative would result in a slightly shorter transmission line (total distance of 225 miles instead of 230 miles); however, a new switchyard would be constructed on up to 40 acres of land, which would create an additional impact of between 6 and 40 acres of undisturbed, native desert scrub habitat. Mitigation measures, as described for the Devers-Harquahala segment, would be applicable to this alternative and would serve to reduce impacts to less than significant levels.

Desert Southwest Transmission Project Alternative. In general, the vegetation communities across the Desert Southwest Transmission Project Alternative are the same as those described for the Proposed Project segments from Midpoint Substation to Cactus City Rest Area and from Cactus City Rest Area to Devers Substation. Between the Keim Substation and the Cactus City Rest Area, this alternative would cross through Sonoran creosote bush scrub and dry desert wash woodland. In addition, scattered desert dunes also occur. The areas where the route of this alternative differ from the Proposed Project would occur

where the construction of one double-circuit 500 kV line or two parallel 500 kV transmission lines would be built for 8.8 miles from Keim Substation to Midpoint Substation and where the three new substation/switching stations (Keim, Midpoint, and on Dillon Road) would be constructed. In addition, it also would differ where the transmission line runs south along the I-10 west of Alligator Rock, and where the line would cross to the north side of I-10, approximately 2.5 miles east of the Cactus City rest area. The alternative would continue west adjacent to the existing DPV1 transmission line. Near the Keim Substation, this alternative would cross disturbed areas, agricultural lands, and the I-10 freeway. South of the I-10, the route of this alternative would cross through patches of agricultural lands within the broader expanse of creosote bush scrub located west of Blythe. The alternative locations for the Midpoint Substation and the Dillon Road Substation are also vegetated with Sonoran creosote bush scrub. The vegetation in the area where this alternative would proceed north of Alligator Rock, along the south side of the I-10, and along the north side of I-10 (east of the Proposed Project crossing of the I-10), also consists of Sonoran creosote bush scrub and dry desert wash woodland. In general, the vegetation community in these portions of the alternative alignment exhibit somewhat of a sparser distribution of shrubs, a lower plant species diversity, a higher incidence of non-native plant species, and an increased level of human disturbance. Mitigation measures, as described for the Devers-Harquahala segment, would be applicable to this alternative and would serve to reduce impacts to less than significant levels.

Alligator Rock Alternatives. The regional setting for these alternatives would be the same as that described for the Proposed Project Cactus City Rest Area to Devers Substation. The Alligator Rock Alternatives would be 0.57 to 1.2 miles longer than the Proposed route, which would increase the length and intensity of short-term construction impacts and ground disturbance to native plant communities and wildlife. The Alligator Rock Alternatives each would establish a new transmission line corridor and specifically the Alligator Rock–North of Desert Center Alternative would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor. However, due to the higher level of human disturbance north of Alligator Rock and south of the I-10, the quality of the habitat that would be removed as a result of all of the Alligator Rock Alternatives would generally be poorer than the habitat along the alignment of the Proposed Project around Alligator Rock, which would be the farthest south of I-10. Mitigation measures, as described for the Devers-Harquahala segment, would be applicable to this alternative and would serve to reduce impacts to less than significant levels.

West of Devers Alternative

Devers-Valley No. 2 Alternative. In general, the vegetation communities across the length of the Devers-Valley No. 2 Alternative would be the same as some of the communities described for the Proposed Project segments from Devers to East Border of Banning, Banning and Beaumont, Calimesa to San Bernardino Junction, and San Bernardino Junction to Vista Substation. The route would traverse a small portion of the San Bernardino National Forest (SBNF) and the Santa Rosa and San Jacinto Mountains National Monument (National Monument). It would cross the Pacific Crest National Scenic Trail (PCT). The habitat, especially within the National Monument and National Forest, the numerous riparian areas, and in the Lakeview Mountains, is of higher quality due to its more undisturbed nature than in the area proposed for the West of Devers upgrades. The mountains within the Santa Rosa and San Jacinto Mountains National Monument and SBNF include highly valuable bighorn sheep habitat through which the new line would pass. Noise from helicopter construction would affect bighorn sheep if they were present. Mitigation measures, as described for the Devers-Harquahala segment, would be applicable to this alternative and would serve to reduce impacts to less than significant levels.

No Project Alternative

Under the No Project Alternative, ground disturbance activities would not occur, and a new transmission line would not be constructed. Impacts to the various habitats, special status species, and special management areas described for the Proposed Project would not occur. Components of the No Project Alternative would include the installation of distributed generation systems and new transmission infrastructure (e.g., power plants, transmission lines). Some of these could be in the existing DPV1 ROW, resulting in impacts to biological resources that are identical to the Proposed Project. If new transmission lines or power plants are constructed outside the existing ROW, they would result in areas of new ground disturbance that could have adverse effects on biological resources.

4.2 Visual Resources

4.2.1 Proposed Project

Devers-Harquahala 500 kV Segment. The eastern portion of the Proposed Project would involve the installation of a new transmission line adjacent to an existing, similar transmission line. Therefore, visual impacts are assessed in terms of the incremental visual change that would be created by the new transmission line. Project installation would result in the long-term visibility of prominent transmission structures and linear conductors, additional industrial character, and increased view blockage from many vantage points. Of the 14 key viewpoints that were established along this route segment, two would be exposed to significant unmitigable visual changes. These significant impacts would occur in Kofa National Wildlife Refuge and at Alligator Rock ACEC. Adverse but less than significant visual impacts are identified at the 12 other key viewpoints. In all cases mitigation measures are recommended to lessen the visual impacts, though the significant visual impacts would not be reduced to levels that would be less than significant. Mitigation measure address tower design (placement, height, and color), conductor spans (matching), lighting control, and facility screening. The Proposed Project would also cause short-term visual impacts associated with project construction including visibility of project construction equipment, materials, personnel, and construction staging areas. However, due to the relatively short duration of project construction, these impacts would constitute adverse but less than significant visual impacts. Since construction land scarring in arid and semi-arid landscapes has the potential to cause longer-tem visual impacts, mitigation measures have been proposed to ensure that such impacts remain short-term.

West of Devers (230 kV Upgrade) Segment. Because there are existing transmission lines within the western segment corridor, visual impacts from the new and reconductored transmission lines are assessed in terms of the incremental visual change that would be caused by the Proposed Project. Project installation would include the removal of some structures and the addition of others, resulting in the long-term visibility of prominent transmission structures and linear conductors. Depending on the viewpoint, the Proposed Project would result in either an increase or reduction in visual contrast, structural prominence, and view blockage. Of the 12 key viewpoints that were established along this route segment, eight would be exposed to adverse but less than significant visual impacts, while four other key viewpoints would experience beneficial visual impacts due to a reduction in visual contrast, structure complexity and prominence, or view blockage. In all cases mitigation measures are recommended to lessen (or further improve in the case of beneficial impacts) the visual effects of the Proposed Project. Project construction along this route segment would cause short-term visual impacts similar to those described in the previous section and would be subjected to the same mitigation measures summarized above.

4.2.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. Most of the SCE Harquahala West Alternative would pass through a landscape presently lacking similar electric transmission facilities. Project installation would result in the long-term visibility of prominent transmission structures and linear conductors with substantial industrial character, and view blockage of higher valued landscape features such as mountain ranges, the desert plain, and sky. As documented by the one key viewpoint established for this alternative, the transmission line would result in significant visual impacts that could not be mitigated to levels that would be less than significant. This alternative would also cause construction impacts similar to the Proposed Project described above and would be subject to the same mitigation measures.

SCE Palo Verde Alternative. Because the SCE Palo Verde Alternative would be constructed adjacent to two existing, similar transmission lines, impacts are assessed in terms of the incremental increase in visual effect that would be created by the alternative. Project installation would result in the long-term visibility of prominent transmission structures and linear conductors, additional industrial character, and view blockage of higher valued landscape features such as mountain ranges, the desert plain, and sky. As documented by the one key viewpoint established for this alternative, the transmission line would result in adverse but less than significant visual impacts. Mitigation measures are proposed to further lessen adverse visual impacts. This alternative would also cause construction impacts similar to the Proposed Project described above and would be subject to the same mitigation measures.

Harquahala Junction Switchyard Alternative. Unlike the proposed location for the switchyard, which is within an existing power plant west of Salome Highway, the Harquahala Switchyard Alternative would be located immediately adjacent and to the east of Salome Highway. As a result, the switchyard alternative would lack the more dominant industrial context of the power plant and would result in the long-term visibility of a prominent, structurally complex, and industrial-appearing facility, which would also cause view blockage of higher valued landscape features such as background hills and sky. This switchyard alternative would result in a significant visual impact that could be mitigated to a level that would be less than significant with effective vegetative screening along the east side of Salome Highway. This alternative would also cause construction impacts similar to the Proposed Project described above and would be subject to the same mitigation measures.

Desert Southwest Transmission Project Alternative. A majority of this alternative route would follow a route similar to the Proposed Project (see above for a discussion of those impacts and mitigation measures). Variations under this alternative include (a) a route segment between Keim Substation and a variant of Midpoint Substation, (b) a 9.5-mile route variant around Alligator Rock, and (c) a third substation adjacent to the existing DPV1 line west of Dillon Road near Indio. With the exception of the 9.5-mile route variant around Alligator Rock, which would result in significant unmitigable visual impacts, the remainder of this alternative would cause adverse but less than significant visual impacts. This alternative would also cause construction impacts similar to the Proposed Project described above and would be subject to the same mitigation measures.

Alligator Rock Alternatives. All of the Alligator Rock Alternatives would be located in close proximity to Alligator Rock and Interstate 10 (I-10) in the vicinity of Desert Center. All of the Alligator Rock alternatives would also have route alignments that would be independent of the existing 500 kV transmission line corridor located further to the south. In all cases, project installation would result in the long-term visibility of prominent transmission structures and linear conductors, additional industrial character, and view

blockage of higher valued landscape features such as mountain ranges, Alligator Rock, the desert plain, and sky. Views from I-10 would be particularly impacted, as would views from Kaiser Road and SR 177 for the Alligator Rock North of Desert Center Alternative. As documented by the three key viewpoints established for these alternatives, all of the Alligator Rock alternatives would result in significant, unmitigable visual impacts. Mitigation measures are proposed to lessen the visual impacts but they would not be reduced to levels that would be less than significant. These alternatives would also cause construction impacts similar to the Proposed Project described above and would be subject to the same mitigation measures.

West of Devers Alternative

Devers-Valley No. 2 Alternative. The Devers-Valley Alternative would involve the installation of a new transmission line adjacent to an existing, similar transmission line. Therefore, visual impacts are assessed in terms of the incremental increase in visual impact that would be created by the new line only. Project installation would result in the long-term visibility of prominent transmission structures and linear conductors, additional industrial character, and increased view blockage from many vantage points including residences, designated and eligible scenic highways, the Pacific Crest Trail, and local roads. Of the 4 key viewpoints that were established along this route segment, all four would be exposed to significant, unmitigable visual changes. In all cases mitigation measures are recommended to lessen the visual impacts, though the impacts would not be reduced to levels that would be less than significant. This alternative would also cause construction impacts similar to the Proposed Project described above and would be subject to the same mitigation measures.

No Project Alternative

The No Project Alternative would eliminate the significant and less than significant visual impacts that would result from the Proposed Project, as well as the beneficial impacts that would be experienced along some portions of the West of Devers route segment. However, the No Project Alternative may also result in the construction of other transmission lines and/or generation facilities that would have their own attendant visual impacts that may be greater or less than those of the Proposed Project.

4.3 Land Use

4.3.1 Proposed Project

Devers-Harquahala 500 kV Segment. The Devers-Harquahala segment would significantly impact landowners in Harquahala Valley, Palo Verde Valley, Desert Center, and in Riverside County areas north of the cities of Indio, Palm Desert, and Palm Springs. The segment would also traverse tribal lands owned by members of the Agua Caliente Band of Cahuilla Indians. The Devers-Harquahala segment would require construction across the Central Arizona Project (CAP) Canal, which may impact the canal during construction and/or operation. Mitigation measures identified in the Land Use analysis would reduce impacts resulting from construction and operation of this segment to less than significant levels. Mitigation would include the preparation of a construction notification plan to inform property and business owners of the location and duration of construction. SCE would also coordinate with the Agua Caliente Band of Cahuilla Indians and would ascertain the legal requirements for crossing tribal lands prior to construction. To mitigate potential impacts to the CAP Canal, SCE would be required to coordinate the canal crossing with the Central Arizona Water Conservation District and the BLM Phoenix Field Office. With implementation of these mitigation measures, land use impacts during construction and operation of the Proposed Project would be less than significant.

West of Devers (230 kV Upgrade) Segment. The West of Devers segment would significantly impact landowners, businesses, and public and community facilities (e.g., memorial parks, churches, schools) in the Cities of Banning, Beaumont, Calimesa, Loma Linda, Colton, and Grand Terrace, and in Riverside County areas east of the City of Banning and within San Timoteo Canyon. This segment would also impact tribal lands under the jurisdiction of the Morongo Band of Mission Indians. Mitigation measures identified in the Land Use analysis would reduce impacts resulting from construction and operation of this segment to less than significant levels. In addition to the construction notification plan described for the Devers-Harquahala segment, SCE would arrange the construction schedule with affected owners to ensure that business functions are not disrupted. To minimize impacts to public and community facilities, SCE would coordinate its construction schedule with the affected facilities that were identified in the analysis. With these mitigation measures, the land use impacts that would be attributed to the West of Devers segment would be less than significant.

4.3.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala-West Alternative. This alternative would create a ~~permanent preclusion of~~temporary disturbance to existing land uses in the Harquahala Valley area, resulting in significant impacts to residences. ~~As such, operational impacts associated with this alternative would be greater than those of the Proposed Project, and no~~Implementation of mitigation measures, however, ~~have been identified that~~ similar to those identified for the Devers-Harquahala segment of the Proposed Project and including avoidance of certain agricultural land would reduce impacts to a less than significant level.

SCE Palo Verde Alternative. This alternative would avoid rural residences that would be impacted by the Proposed Project, thereby creating ~~less than~~no significant impacts to existing land uses. No mitigation measures would be implemented for the alternative.

Harquahala Junction Switchyard Alternative. Similar to the SCE Palo Verde Alternative, the Harquahala Junction Switchyard Alternative would avoid rural residences that would be impacted by the Proposed Project. ~~Less than~~No significant impacts to existing land uses would occur, and no mitigation measures would be implemented.

Desert Southwest Transmission Project Alternative. This alternative would significantly impact residences in the Palo Verde Valley, Desert Center, and in Riverside County areas north of the Cities of Indio, Palm Desert, and Palm Springs. The segment would also traverse tribal lands owned by members of the Agua Caliente Band of Cahuilla Indians. With mitigation measures similar to those identified for the Devers-Harquahala segment of the Proposed Project, land use impacts attributed to construction and operation of the alternative would be reduced to a level that is less than significant.

Alligator Rock Alternatives. The Alligator Rock Alternatives would significantly impact residences and commercial uses in the Desert Center area of Riverside County. To mitigate impacts to a less than significant level, SCE would prepare a construction notification plan as described for the Devers-Harquahala segment of the Proposed Project.

West of Devers Alternative

Devers-Valley No. 2 Alternative. The alternative would significantly impact landowners, businesses, and public and community facilities (e.g., memorial parks, churches, schools) in the Cities of Banning

and Beaumont, and in Riverside County areas southeast of the City of Banning, and northwest and west of the City of San Jacinto. Mitigation measures described for the Devers-Harquahala segment of the Proposed Project would reduce impacts resulting from construction and operation of this alternative to less than significant levels. With these mitigation measures, the land use impacts that would be attributed to the Devers-Valley No. 2 Alternative would be less than significant.

No Project Alternative

Under the No Project Alternative, construction-related impacts would not occur to existing sensitive land uses such as rural and urban residential communities, schools, public visitor centers, cemeteries, and areas of important cultural and wilderness resources. Components of the No Project Alternative would include the installation of distributed generation systems and new transmission infrastructure (e.g., power plants, transmission lines). If new facilities are sited in developed areas, these facilities would likely create significant impacts to existing land uses similar to the Proposed Project.

4.4 Wilderness and Recreation

4.4.1 Proposed Project

Devers-Harquahala 500 kV Segment. The Devers-Harquahala segment would significantly impact recreational resources during construction and operation of the Proposed Project. Construction activities would temporarily reduce access and visitation, and the siting of transmission towers and access roads would potentially preclude recreation areas. Mitigation measures identified in the Wilderness and Recreation analysis would reduce impacts resulting from construction and operation of this segment to less than significant levels. Mitigation would include coordinating the construction schedule and activities with the authorized officer of the affected recreation areas. In addition, SCE would be required to coordinate tower and road locations with the aforementioned authorized officers.

The Devers-Harquahala segment would also create permanent impacts to the character of the following recreation or wilderness areas: Kofa National Wildlife Refuge, Chuckwalla Valley Dune Thicket ACEC, and Alligator Rock ACEC. Impacts to these resources would be significant and unmitigable.

West of Devers (230 kV Upgrade) Segment. Similar to the Devers-Harquahala segment, the West of Devers segment would significantly impact recreational resources during construction and operation of the Proposed Project. The mitigation measures identified for the Devers-Harquahala segment would be applicable to this segment, and would serve to reduce impacts to less than significant levels. No permanent impacts to the character of recreation or wilderness areas would be attributed to the West of Devers segment.

4.4.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala-West Alternative. Similar to the Proposed Project, the alternative would create significant impacts to recreational resources during construction. Coordination requirements with the authorized officer for the recreation areas, as described for the Devers-Harquahala segment, would be applicable to this alternative and would serve to reduce impacts to less than significant levels. No permanent impacts to the character of recreation or wilderness areas would be attributed to the SCE Harquahala-West Alternative.

SCE Palo Verde Alternative. This alternative would avoid traversing recreation or wilderness areas, and as such would not impact recreational resources. No mitigation measures would be implemented for the alternative.

Harquahala Junction Switchyard Alternative. This alternative would avoid traversing recreation or wilderness areas, and as such would not impact recreational resources. No mitigation measures would be implemented for the alternative.

Desert Southwest Transmission Project Alternative. Similar to the Proposed Project, this alternative would significantly impact recreational resources during construction and operation. The mitigation measures identified for the Proposed Project would be applicable to this alternative, and would serve to reduce impacts to less than significant levels. The Desert Southwest Transmission Project Alternative would also create permanent impacts to the character of the Chuckwalla Valley Dune Thicket and Alligator Rock ACECs. As described for the Devers-Harquahala segment, impacts to these resources would be significant and unmitigable.

Alligator Rock Alternatives.

The Alligator Rock–North of Desert Center Alternative would avoid traversing recreation or wilderness areas, and as such would not impact recreational resources. No mitigation measures would be implemented for the alternative.

The Alligator Rock–Blythe Energy Transmission Alternative and the South of I-10 Frontage Alternative would be similar to the Proposed Project by creating significant impacts to recreational resources during construction and operation. The mitigation measures identified for the Proposed Project would be applicable to these alternatives, and would serve to reduce impacts to less than significant levels. These alternatives would also create permanent impacts to the character of the Alligator Rock ACEC. As described for the Devers-Harquahala segment, impacts to this resource would be significant and unmitigable.

West of Devers Alternative

Devers-Valley No. 2 Alternative. Similar to the Proposed Project, the Devers-Valley No. 2 Alternative would significantly impact recreational resources during construction and operation. The mitigation measures identified for the Proposed Project would be applicable to this alternative, and would serve to reduce impacts to less than significant levels. The Devers-Valley No. 2 Alternative would also create permanent impacts to the character of the following recreation and wilderness areas: Santa Rosa and San Jacinto Mountains National Monument, PCT, SBNF, San Jacinto WA, and the Potrero ACEC. As described for the Devers-Harquahala segment, impacts to these resources would be significant and unmitigable.

No Project Alternative

Under the No Project Alternative, construction-related impacts would not occur to recreation or wilderness areas resulting from temporary or permanent preclusion of recreational resources. Components of the No Project Alternative would include the installation of distributed generation systems and new transmission infrastructure (e.g., power plants, transmission lines). If new facilities are sited in recreation areas, these facilities would likely create significant impacts to existing recreational resources similar to the Proposed Project.

4.5 Agriculture

4.5.1 Proposed Project

Devers-Harquahala 500 kV Segment. The Devers-Harquahala segment would significantly impact agricultural resources by contributing to a temporary conversion of Farmland to a non-agricultural use. Construction and operational activities would also interfere with agricultural operations. Mitigation measures identified in the Agriculture analysis would reduce impacts resulting from construction and operation of this segment to less than significant levels. Mitigation would include establishing an agreement and coordinating construction activities with agricultural landowners, and the preparation of a construction notification plan. In addition, SCE would locate transmission tower and pulling/splicing stations to avoid agricultural operations.

Operation of the Devers-Harquahala segment in the Harquahala Valley would also contribute to a permanent conversion of Farmland to a non-agricultural use. This impact would be significant and unmitigable.

West of Devers (230 kV Upgrade) Segment. Neither construction nor operation of the West of Devers segment would create significant impacts to agricultural resources. No mitigation measures would be implemented for this segment of the Proposed Project.

4.5.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala-West Alternative. Similar to the Proposed Project, the SCE Harquahala-West Alternative would significantly impact agricultural resources during construction and operation. The mitigation measures identified for the Devers-Harquahala segment would be applicable to this alternative, and would serve to reduce impact to less than significant levels. Operation of the SCE Harquahala-West Alternative would also contribute to a permanent conversion of Farmland in the Harquahala Valley, resulting in a significant and unmitigable impact.

SCE Palo Verde Alternative. Similar to the Proposed Project, the SCE Palo Verde Alternative would significantly impact agricultural resources during construction and operation. The mitigation measures identified for the Devers-Harquahala segment would be applicable to this alternative, and would serve to reduce impact to less than significant levels. Any permanent conversion of Farmland would not be significant under this alternative.

Harquahala Junction Switchyard Alternative. The Harquahala Junction Switchyard Alternative would not be constructed on Farmland. No impacts to agricultural resources would occur under this alternative.

Desert Southwest Transmission Project Alternative. Neither construction nor operation of this alternative would create significant impacts to agricultural resources. No mitigation measures would be implemented for the Desert Southwest Transmission Project Alternative.

Alligator Rock Alternatives. The Alligator Rock Alternatives would not be constructed on Farmland. No impacts to agricultural resources would occur under these alternatives.

West of Devers Alternative

Devers-Valley No. 2 Alternative. Neither construction nor operation of this alternative would create significant impacts to agricultural resources. No mitigation measures would be implemented for the Devers-Valley No. 2 Alternative.

No Project Alternative

Under the No Project Alternative, construction-related impacts would not occur to agricultural resources resulting from a temporary or permanent conversion of Farmland, or an interference with agricultural operations. Components of the No Project Alternative would include the installation of distributed generation systems and new transmission infrastructure (e.g., power plants, transmission lines). If new facilities are sited on Farmland, these facilities would likely create significant impacts to agriculture similar to the Proposed Project.

4.6 Cultural and Paleontological Resources

4.6.1 Proposed Project

Devers-Harquahala 500 kV Segment. The Devers-Harquahala segment would have adverse effects on historic properties (historical structures and prehistoric and historic archaeological sites that are eligible for listing on the National Register of Historic Places or the California Register of Historic Resources) and significant paleontological resources during construction and operation of the Proposed Project. Construction activities and access roads could directly impact archaeological sites and fossil localities, while the siting of permanent transmission towers and other facilities could adversely affect historic viewsheds or landscapes that contribute to the significance of historic sites. Mitigation measures identified in the Cultural and Paleontological Resources analysis would reduce adverse effects resulting from construction and operation of this segment, in most cases, to less than significant levels. Mitigation would include siting of project facilities and construction activities to avoid direct impacts to historic properties and fossil localities and personnel training and exclusionary barriers to protect resources during construction. Where significant paleontological resources cannot be protected from direct construction impacts, fossil recovery, analysis, and curation would be undertaken.

In cases where direct impacts to known historic properties cannot be avoided, or if buried historic properties are discovered during construction, adverse effects would be reduced by mitigation, but would be significant. Mitigation to reduce adverse effects to historic properties would be in accordance with a Treatment Plan approved by the BLM and the appropriate State Historic Preservation Officer, and would likely involve data recovery investigations, historical research, site documentation, and public interpretation.

Operational impacts to historic properties would be reduced to less than significant levels by site avoidance, personnel training, and a site monitoring program.

West of Devers (230 kV Upgrade) Segment. Within the West of Devers segment, all known historic properties can be protected from direct construction and operational impacts. Therefore, the Proposed Project will have no adverse effects to known historic properties. In this segment there is potential for direct impacts to significant paleontological resources and buried historic properties. For those resources, the mitigation measures identified for the Devers-Harquahala segment would be applicable to this segment.

4.6.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. There are no known historic properties within this alternative. However, there is potential for direct construction impacts to significant paleontological resources and buried historic properties. For those resources, the mitigation measures identified for the Devers-Harquahala segment would be applicable to this alternative.

SCE Palo Verde Alternative. Within this alternative, known historic properties would be protected from direct construction and operational impacts by careful siting of project facilities, roads, and other construction areas. Therefore, it is anticipated that these alternatives will have no adverse effects to known historic properties. In cases where known historic properties cannot be protected from direct construction and operational impacts, mitigation measures identified for the Devers-Harquahala segment would be implemented to reduce adverse effects.

In this alternative there is potential for direct impacts to significant paleontological resources and buried historic properties. For those resources, the mitigation measures identified for the Devers-Harquahala segment would be applicable to this segment.

Harquahala Junction Switchyard Alternative. There are no known historic properties within this alternative. However, there is potential for direct construction impacts to significant paleontological resources and buried historic properties. For those resources, the mitigation measures identified for the Devers-Harquahala segment would be applicable to this alternative.

Desert Southwest Transmission Project Alternative. Within this alternative, known historic properties would be protected from direct construction and operational impacts by careful siting of project facilities, roads, and other construction areas. Therefore, it is anticipated that this alternative will have no adverse effects to known historic properties. In cases where known historic properties cannot be protected from direct construction and operational impacts, mitigation measures identified for the Devers-Harquahala segment would be implemented to reduce adverse effects.

In this alternative there is potential for discovery and direct impacts to buried historic properties. For those resources, the mitigation measures identified for the Devers-Harquahala segment would be applicable to this segment. This alternative has low potential for significant paleontological resources and no impacts are anticipated.

Alligator Rock Alternatives. Within all three Alligator Rock alternatives, known historic properties would be protected from direct construction and operational impacts by careful siting of project facilities, roads, and other construction areas. Therefore, it is anticipated that this alternative will have no adverse effects to known historic properties. In cases where known historic properties cannot be protected from direct construction and operational impacts, mitigation measures identified for the Devers-Harquahala segment would be implemented to reduce adverse effects.

In all three Alligator Rock alternatives there is potential for discovery and direct impacts to buried historic properties. For those resources, the mitigation measures identified for the Devers-Harquahala segment would be applicable to this segment. These three alternatives have low potential for significant paleontological resources and no impacts are anticipated.

West of Devers Alternative

Devers-Valley No. 2 Alternative. Within this alternative, most of the known historic properties would be protected from direct construction and operational impacts by careful siting of project facilities, roads, and other construction areas. Therefore, it is anticipated that this alternative will have no adverse effects to known historic properties. In cases where known historic properties cannot be protected from direct construction and operational impacts, mitigation measures identified for the Devers-Harquahala segment would be implemented to reduce adverse effects.

In this alternative there is potential for direct impacts to significant paleontological resources and buried historic properties. For those resources, the mitigation measures identified for the Devers-Harquahala segment would be applicable to this segment.

No Project Alternative

Under the No Project Alternative, construction-related impacts resulting from ground-disturbing activities would not occur to cultural or paleontological resources. Components of the No Project Alternative would include the installation of distributed generation systems and new transmission infrastructure (e.g., power plants, transmission lines). New facilities would likely create significant impacts to cultural and paleontological resources similar to the Proposed Project.

4.7 Noise

4.7.1 Proposed Project

Devers-Harquahala 500 kV Segment. Construction would require short-term use of heavy equipment such as cranes, drill rigs, dozers, excavators, compressors, generators, and trucks. Helicopters would also be needed to transport construction materials and to string the conductors for the overhead line. Noise ordinances usually provide exemptions for construction activities occurring during normal daytime, weekday hours, but SCE may be forced to obtain approval from local jurisdictions where local noise ordinances fail to exempt construction activity especially if it would occur at night. There may be a need to work outside of the daytime, weekday hours to take advantage of low electrical draw periods at night hours or to cross major roads and highways. Mitigation including best management practices for noise suppression would reduce impacts of construction noise to less than significant levels.

Once operational, noise from the overhead transmission line would occur from corona discharge and minor inspection or maintenance activities. Inspection and maintenance along the overhead route would not change substantially when compared to the existing conditions. Audible noise from corona discharge along a 500 kV line can be well above background ambient noise levels, especially during wet weather. The corona noise impact would be significant for residences of unincorporated Riverside County within 200 feet of the ROW in the Palo Verde Valley, Thousand Palms, and North Palm Springs. There are few options for mitigating corona noise as it would be a function of conductor design and configuration, which is related to the power transmission needs and tower design and configuration. SCE hopes to relocate some homes, but if this proves problematic, the violation of the Riverside County noise policies during wet weather would create an infrequent but significant and unavoidable noise impact for homes within 200 feet of the 500 kV ROW.

West of Devers (230 kV Upgrade) Segment. Construction of the WOD upgrades would involve the short-term use of heavy equipment and helicopters in a manner similar to that expected for the 500 kV segment. Approximately 24 months of work would be necessary to build the WOD portion of the project,

with multiple crews at separate locations, at times causing construction noise at night. This would cause potentially significant noise impacts to many residences and other noise-sensitive land uses along the corridor; however, with mitigation, construction noise impacts would be less than significant. Corona noise levels along the 230 kV segment would decrease as a result of the Proposed Project because of the increased capacities of the new conductors and the reconfiguration of the towers within the corridor.

4.7.2 Alternatives

Alternatives within Devers-Harquahala Segment

The noise impacts for each alternative would vary depending on their proximity of noise-sensitive land uses. In general, all alternatives would cause similar noise impacts, which means that the mitigation measures for the Proposed Project would remain appropriate for the alternatives.

Harquahala West Alternative. The corridor of the Harquahala-West Alternative contains no noise-sensitive receptors. Given the lack of receptors, noise impacts would be less than significant.

Palo Verde Alternative. The Palo Verde Alternative would cause construction noise near one dwelling, about one-quarter mile from the corridor, south of Salome Highway (MP PV1). With mitigation, the noise impacts would be less than significant.

Harquahala Junction Switchyard Alternative. No noise-sensitive receptors are near the location of the proposed Harquahala Junction Switchyard. Given the lack of receptors, noise impacts would be less than significant.

Desert Southwest Transmission Project Alternative. The DSWTP Alternative would bring noise impacts to residences that would not be affected under the Proposed Project: an additional small community of residences near the proposed Keim Substation/Switching Station and a rural residence along Aztec Avenue in the Desert Center area of unincorporated Riverside County (south of I-10). With mitigation, the construction noise impacts would be less than significant. However, as with the Proposed Project, this alternative could occasionally cause excessive corona noise that would create unacceptable conditions according to Riverside County policies for any residences within about 200 feet. This would cause an infrequent, but significant and unavoidable, noise impact for homes near the proposed Keim Substation.

Alligator Rock Alternatives. The Alligator Rock Alternatives that would be south of I-10 would affect one rural residence near Desert Center that would not be otherwise affected by the Proposed Project. This is the same property that would be affected by the DSWTP Alternative. As with the Proposed Project the Alligator Rock Alternatives would cause construction noise and corona noise. With mitigation, the construction noise impacts would be less than significant. Corona noise levels would not violate local noise policies at the Desert Center residence because the home is located at a sufficient distance to be protected from corona noise.

West of Devers Alternative

Devers-Valley No. 2 Alternative. The Devers-Valley No. 2 Alternative would bring noise impacts to areas of Riverside County and the City of Banning that would not be affected under the Proposed Project. With mitigation, the construction noise impacts would be less than significant. However, this alternative would increase the corona noise levels in the corridor of the Devers-Valley No. 2 Alternative to levels that would cause potentially significant noise impacts during wet weather. This violation of Riverside County policies would result in an infrequent, but significant, noise impact for any home within 200 feet of the ROW of the Devers-Valley No. 2 Alternative that would remain unavoidable.

No Project Alternative

The No Project Alternative would avoid construction-related or operational noise changes, including permanent changes in audible corona noise. The continuation of ongoing demand-side and supply-side actions under the No Project Alternative could lead to installations of distributed generation (DG) or new power plants and transmission lines. These actions would result in possible localized noise impacts. However, local jurisdictions such as cities and counties, would need to conduct environmental reviews, and the sources would need to comply with local noise rules, standards, and/or ordinances. Substantial noise effects would occur for any noise-sensitive uses near possible power plants, and new transmission facilities could cause substantial corona noise.

4.8 Transportation & Traffic

4.8.1 Proposed Project

Devers-Harquahala 500 kV Segment. The majority of transportation and traffic related impacts would occur during the construction phase of the project. Operational impacts include a negligible increase of traffic on project area roads and minor aviation safety issues. The majority of construction impacts would occur during transmission line stringing activities over roads, including I-10. Construction could require temporary road closures during stringing, which would potentially impact general traffic, emergency service providers, bus services, and pedestrian and bicycle movements. However, encroachment permits from each applicable transportation agency would need to be secured by the Applicant before a roadway could be temporarily blocked. Encroachment permits would require that the Applicant implement safety and traffic control measures. Impacts associated with temporary road closures would be less than significant. Construction activities could also temporarily block railroad operations and affect aviation safety; both of which would result in less than significant impacts. One potentially significant impact is identified related to the potential for construction equipment to physically damage roads in the project area. However, a mitigation measure is recommended that would reduce road damage impacts to less than significant levels.

West of Devers (230 kV Upgrade) Segment. The same impacts that would occur for the Devers-Harquahala segment would for under the West of Devers Segment. In addition, for the West of Devers segment, the proposed project would result short-term elimination of parking spaces. This impact is considered less than significant with implementation of a mitigation measure that would require coordination with the parking lot owner.

4.8.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. Construction could require temporary road closures during stringing, which would potentially impact general traffic levels and emergency service providers, bus services, and pedestrian and bicycle movements. There would be no aviation safety concerns for this alternative. All other impacts would be general the same as those described above for the Devers-Harquahala segment of the Proposed Project.

SCE Palo Verde Alternative. The types of impacts that would be associated with the SCE Palo Verde Alternative would be essentially the same as that described above for the SCE Harquahala West Alternative.

Harquahala Junction Switchyard Alternative. Under the Harquahala Junction Switchyard Alternative, there would be no potential for project construction activities to block roadways or to affect aviation safety. All other impacts would be general the same as those described above for the Devers-Harquahala segment of the Proposed Project.

Desert Southwest Transmission Project Alternative. The types of impacts that would be associated with the Desert Southwest Transmission Project Alternative would be essentially the same as that described above for the Devers-Harquahala segment of the Proposed Project. However, this alternative would not result in a potential disruption to rail operations.

Alligator Rock Alternatives. The types of impacts that would be associated with the Alligator Rock Alternatives would be essentially the same as that described above for the Desert Southwest Transmission Project Alternative. However, the Alligator Rock–North of Desert Center Alternative would not result in any impacts to pedestrian and/or bicycle movements.

West of Devers Alternative

Devers-Valley No. 2 Alternative. The types of impacts that would be associated with the Devers-Valley No. 2 Alternative would be essentially the same as that described above for the Devers-Harquahala segment of the Proposed Project. However, this alternative would not result in any aviation safety impacts.

No Project Alternative

Under the No Project Alternative, the proposed DPV2 project would not be constructed, so the impacts associated with construction and operation of the project would not occur. The first component of the No Project Alternative is the continuation of ongoing demand-side actions, including energy conservation and distributed generation. These actions would result in limited or no impacts to transportation and traffic. The second component of the No Project Alternative is the continuation of supply-side actions, resulting in potentially increased generation within California or increased transmission into California to serve anticipated growth in electricity consumption. The impacts of new power plants and new transmission lines to transportation and traffic would be approximately the same, depending on the locations of the projects, as those that would occur under the Proposed Project.

4.9 Public Health & Safety

4.9.1 Proposed Project

Devers-Harquahala 500 kV Segment. Construction activities associated with the Proposed Project along the Devers-Harquahala 500 kV Segment could result in soil contamination from improper handling and spills, encountering residual pesticides and other unknown pre-existing contamination. In addition soil contamination could result from accidental spill or release of hazardous materials during operations and maintenance. With mitigation, contamination encountered during construction or resulting from an accidental spill or release would be properly removed and transported; all impacts would be less than significant.

West of Devers (230 kV Upgrade) Segment. The same impacts that would occur for the proposed Devers-Harquahala segment would occur under the West of Devers Segment. With mitigation, contamination encountered during construction or resulting from an accidental spill or release would be properly removed and transported; all impacts would be less than significant.

4.9.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. The Harquahala-West Alternative traverses agricultural land west of the Harquahala Switchyard, then crosses undeveloped open space to the existing El Paso Natural Gas pipeline utility corridor, resulting in a very low potential for environmental contamination that is typically associated with commercial and industrial land use activities. However, it does have a potential for contamination related to residual pesticides and herbicides. Based on the environmental database review, there are no known hazardous release sites along this alternative route segment. Therefore, few impacts are expected, and if unanticipated sites are discovered or soil contamination results from an accidental spill or release of hazardous materials, mitigation would ensure that impacts are less than significant.

SCE Palo Verde Alternative. The SCE Palo Verde Alternative route has a very low potential to encounter environmental contamination associated with commercial, industrial, or agricultural land use activities because it traverses undeveloped open space within an existing transmission line corridor and there are no known hazardous release sites within this alternative route segment. However, there is some potential for soil contamination within the PVNGS Switchyard and if unanticipated sites are discovered or soil contamination results from an accidental spill or release of hazardous materials, mitigation would ensure that impacts are less than significant.

Harquahala Junction Switchyard Alternative. This alternative would be constructed on an approximately 40-acre undeveloped site with no known hazardous release sites in the immediate vicinity. This alternative has no potential to encounter environmental contamination; however, if unanticipated sites are discovered or soil contamination results from an accidental spill or release of hazardous materials, mitigation would ensure that impacts are less than significant.

Desert Southwest Transmission Project Alternative. In general the DSWTP Alternative would have a very low potential to encounter environmental contamination typically associated with commercial and industrial land use activities. Based on the limited environmental database review, there are no known hazardous release sites within the proposed alternative. Therefore, few impacts are expected, and if unanticipated sites are discovered or soil contamination results from an accidental spill or release of hazardous materials, mitigation would ensure that impacts are less than significant.

Alligator Rock Alternatives. These alternatives have a very low potential to encounter environmental contamination associated with commercial, industrial, or agricultural land use activities. Based on the review of online environmental databases, there are no known hazardous release sites along these alternative route segments. Therefore, few impacts are expected, and if unanticipated sites are discovered or soil contamination results from an accidental spill or release of hazardous materials, mitigation would ensure that impacts are less than significant.

West of Devers Alternative

Devers-Valley No. 2 Alternative. The Devers-Valley Alternative traverses primarily undeveloped open space and a small amount of agricultural land uses within an existing 500 kV transmission line corridor. Between MPs DV27 and DV28 the alternative route passes between 500 to 1,000 feet north and west of the Riverside County Landfill, an active municipal waste landfill. Overall, the alternative route has a very low potential to encounter environmental contamination typically associated with commercial and industrial

land use activities. Based on the limited environmental database review, there are no known hazardous release sites within or adjacent to this alternative route and few impacts are expected. If unanticipated sites are discovered or soil contamination results from an accidental spill or release of hazardous materials, mitigation would ensure that impacts are less than significant.

No Project Alternative

Under the No Project Alternative, the proposed DPV2 project would not be constructed, so the impacts associated with construction and operation of the project would not occur. The first component of the No Project Alternative is the continuation of ongoing demand-side actions, including energy conservation and distributed generation. These actions would result in limited or no impacts related to environmental contamination. The second component of the No Project Alternative is the continuation of supply-side actions, resulting in potentially increased generation within California or increased transmission into California to serve anticipated growth in electricity consumption. The impacts of new power plants and new transmission related to environmental contamination would be approximately the same, depending on the locations of the projects, as those that would occur under the Proposed Project.

4.10 Air Quality

4.10.1 Proposed Project

Devers-Harquahala 500 kV Segment. The project would generate localized pollutant emissions from the construction equipment over the entire construction duration. Over the long-term, the project would affect power plant emissions in California and Arizona, and minimal vehicular emissions associated with maintenance and repair of the transmission line would also occur.

Dust and equipment exhaust emissions would be caused by all construction activities especially where heavy amounts of travel would occur on unpaved roads and surfaces that would create fugitive dust. Use of construction equipment and emissions from motor vehicles would also adversely affect air quality because construction activities would emit pollutants that could contribute to existing violations of ambient air quality standards. The severity of impacts due to construction emissions depends on the local air quality and the regulatory requirements of each different local air quality management jurisdiction.

The construction emissions would cause an impact characterized as less than significant in the jurisdiction of the Maricopa County Air Quality Division (MCAQD), but because of relatively less stringent regulations elsewhere in Arizona, mitigation would be required in the La Paz County portion of the Arizona Department of Environmental Quality (ADEQ) to reduce construction impacts to a less than significant level. In California, additional mitigation would be required to reduce construction impacts to a less than significant level in the Mojave Desert Air Quality Management District (MDAQMD). In the South Coast Air Quality Management District (SCAQMD), where most construction activity would occur, mitigation would be required, but construction impacts would remain significant and unavoidable. Mitigation would also require that NOx emissions be offset during years that project emissions are forecast to exceed the General Conformity *de minimis* threshold in the South Coast Air Basin (SCAB).

The CAISO forecasts that with DPV2 operational, power plant emissions in California would decrease, and emissions from power plants in Arizona and other western states would increase. The precise location and quantity of the forecasted emissions reductions would change over time depending on the ultimate customers of power flowing from DPV2, but the decrease in California power plant emissions is consid-

ered to be a beneficial impact of the Proposed Project. Because less efficient facilities in California would be used less, the decrease in California power plant emissions would be large compared to the increase in emissions in Arizona. This impact in Arizona would be less than significant.

West of Devers (230 kV Upgrade) Segment. The entirety of proposed WOD upgrades would occur within the jurisdiction of the SCAQMD, where construction impacts would be significant and unavoidable. Mitigation would require that NOx emissions be offset during years that project emissions are forecast to exceed the SCAB General Conformity *de minimis* threshold.

4.10.2 Alternatives

The air quality impacts for each alternative would vary depending on the intensity of construction activities. In general, all alternatives would cause similar air quality impacts, which means that the mitigation measures for the Proposed Project would remain appropriate for the alternatives.

Alternatives within Devers-Harquahala Segment

Harquahala West Alternative. The Harquahala West Alternative would cause more emissions in the ADEQ and fewer emissions in the MCAQD when compared to the construction emissions of the Proposed Project. The impact would be classified as less than significant in MCAQD, but as with the Proposed Project, mitigation would be required in the ADEQ to reduce this impact to a less than significant level.

Palo Verde Alternative. The Palo Verde alternative would not cause any notably different impacts within the MCAQD when compared to the Proposed Project, and the impact would remain less than significant.

Harquahala Junction Switchyard Alternative. This alternative would cause a slight decrease in the Proposed Project's construction emissions within MCAQD jurisdiction, and the impact would remain less than significant.

Desert Southwest Transmission Project Alternative. Air quality impacts from construction emissions would be less than significant with the mitigation implemented in MDAQMD, but for activities within the SCAQMD, the impacts would be significant and unavoidable.

Alligator Rock Alternatives. Each of the Alligator Rock Alternatives would occur in the Mojave Desert portion of the SCAQMD. The alternatives would cause slight emission increases when compared to the Proposed Project, and because the alternatives would occur in the SCAQMD, the impact would be significant and unavoidable

West of Devers Alternative

Devers-Valley No. 2 Alternative. The Devers-Valley No. ~~3~~ 2 Alternative would result in greater levels of daily NOx and CO construction emissions within the SCAB compared to the Proposed Project. However, because it would involve a reduced overall amount of construction and less demolition activity, this alternative causes less annual emissions in SCAB and SSAB. Although this alternative would avoid exceeding the General Conformity *de minimis* threshold for annual NOx emissions, local SCAQMD thresholds would be exceeded, and the construction impact would be significant and unavoidable.

No Project Alternative

The No Project Alternative would avoid construction-related project emissions and the project-related changes in regional emissions from power plants. The continuation of ongoing demand-side and supply-side actions under the No Project Alternative would avoid the dust and exhaust emissions caused by project construction activities and the changes in emissions from power plants that could be caused by operation of DPV2. The forecast net decrease in emissions from power plants in California and the smaller increase in emissions from power plants in Arizona (described in Impact AQ-3) would not occur with implementation of No Project Alternative. Although construction and operation of new power plants and transmission lines may occur under the No Project Alternative, their locations and development schedules cannot be predicted. The impacts of new power plants and new transmission lines under the No Project Alternative could add air pollutants contributing to existing nonattainment conditions or violations of ambient air quality standards, if they occur in areas of substantial existing pollution.

4.11 Water Resources

4.11.1 Proposed Project

Devers-Harquahala 500 kV Segment. There would be over 85 water crossings in this segment of the Proposed Project, all of which would be either typical desert/desert valley washes, alluvial fan washes, or irrigation canals, with the exception of the Colorado River at the California-Arizona border, which is the only natural river or stream east of the Devers Substation with permanent flow. Construction activity could degrade water quality due to erosion and sedimentation or through a spill of potentially harmful materials used in construction. All impacts would be reduced to less than significant levels through the implementation of mitigation measures.

West of Devers (230 kV Upgrade) Segment. The climate of the project area west of Devers Substation results in more rainfall compared to east of the Devers Substation, and natural watercourses are more likely to have flowing water. Most of the almost 40 watercourses in the West of Devers segments originate in the San Bernardino Mountains and can be fed by snowmelt in the winter. Construction activity could degrade water quality due to erosion and sedimentation or through a spill of potentially harmful materials used in construction. Groundwater quality degradation would not likely occur along these segments because groundwater in the area is very deep. All impacts would be reduced to less than significant levels through the implementation of mitigation measures.

4.11.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. The Harquahala-West Alternative would be similar to, but shorter than, the Proposed Project, with fewer water crossings, resulting in a lesser potential for impacts. Mitigation measures similar to those for the Proposed Project would reduce all impacts to less than significant levels.

SCE Palo Verde Alternative. This alternative would have similar impacts like the proposed route, but the SCE Palo Verde Alternative would be 14.7 miles longer with at least four additional water crossings. Mitigation measures similar to those for the Proposed Project would reduce all impacts to less than significant levels.

Harquahala Junction Switchyard Alternative. The Harquahala Junction Switchyard Alternative would be located in a similar setting and would have one fewer water crossing than the Proposed Project, but this alternative would include a new switchyard, which has the potential for increased construction area and water quality and flow diversion impacts during operation. Regardless, mitigation measures similar to those for the Proposed Project would reduce all impacts to less than significant levels.

Desert Southwest Transmission Project Alternative. This alternative would be similar to the Proposed Project, except it would follow the Alligator Rock–South of I-10 Frontage Alternative in the Alligator Rock ACEC area where there would be one fewer watercourse crossing due to the proximity of I-10. Therefore, impacts would be similar to those identified for the proposed Devers-Harquahala route from Blythe to Devers Substation and the same associated mitigation measures would reduce impacts to less than significant levels. Construction of the new Keim and Dillon Road Substations under this alternative would have the potential for increased construction area and water quality and flow diversion impacts during operation, however, with mitigation impacts would be less than significant.

Alligator Rock Alternatives. Impacts for the Alligator Rock Alternatives would generally be similar to those for the Proposed Project because they would occur in the same watersheds and would affect largely the same water crossings. All of the alternative would be downstream of the Proposed Project and therefore, flows, which originate at the alluvial fan apex, would have more opportunity to attenuate. The Alligator Rock–North of Desert Center Alternative would be north of I-10 and the lowest route on the alluvial fan. In addition, the freeway tends to block and concentrate flow into fewer flow paths that would exist in a natural condition. Being further downstream on the alluvial fan, there is less chance of small flows reaching the power line. Mitigation measures similar to those for the Proposed Project would reduce all impacts to less than significant levels.

West of Devers Alternative

Devers-Valley No. 2 Alternative. This alternative would cross 22 natural watercourses, including several crossings of the San Gorgonio River in locations where the river is in a braided condition with potential for flow to follow several channel paths. In addition, several of the alternative towers would be in or very near active watercourses and a portion of this route would be constructed on Forest Service land in very steep terrain where construction and operation-related erosion would be a concern. However, with the incorporation of mitigation measures, all impacts would be less than significant.

No Project Alternative

Under the No Project Alternative, the proposed DPV2 project would not be constructed, so the impacts associated with construction and operation of the project would not occur. The first component of the No Project Alternative is the continuation of ongoing demand-side actions, including energy conservation and distributed generation. These actions would result in limited or no impacts related to hydrology and water resources. The second component of the No Project Alternative is the continuation of supply-side actions, resulting in potentially increased generation within California or increased transmission into California to serve anticipated growth in electricity consumption. The impacts of new power plants and new transmission to hydrology and water resources would be approximately the same, depending on the locations of the projects, as those that would occur under the Proposed Project.

4.12 Geology, Mineral Resources, and Soils

4.12.1 Proposed Project

Devers-Harquahala 500 kV Segment. This segment of the proposed route would roughly parallel the San Andreas Fault in its western portion, crossing in two places an active fault strand of the San Andreas Fault Zone. In the event of an earthquake along the San Andreas Fault adjacent to the project, the portion of the segment west of Cactus City Rest Area would be subject to strong to extreme groundshaking. Further, large earthquakes may trigger surface fault rupture, causing damage to and potential failure of transmission towers near fault crossings. Impacts associated with active fault crossings can be mitigated to less than significant levels because tower design compensates for transmission line displacement. Recommended mitigation requires further tower design and construction studies at high-risk tower locations.

Construction activities could cause the following impacts: accelerated erosion, slope instability, inaccessibility of known mineral resources, loose soils destabilizing tower foundations, and soil corrosive to construction materials. Other geologic hazards that could affect the project include strong to severe groundshaking, slope instability, and seismically induced ground failure. Mitigation to reduce these impacts to less than significant levels would be accomplished through geotechnical studies to define the best design to protect against such hazards, coordination with existing quarry operations, implementing standard engineering methods for problematic and corrosive soils.

West of Devers (230 kV Upgrade) Segment. This segment of the proposed route would run near a number of significant active fault segments, crossing four faults in the San Andreas and San Jacinto Fault Zones capable of significant surface rupture. Surface fault rupture near transmission towers may damage them and cause transmission failure. Impacts and the associated mitigation to reduce these impacts to less than significant levels would be similar to the Devers-Harquahala segment.

4.12.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala-West Alternative. This alternative would cross the Harquahala Plain and the northeastern edge of the Eagletail Mountains. The only expected construction impact would be accelerated erosion, but the impact would be less than significant with mitigation. The only expected geologic hazard would be highly corrosive soils, but implementation of the same mitigation measures identified for the Proposed Project would reduce impacts to less than significant levels.

SCE Palo Verde Alternative. This alternative would pass between Saddle Mountain and the Palo Verde Hills. The same impacts identified for the Proposed Project and the SCE Harquahala-West Alternative would apply to this route and the same mitigation measures would reduce impacts to less than significant levels.

Harquahala Junction Switchyard Alternative. This alternative switchyard site would be located directly east of the existing Harquahala Generating Station switchyard in undeveloped open space. The same impacts identified for the Proposed Project and SCE Harquahala-West Alternative would apply to this route and the same mitigation measures would reduce impacts to less than significant levels.

Desert Southwest Transmission Project Alternative. This alternative would be similar to the Proposed Project, except it would follow the Alligator Rock–South of I-10 Frontage Alternative in the Alligator Rock

ACEC area. Therefore, it would be subject to the similar geologic impacts identified for the proposed Devers-Harquahala route from Blythe to Devers Substation and the same mitigation measures would reduce impacts to less than significant levels.

Alligator Rock Alternatives. The Alligator Rock Alternatives are in close proximity to the proposed route, and therefore, impacts and associated mitigation would be similar to the Proposed Project. All impacts would be less than significant.

West of Devers Alternative

Devers-Valley No. 2 Alternative. This alternative begins at Devers Substation in the eastern end of the Coachella Valley and runs 41.6 miles, crossing the San Jacinto Valley, to Valley Substation. The western end crosses segments of the San Jacinto Fault Zone in several places. Geologic hazards and construction impacts would be similar to those identified for the West of Devers segment of the proposed route, making the same mitigation measures appropriate to reduce impacts to less than significant levels.

No Project Alternative

Under the No Project Alternative, the proposed DPV2 project would not be constructed, so the impacts associated with construction and operation of the project would not occur. The first component of the No Project Alternative is the continuation of ongoing demand-side actions, including energy conservation and distributed generation. These actions would result in limited or no impacts related to geology, minerals resources, or soils. The second component of the No Project Alternative is the continuation of supply-side actions, resulting in potentially increased generation within California or increased transmission into California to serve anticipated growth in electricity consumption. The impacts of new power plants and new transmission to geology, mineral resources, and soils would be approximately the same, depending on the locations of the projects, as those that would occur under the Proposed Project.

4.13 Socioeconomics

4.13.1 Proposed Project

Devers-Harquahala 500 kV Segment. The socioeconomics analysis addresses whether the Proposed Project would adversely affect labor, housing, public services, and utility systems, as well as economic conditions along the project route. While the Proposed Project would require up to 211 personnel for construction of the Devers-Harquahala 500 kV Segment, the labor force along the project route would be sufficient to meet the labor demands of the project. It is not expected that new personnel would be required to permanently relocate for the project. Consequently, there would not be increased demand for housing or public services as a result of this segment of the project. Construction activities would have the potential to disrupt utilities in some areas, but could largely be avoided with proper location and identification of utility lines. Construction activities would also place demands on local utilities, such as water suppliers and waste facilities, but these demands would be relatively insignificant compared to the total capacity of facilities along the project route. Due to the Proposed Project's route largely through undeveloped lands along the Devers-Harquahala 500 kV Segment, the economic effects on the environment along the route would be limited. Although there is evidence that transmission lines have affected property values in some cases, the effects are generally smaller than anticipated and with the Proposed Project, there is not enough data to conclusively state the project's effect on property values. The Proposed Project could, however, potentially provide revenue for the Agua Caliente Band of Cahuilla Indians as the route crosses land under the jurisdiction of the Tribe.

West of Devers (230 kV Upgrade) Segment. Impacts along the West of Devers (230 kV Upgrade) Segment would be largely the same as for the Devers-Harquahala 500 kV Segment. This segment would require a maximum of 174 personnel for construction activities, all of which are expected to be drawn from the local labor force, so no new demands on housing or public services would be made by the Proposed Project in this segment. Construction activities could disrupt utilities, but this could be avoided through the location and identification of utilities along the construction route. Water supply demands along this segment would be similar to the Devers-Harquahala 500 kV Segment and would be insignificant relative to the area's water supply. The removal of transmission towers in this segment, however, would generate 750 tons of tower steel, 2,050 tons of conductor, and 33,660 feet of treated wood poles. Although it is expected that local landfills could accommodate this waste, to comply with the Integrated Waste Management Act of 1989, a mitigation measure was developed to ensure that a minimum of 50 percent of the waste generated would be recycled. As described for the Devers-Harquahala 500 kV Segment, not enough data is available to conclusively state the effects of the Proposed Project on property values. As with the Devers-Harquahala 500 kV Segment traversing lands under the jurisdiction of the Agua Caliente Band of Cahuilla Indians, the West of Devers Segment would traverse Morongo Band of Mission Indians land. SCE would be required to lease ROW land under the jurisdiction of the Morongo Band of Mission Indians for construction of this segment, which would provide revenue to the Morongo Band.

4.13.2 Alternatives

Alternatives within Devers-Harquahala Segment

SCE Harquahala West Alternative. Although the SCE Harquahala-West Alternative would be shorter than the equivalent segment of the Proposed Project, would use less water, and generate less waste, but not by a substantial amount. The socioeconomic impacts associated with this Alternative would be the same as described for the Proposed Project.

SCE Palo Verde Alternative. The SCE Palo Verde Alternative would be longer than the Proposed Project and consequently would require more water and generate more waste than the Proposed Project. As these increases would not be substantially greater, however, the impacts associated with the SCE Palo Verde Alternative would be the same as described for the Proposed Project.

Harquahala Junction Switchyard Alternative. Construction of the Harquahala Junction Switchyard alternative would require slightly more water than the Proposed Project, but socioeconomic impacts associated with this Alternative would be the same as described for the Proposed Project.

Desert Southwest Transmission Project Alternative. Although the Desert Southwest Transmission Project Alternative would follow a slightly different alignment than the Proposed Project, it would require the same labor force and have the same demands on utilities. Socioeconomic impacts of this Alternative would be the same as for the Proposed Project.

Alligator Rock Alternatives. The Alligator Rock Alternatives would each vary in their route and length, but all would be comparable to the equivalent segment of the Proposed Project. Consequently, the socioeconomic impacts of these Alternatives would be the same as for the Proposed Project.

West of Devers Alternative

Devers-Valley No. 2 Alternative. The Devers-Valley No. 2 Alternative would be similar in length to the West of Devers Segment of the Proposed Project, and so would have similar demands on water supplies. As this route would be outside the existing West of Devers corridor, it would not require the removal

of transmission towers and it would avoid traversing Morongo Indian Band land. As a result, this alternative would not generate the large quantities of waste generated in the West of Devers Segment and so would not require mitigation to recycle up to 50 percent of the waste generated. By following a different route, this alternative would not require SCE to lease ROW land from the Morongo Indian Band, thus removing a source of revenue for the Morongo Indian Band. Other effects of this Alternative, however, would be the same as described for the Proposed Project.

No Project Alternative

Under the No Project Alternative, no construction of the transmission line or associated facilities would occur, so there would be no impacts to labor, housing, service systems, or utilities. Other methods of ensuring energy supply would be required, however, and demand side actions such as energy conservation and distributed generation could adversely effect businesses as they try to shift activities to meet conservation goals or purchase distributed generation technology. Increases in power generation in California would also be required which would require the upgrade of existing power facilities or the construction of new facilities. Construction of these facilities would result in adverse impacts to water supplies and waste facilities and would potentially result in utility disruptions due to collocation accidents. Labor forces used in the construction of these projects would likely be drawn from the surrounding areas, so effects on workforces or housing be minimal. Operation of new power plants and transmission lines could provide beneficial economic impacts through the provision of taxes and jobs to local economies.

ES.5 Summary Comparison of the Proposed Project and Alternatives

This section summarizes and compares the environmental advantages and disadvantages of the Proposed Project and the alternatives evaluated in this EIR/EIS. This comparison is based on the assessment of environmental impacts of the Proposed Project and each alternative, as identified in Sections D.2 through D.14. Section 5.1 describes the methodology used for comparing alternatives. Section 5.2 defines the environmentally superior/preferred[6] alternative, based on comparison of each alternative with the Proposed Project. Section 5.3 presents a comparison of the No Project/Action Alternative with the alternative that is determined in Section 5.2 to be environmentally superior/preferred.

CEQA Guidelines require that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. The Guidelines also state that if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. If the environmentally superior alternative is the No Project Alternative, CEQA requires identification of an environmentally superior alternative among the other alternatives [CEQA Guidelines Section 15126.6(e)(2)].

Under NEPA the Draft EIR/EIS should identify the environmentally preferable alternative from a range of alternatives considered if one exists at the draft stage. Commenters from other agencies and the public are also encouraged to address this question. In addition, the BLM NEPA Handbook (H-1790-1, Chapter 5.B.2.b) requires identification of an agency preferred alternative.

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6 Under CEQA, an "environmentally superior alternative" is designated, and under NEPA an "environmentally preferred" alternative is designated.

5.1 Methodology for Alternatives Comparison

The following methodology was used to compare alternatives in this EIR/EIS:

- **Step 1: Identification of Alternatives.** An alternatives screening process was used to identify a number of alternatives to the Proposed Project.
- **Step 2: Determination of Environmental Impacts.** The environmental impacts of the proposed and the alternative route segments were identified in Sections D.2 through D.14, including the potential impacts of transmission line and substation construction and operation.
- **Step 3: Comparison of Proposed Project with Alternatives.** The environmental impacts of the Proposed Project were compared to those of each alternative to determine the environmentally superior alternative. The environmentally superior alternative was then compared to the No Project Alternative.

Determining an environmentally superior/preferred alternative requires balancing many environmental factors. In order to identify the environmentally superior alternative, the most important impacts in each issue area were identified and compared. Although this EIR/EIS identifies an environmentally superior/preferred alternative, it is possible that the ultimate decision-makers could balance the importance of each impact area differently and reach a different conclusion.

5.2 Environmentally Superior/Preferred Alternative

5.2.1 Transmission Line Route Alternatives: Devers-Harquahala Segment

The Devers-Harquahala segment of the project is the 500 kV portion. Along this segment, the Proposed Project was designed to follow an established utility corridor. Use of the established corridor and existing access roads would minimize the duration and intensity of construction-related impacts. The following discussions compare the alternatives with the Proposed Project in three areas of the 500 kV portion where alternatives were analyzed:

- The area near the Palo Verde Nuclear Generating Station (PVNGS)
- The area around Alligator Rock
- The area between Blythe and Devers Substation (where the Desert Southwest Transmission Project would be constructed)

Proposed Project vs. Alternatives Near Palo Verde Nuclear Generating Station

The **Proposed Project** in the segment between Harquahala Generating Station and the Kofa National Wildlife Refuge would have three significant and unavoidable impacts:

- **Agriculture:** Operation would permanently convert Farmland to non-agricultural use
- **Cultural Resources:** Construction of the project would cause an adverse change to known historic properties
- **Cultural Resources:** Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains.

The **SCE Palo Verde Alternative** would eliminate the need for construction of 5.0 miles of the Proposed Project, but would add the required construction of 14.7 miles (from Harquahala Junction to the PVNGS). This alternative would have the same cultural resources impacts as the Proposed Project. Because the SCE Palo Verde Alternative would not affect farmland, this alternative would not result in a significant impact from conversion of farmland.

The **SCE Harquahala-West Alternative** would eliminate the need for construction of 35.0 miles of the Proposed Project (all adjacent to existing 500 kV lines) but would require construction of 21.0 miles of new 500 kV line entirely in a new transmission corridor. This alternative would have the same cultural resources impacts as the Proposed Project. The SCE Harquahala-West Alternative would result in a significant impact to agriculture as the result of conversion of Farmland, similar to the Proposed Project. In addition, it would have significant impacts in visual resources and land use (due to preclusion of land uses).

The **Harquahala Junction Switchyard Alternative** would eliminate five miles of transmission line construction required for the Proposed Project, but would require disturbance of between 6 and 40 acres of land. This alternative would have the same cultural resources impacts as the Proposed Project. However, the Harquahala Junction Switchyard Alternative would not affect farmland, so would not result in a significant impact from conversion of farmland.

Conclusion: The **Harquahala Junction Switchyard Alternative** is preferred because it would require the least distance of transmission line construction outside of existing corridors, and it would eliminate effects to agricultural lands in the PVNGS area. The alternative with the most severe impacts would be the SCE Harquahala-West Alternative, due to its creation of a new transmission corridor and effects on agricultural land.

Proposed Project vs. Alligator Rock Alternatives

Three alternatives are considered to minimize the Proposed Project's impacts as it passes through the Alligator Rock ACEC. The **Proposed Project** in this segment would have five significant unavoidable impacts:

- **Visual Resources**: Inconsistency with Interim BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining[7] when viewed from the Alligator Rock ACEC.
- **Wilderness and Recreation**: Presence of the new towers would change the character of the Alligator Rock ACEC and adjacent wilderness area, diminishing its recreational value.
- **Cultural Resources:** Construction of the project would cause an adverse change to known historic properties.
- **Cultural Resources:** Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains.
- **Air Quality:** Construction would generate dust and exhaust emissions in the South Coast Air Quality Management District (SCAQMD).

The **Alligator Rock–North of Desert Center** Alternative is 1.2 miles longer than the Proposed Project, but it would not require any new construction within the Alligator Rock ACEC. It would have the same significant impacts in air quality and cultural resources, although the cultural resources potentially affect

[7] Skylining occurs when a transmission tower is seen with only the sky behind it, making it highly visible.

would have less value than those in the ACEC. The alternative would create a different significant visual impact resulting from inconsistency with Interim BLM VRM Class III management objective when viewing the Chuckwalla Mountains from north of Desert Center. The alternative would eliminate the significant impact to wilderness and recreation because it would avoid the Alligator Rock ACEC.

The **Alligator Rock–Blythe Energy Project Alternative** is 0.65 miles longer than the proposed route, and would be still within the Alligator Rock ACEC. It would have the same significant impacts in air quality and cultural resources, although the cultural resources potentially affect would likely have less value than those in the heart of the ACEC. The alternative would create a different significant visual impact, resulting from inconsistency with Interim BLM VRM Class II management objective when viewing Alligator Rock from westbound Interstate 10, east of Desert Center.

The **Alligator Rock–South of I-10 Frontage Alternative** is 0.57 miles longer than the proposed route, and would be still within the Alligator Rock ACEC. It would have the same significant impacts in air quality and cultural resources, although the cultural resources potentially affect would have less value than those in the heart of the ACEC. The alternative would create a different significant visual impact resulting from inconsistency with Interim BLM VRM Class II management objective when viewing Alligator Rock from eastbound Interstate 10.

Conclusion: The Alligator Rock–North of Desert Center Alternative is preferred to the other routes because it would minimize biological, cultural, and wilderness area impacts, even though it would be closer to populated areas and would require two crossings of the I-10.

Proposed Project vs. Desert Southwest Transmission Project Alternative

The Desert Southwest Transmission Project (DSWTP) Alternative would replace the Proposed Project between Blythe and the Devers Substation. Nearly the entire route would be the same as the Proposed Project, but the DSWTP would require construction of several additional substations and a transmission line into Blythe. The **Proposed Project** in this segment would have the following significant impacts:

- **Visual Resources**: Inconsistency with Interim BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from the Alligator Rock ACEC.
- **Wilderness and Recreation**: The presence of the new line would change the character of a recreation or wilderness area, diminishing its recreational value.
- **Cultural Resources:** Construction of the project would cause an adverse change to known historic properties.
- **Cultural Resource**: Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains.
- **Noise:** Permanent noise levels along the ROW would increase due to corona noise from operation of the transmission lines.
- **Air Quality**: Construction would generate dust and exhaust emissions in SCAQMD.

The Proposed Project and the **DSWTP Alternative** would be the same over the vast majority of the length of the route. The significant impacts above would be the same for all both projects, except that a different significant visual impact would occur in the area of Alligator Rock where the DSWTP would be closer to the I-10. DSWTP would still result in significant cultural resources impacts, but it would

avoid the specific effects on the N. Chuckwalla Mountains NRHP Quarry District and three other NRHP-eligible sites in the area of Alligator Rock. It would eliminate significant visual resources impact at the Alligator Rock ACEC, but it would create another significant visual impact when viewing Alligator Rock from eastbound Interstate 10.

Conclusion: The Proposed Project is preferred over the DSWTP because it would require less ground disturbance and construction of fewer substations. However, the Midpoint-DSW Substation location would have impacts that are comparable to those of the SCE Midpoint Substation location (no significant impacts at either site, and both sites are on BLM land). As a result, the two substation locations are considered to be equally environmentally superior/preferable. In a comment on the Draft EIR/EIS, the DSW proponents asked that the CPUC and BLM consider designation of this substation location as an acceptable location for SCE to interconnect with the DSW transmission line from the Blythe power plants.

5.2.2 Transmission Line Route Alternatives: West of Devers Segment

The **Proposed Project** in this segment would have three significant impacts:

- **Cultural Resources:** Construction of the project ~~would~~ could cause an adverse change to known historic properties if they cannot be protected from direct construction and operational impacts.
- **Cultural Resources**: Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains.
- **Air Quality**: Construction would generate dust and exhaust emissions in SCAQMD.

In addition, due to the proposed removal of structures in the West of Devers segment, the Proposed Project would result in the following beneficial impacts. These beneficial impacts would not occur if the Devers-Valley No. 2 Alternative were constructed.

- Improved views at three visual resources viewpoints (Cedar Hollow Road in the City of Beaumont, Stargazer Street and Rose Avenue in the City of Beaumont, and the Oak Valley Golf Course in the City of Beaumont)
- Project operation would provide revenue to the Morongo Band of Mission Indians (Impact S-4).

The **Devers-Valley No. 2 Alternative** was considered in the EIR/EIS because there is uncertainty as to whether SCE will negotiate lease renewals for the existing West of Devers corridor with the Morongo Band of Mission Indians in time to allow construction and operation of the West of Devers segment concurrent with the Devers-Harquahala segment of the project. In the absence of that lease renewal, the Proposed Project described by SCE would not be feasible.

The Devers-Valley No. 2 Alternative would not eliminate any significant impacts of the Proposed Project. It would create the following additional significant and unavoidable impacts:

- **Visual Resources**: Increased visual contrast and skylining from 5 key viewpoints along Devers-Valley alternative
- **Visual Resources:** Inconsistency with BLM and San Bernardino National Forest scenic criteria
- **Wilderness and Recreation:** Operation would change the character of a recreation or wilderness area, diminishing its recreational value.

- **Noise:** Permanent noise levels along the ROW would increase due to corona noise from operation of the transmission lines.

While the environmental impacts of the Proposed Project would be less than those of the Devers-Valley No. 2 Alternative, the Devers-Valley No. 2 Alternative is feasible and would be constructed within an existing transmission corridor.

Conclusion: Based only on environmental factors, the West of Devers portion of the Proposed Project is preferred over the Devers-Valley No. 2 Alternative. However, the Devers-Valley No. 2 Alternative would also be in an existing transmission corridor, and it would be feasible to construct. If the Proposed Project is found to be infeasible, the alternative would meet project objectives and allow the entire DPV2 Project to be successfully constructed.

5.2.3 Definition of Environmentally Superior/Preferred Alternative and BLM Agency Preferred Alternative

The conclusions described above for the various alternatives result in the following environmental superior and BLM agency preferred alternative:

- Harquahala Junction Switchyard (the project would begin at this point)
- Proposed Project route from Harquahala Junction Switchyard to east of Alligator Rock
- Alligator Rock–North of Desert Center Alternative to west of Alligator Rock
- Proposed Project route from west of Alligator Rock to Devers Substation
- The SCE Midpoint Substation and the Midpoint-DSW Substation are equally environmentally superior/preferable
- Proposed West of Devers upgrades *unless* determined to be infeasible, in which case the Devers-Valley No. 2 Alternative would be constructed.

The environmentally superior/preferred transmission line route is illustrated in Figures ES-4a and ES-4b.

5.2.4 No Project Alternative vs. the Environmentally Superior Alternative

The No Project Alternative is described in Section 2.2.4 above, and although no specific development scenario is envisioned, certain consequences can be identified without undue speculation. The absence of the Proposed Project may lead SCE or other developers to pursue other actions to achieve the objectives of the Proposed Project. The events or actions that are reasonably expected to occur in the foreseeable future would primarily result from operation of gas-fired turbine generators and new transmission lines. These long-term operational impacts include substantial air emissions and ongoing noise near the generators, as well as visual impacts of the new transmission lines and generators depending on their locations.

Therefore, because the No Project Alternative could also require construction of transmission lines with impacts similar to those described for the Proposed Project, as well as impacts of generation sources, the No Project Alternative is not found to be superior to the Environmentally Superior Alternative as defined above.

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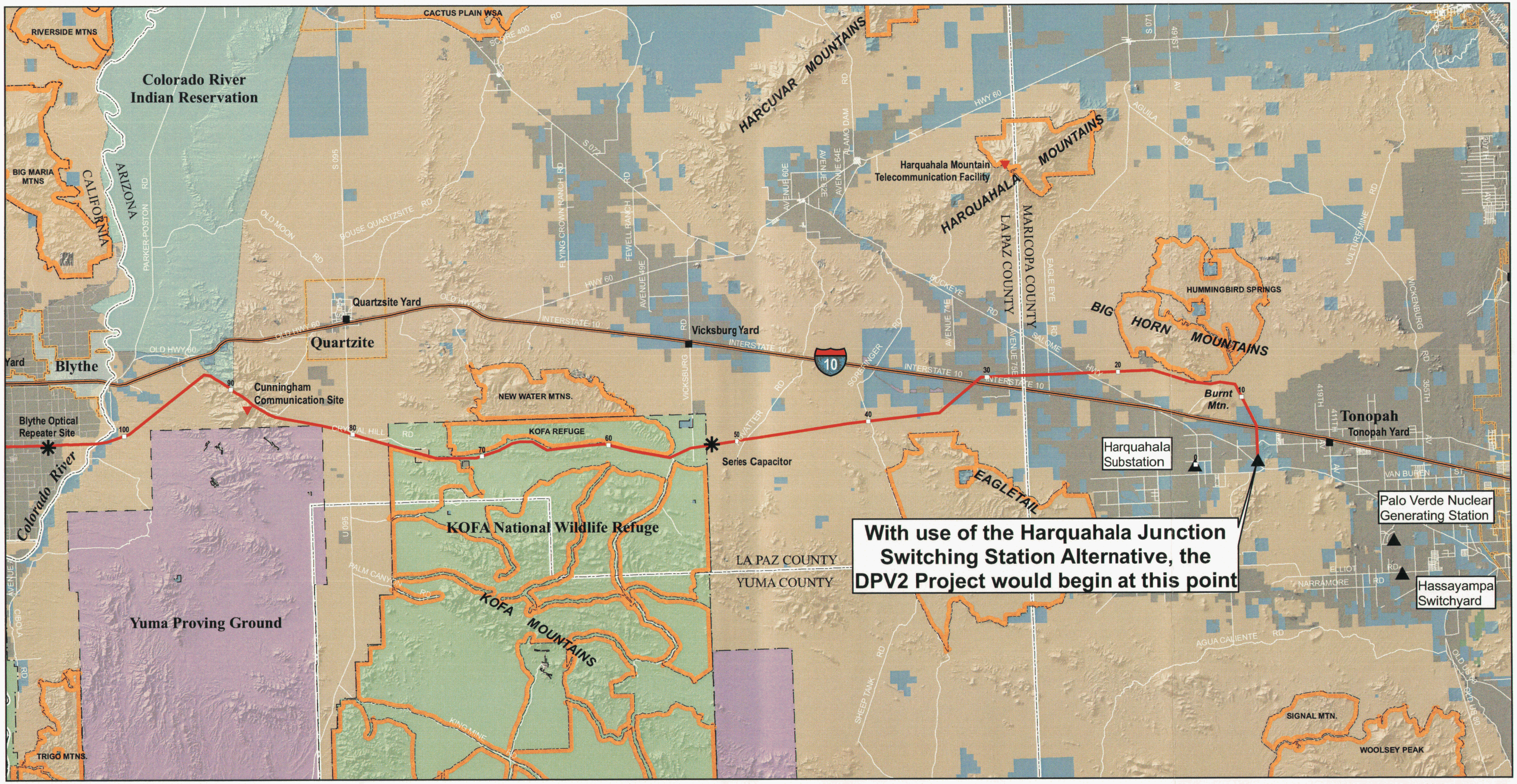


PREPARED BY Aspen Environmental Group

20 Environmentally Superior/ Preferred Alternative

Mileposts

OWNERSHIP/JURISDICTIONS (unincorporated areas)

- BLM
- FWS
- Indian Lands
- Military
- State
- Private
- Incorporated Areas
- Wilderness Areas

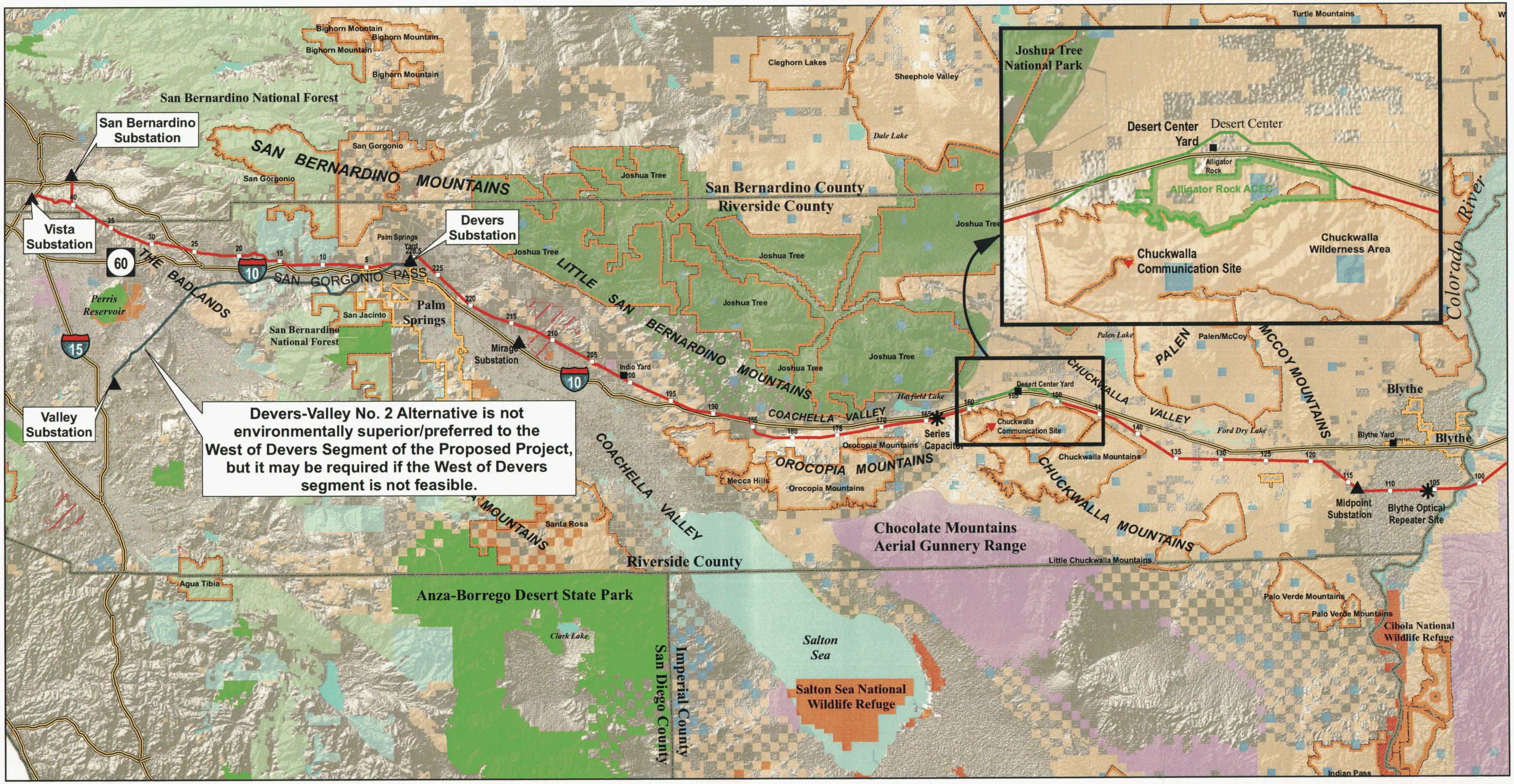
0 2.5 Miles

- Substations
- Series Capacitor
- Construction Yard
- Communications Site

Devers-Palo Verde No. 2 Transmission Line Project

Figure ES-4a

Environmentally Superior/ Preferred Alternative (Arizona)



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Environmentally Superior/ Preferred Alternative

Mileposts

Devers-Valley No. 2 Alternative

Alligator Rock - North of Desert Center (a component of the Environmentally Superior/ Preferred Alternative)

0 10 20 Miles

OWNERSHIP/JURISDICTIONS (unincorporated areas)

- BLM
- Fish and Wildlife Service
- Indian Lands
- Military
- State Parks & Recreation
- National Park Service
- Nature Conservancy
- Forest Service
- State Fish and Game
- State
- Private
- Wilderness Areas

- Substations
- Series Capacitor
- Construction Yard
- Communications Site
- Incorporated Areas

Devers-Palo Verde No. 2 Transmission Line Project

Figure ES-4b

Environmentally Superior/ Preferred Alternative (California)

ES.6 Impact Summary Tables

Tables ES-1 through ES-5 on the following pages summarize all identified impacts of the Proposed Project (Tables ES-1 through ES-3) and alternatives (Tables ES-4 and ES-5). For each impact, the following information is presented: impact number and title, impact class[8] (Class I, II, or IV), applicable mitigation measure, and residual impact (whether significant or less than significant).

[8] Impact classes in this EIR/EIS are defined as follows: Class I (significant and unavoidable), Class II (significant but mitigable to less than significant), Class III (adverse but less than significant), Class IV (beneficial).

Table ES-1. Summary of Significant Unmitigable (Class I) Impacts for the Proposed Project

Impact	Mitigation Measure (if any)
Biological Resources	
No Class I Impacts	n/a
Visual Resources	
V-7. Increased visual contrast, view blockage, and skylining when viewed from Key Viewpoint 4 on Crystal Hill Road in Kofa National Wildlife Refuge.	**V-3a.** Reduce visual contrast of towers and conductors.
V-15. Inconsistency with Interim BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 10 in the Alligator Rock ACEC.	**V-3a.** Reduce visual contrast of towers and conductors.
V-48. Inconsistency of the Harquahala Mountain Telecommunication Facility with BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from Harquahala Mountains Wilderness (VRM Class I) and surrounding area (VRM Class II)	**C-1g.** Minimize effects at Harquahala Peak.
Land Use	
No Class I Impacts	n/a
Wilderness and Recreation	
WR-2. Operation would change the character of a recreation or wilderness area, diminishing its recreational value.	**C-1g.** Minimize effects at Harquahala Peak. **WR-2a.** Coordinate with USFWS to improve impacted areas within Kofa National Wildlife Refuge.
Agriculture	
AG-3. Operation would permanently convert Farmland to non-agricultural use	No mitigation proposed
Cultural and Paleontological Resources	
C-1. Construction of the project would cause an adverse change to known historic properties	**C-1a.** Inventory and evaluate cultural resources in Final APE **C-1b.** Avoid and protect potentially significant resources. **C-1c.** Develop and implement Historic Properties Treatment Plan. **C-1d.** Conduct data recovery to reduce adverse effects. **C-1e.** Monitor construction. **C-1f.** Train construction personnel. **C-1g.** Minimize effects at Harquahala Peak.
C-2. Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains	**C-1c.** Develop and implement Historic Properties Treatment Plan. **C-1d.** Conduct data recovery to reduce adverse effects. **C-1e.** Monitor construction. **C-1f.** Train construction personnel. **C-2a.** Consult agencies and Native Americans.
Noise	
N-2. Permanent noise levels along the ROW would increase due to corona noise from operation of the transmission lines.	No mitigation proposed
Transportation & Traffic	
No Class I Impacts	n/a
Public Health & Safety	
No Class I Impacts	n/a

Table ES-1. Summary of Significant Unmitigable (Class I) Impacts for the Proposed Project

Air Quality	
AQ-1. Construction would generate dust and exhaust emissions [SCAQMD (SCAB, SSAB, and MDAB)]	**AQ-1a.** Develop and Implement a Fugitive Dust Emission Control Plan. **AQ-1b.** Use ultra low-sulfur diesel fuel. **AQ-1c.** Restrict engine idling. **AQ-1d.** Use lower emitting offroad diesel-fueled equipment. **AQ-1e.** Use onroad vehicles that meet California onroad standards. **AQ-1f.** Use lower emitting offroad gasoline-fueled equipment. **AQ-1g.** Reduce helicopter use during construction. **AQ-1h.** Schedule deliveries outside of peak hours. **AQ-1i.** Obtain NOx emission offsets.
Hydrology and Water Resources	
No Class I Impacts	n/a
Geology, Mineral Resources, and Soils	
No Class I Impacts	n/a
Socioeconomics	
No Class I Impacts	n/a

Table ES-2. Summary of Significant but Mitigable (Class II) Impacts and Mitigation for the Proposed Project

Impact	Mitigation Measure(s)
Biological Resources	
B-1. Construction activities would result in temporary and permanent loss of native vegetation	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan. **B-1b.** Coordinate tower placement with USFWS/BLM
B-2. Construction activities would result in the introduction invasive non-native or noxious plant species	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan. **B-2a.** Conduct invasive and noxious weed inventory. **B-2b.** Implement control measures for invasive and noxious weeds
B-5. Construction activities during the breeding season would result in a potential loss of nesting birds	**B-5a.** Conduct pre-construction surveys and monitoring for breeding birds
B-6. Construction activities would result in indirect or direct loss of listed plants	**B-6a.** Develop a transplanting plan
B-7. Construction activities would result in indirect or direct loss of listed wildlife or habitat	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan. **B-7a.** Avoid Colorado River. **B-7b.** Conduct pre-construction tortoise surveys. **B-7c.** Purchase mitigation lands for impacts to tortoise habitat. **B-7d.** Purchase mitigation lands for impacts to fringe-toed lizard habitat, clear work areas of CVFTL in the Coachella Valley Preserve. **B-5a.** Conduct pre-construction surveys and monitoring for breeding birds. **B-7e.** Conduct focused surveys for California gnatcatchers. **B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan **B-7f.** Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat.
B-9. Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan. **B-5a.** Conduct pre-construction surveys and monitoring for breeding birds. **B-9a.** Conduct pre-construction surveys. **B-9b.** Conduct biological monitoring. **B-9c.** Implement a Worker Environmental Awareness Program. **B-9d.** Conduct pre-construction reptile surveys. **B-9e.** Conduct pre-construction surveys and owl relocation. **B-9f.** Perform construction outside of breeding and lambing period. **B-9g.** Conduct pre-construction surveys and relocation for American badger. **B-9h.** Conduct pre-construction surveys for roosting bats. **B-9i.** Schedule construction when the Coachella Valley round-tailed squirrel is dormant.
B-10. The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands	**B-1a.** Prepare and implement a Habitat Restoration/ Compensation Plan.
B-11. Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	**B-9h.** Conduct pre-construction surveys for roosting bats. **B-9f.** Perform construction outside of breeding and lambing period.

Table ES-2. Summary of Significant but Mitigable (Class II) Impacts and Mitigation for the Proposed Project

Impact	Mitigation Measure(s)
B-13. Construction activities may conflict with local policies or ordinances protecting biological resources	**B-7b.** Conduct pre-construction tortoise surveys. **B-7c.** Purchase mitigation lands for impacts to tortoise habitat. **B-9f.** Perform construction outside of breeding and lambing period. **B-7d.** Purchase mitigation lands for impacts to fringe-toed lizard habitat. **B-9i.** Schedule construction when the Coachella Valley round-tailed squirrel is dormant. **B-13a.** Demonstrate compliance with the Western Riverside County MSHCP. SCE shall provide documentation that it has complied with the provisions of the MSHCP. **B-13b.** Implement the Best Management Practices required by the Western Riverside County MSHCP.
B-15. Operation of the transmission line may result in collisions by listed bird species	**B-15a.** Utilize collision-reducing techniques in installation of transmission lines.
B-16. Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	**B-16a.** Prepare and implement a raven control plan.
Visual Resources	
V-2. Long-term visibility of land scarring in arid and semi-arid landscapes.	**V-2a.** Reduce in-line views of land scars. **V-2b.** Reduce visual contrast from unnatural vegetation lines. **V-2c.** Reduce color contrast of land scars.
Land Use	
L-1. Construction would temporarily disturb the land uses it traverses or adjacent land uses.	**L-1a.** Prepare Construction Notification Plan. **L-1b.** Coordinate with the Central Arizona Project regarding canal crossings.
L-2. Operation would result in permanent preclusion of land uses it traverses or adjacent land uses.	**L-1a:** Prepare Construction Notification Plan. **L-1b.** Coordinate with the Central Arizona Project regarding canal crossings. **L-1c.** Provide proof of resolution of land acquisition issues for crossing of Agua Caliente Band of Cahuilla Indians tribal lands.
Wilderness and Recreation	
WR-1. Construction activities would temporarily reduce access and visitation to recreation or wilderness areas.	**WR-1a.** Coordinate construction schedule and activities with the authorized officer for the recreation area.
WR-3. Operation would permanently preclude recreational activities.	**WR-3a.** Coordinate tower and road locations with the authorized officer for the recreation area.
Agriculture	
AG-1. Construction activities would temporarily convert Farmland to non-agricultural use	**AG-1a.** Establish agreement and coordinate construction activities with agricultural landowners.
AG-2. Construction activities would interfere with agricultural operations	**L-1a.** Prepare Construction Notification Plan. **AG-1a.** Establish agreement and coordinate construction activities with agricultural landowners.
AG-4. Operation would interfere with agricultural operations	**AG-4a.** Locate transmission towers and pulling/splicing stations to avoid agricultural operations.
AG-5. Construction activities would conflict with a Williamson Act contract	**AG-1a.** Establish agreement and coordinate construction activities with agricultural landowners.

Table ES-2. Summary of Significant but Mitigable (Class II) Impacts and Mitigation for the Proposed Project

Impact	Mitigation Measure(s)
Cultural and Paleontological Resources	
C-1. Construction of the project would cause an adverse change to known historic properties	**C-1a.** Inventory and evaluate cultural resources in Final APE **C-1b.** Avoid and protect potentially significant resources. **C-1c.** Develop and implement Historic Properties Treatment Plan. **C-1d.** Conduct data recovery to reduce adverse effects. **C-1e.** Monitor construction. **C-1f.** Train construction personnel. **C-1g.** Minimize effects at Harquahala Peak.
C-2. Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains	**C-1c.** Develop and implement Historic Properties Treatment Plan. **C-1d.** Conduct data recovery to reduce adverse effects. **C-1e.** Monitor construction. **C-1f.** Train construction personnel. **C-2a.** Consult agencies and Native Americans.
C 3. Construction of the project could cause an adverse change to Traditional Cultural Properties	**C-3a.** Complete consultation with Native American and other Traditional Groups. **C-5a.** Protect and monitor NRHP-eligible properties.
C-4. Construction of the project could destroy or disturb significant paleontological resources	**C-4a.** Inventory paleontological resources in Final APE. **C-4b.** Develop Paleontological Monitoring and Treatment Plan. **C-4c.** Monitor construction for paleontology. **C-4d.** Conduct paleontological data recovery. **C-4e.** Train construction personnel.
C-5. Operation and long-term presence of the project could cause an adverse change to known historic properties	**C-2a.** Consult agencies and Native Americans. **C-3a.** Complete consultation with Native American and other Traditional Groups. **C-5a.** Protect and monitor NRHP-eligible properties.
Noise	
N-1. Construction noise could substantially disturb sensitive receptors or violate local rules, standards, and/or ordinances.	**N-1a.** Implement best management practices for construction noise.
Transportation and Traffic	
T-7. Construction vehicles and equipment would potentially cause physical damage to roads in the project area.	**T-7a.** Repair roadways damaged by construction activities.
T-12. Construction would result in the short-term elimination of parking spaces.	**L-1e.** Coordinate with business owners.
Public Health & Safety	
P-1. Soil contamination as a result of improper handling and/or storage of hazardous materials during construction activities	**P-1a.** Develop Hazardous Substance Control and Emergency Response Plan. **P-1b.** Conduct environmental training and monitoring program. **P-1c.** Ensure proper disposal of construction waste. **P-1d.** Maintain emergency spill supplies and equipment.
P-2. Residual pesticides and or herbicides could be encountered during grading or excavation in agricultural areas	**P-2a.** Identify pesticide/herbicide contamination.
P-3. Previously unknown contamination could be encountered during grading or excavation	**P-3a.** Observe exposed soil for evidence of contamination.
P-4. Soil contamination could result from accidental spill or release of hazardous materials during operations and maintenance	**P-4a.** Prepare Spill Prevention, Countermeasure, and Control Plans.

Table ES-2. Summary of Significant but Mitigable (Class II) Impacts and Mitigation for the Proposed Project

Impact	Mitigation Measure(s)
Air Quality	
AQ-1. Construction would generate dust and exhaust emissions (ADEQ, MDAQMD)	**AQ 1a.** Develop and Implement a Fugitive Dust Emission Control Plan. **AQ-1b.** Use ultra low-sulfur diesel fuel. **AQ-1c.** Restrict engine idling. **AQ-1d.** Use lower emitting offroad diesel-fueled equipment. **AQ-1e.** Use onroad vehicles that meet California onroad standards. **AQ-1f.** Use lower emitting offroad gasoline-fueled equipment. **AQ-1g.** Reduce helicopter use during construction.
Hydrology and Water Resources	
H-2. Degradation of water quality through spill of potentially harmful materials used in construction	**P-1a.** Develop Hazardous Substance Control and Emergency Response Plan. **P 1b.** Conduct environmental training and monitoring program. **P 1c.** Ensure proper disposal of construction waste. **P 1d.** Maintain emergency spill supplies and equipment.
H-4. Water quality degradation caused by accidental releases of oil from project facilities	**P-4a.** Prepare Spill Prevention, Countermeasure, and Control Plans.
H-6. Encroachment into a floodplain or watercourse by permanent aboveground project features resulting in flooding, flood diversions, or erosion.	**H-6a.** Design diversion dikes or other site remediations to avoid damage to adjacent property.
Geology, Mineral Resources, and Soils	
G-1. Construction could accelerate erosion	**G-1a.** Protect desert pavement.
G-2. Project structures could be damaged by problematic soils	**G-2a.** Conduct geotechnical studies for ~~problematic~~ soils to assess characteristics and aid in appropriate foundation design.
G-3. Excavation or grading during construction could cause slope instability.	**G-3a.** Conduct geotechnical surveys for landslides.
G-4. Project structures could be damaged by landslides, earthflows, and/or debris flows	**G-3a.** Conduct geotechnical surveys for landslides.
G-5. Project structures could be damaged by seismically included groundshaking and ground failure	**G-5a.** Protect project facilities from ground failure.
G-6. Construction activities would render known mineral resources inaccessible.	**G-6a.** Coordinate with quarry operations.
G-7. Project structures could be damaged by surface fault rupture at crossings of active and potentially active faults.	**G-7a.** Minimize project structures within active fault zones.
Socioeconomics	
S-2. Project construction would place demands on local water or solid waste utilities.	**S-2a.** Recycle construction waste.

Table ES-3. Summary of Beneficial (Class IV) Impacts for the Proposed Project *

Visual Resources
V-27. Beneficial impact from reduction in structure prominence and view blockage when viewed from Key Viewpoint 21 on Cedar Hollow Road in the City of Beaumont.
V-28. Beneficial impact from reduction in structure prominence and view blockage when viewed from Key Viewpoint 22 at the intersection of Stargazer Street and Rose Avenue in the City of Beaumont.
V-29. Beneficial impact from reduction in structure prominence and view blockage when viewed from Key Viewpoint 23 on the Oak Valley Golf Course in the City of Beaumont.
Air Quality
AQ-3. Power generated during transmission line operation would cause emissions from power plants (SCAQMD)
Socioeconomics
S-3. Project operation would provide revenue to the Agua Caliente Band of Cahuilla Indians.
S-4. Project operation would provide revenue to the Morongo Band of Mission Indians.

* There are no Beneficial Impacts in Issue Areas omitted above.

Table ES-4. Summary of Class I Impacts for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
Biological Resources		
No Class I Impacts	none	n/a
Visual Resources		
V-33. Inconsistency with BLM VRM Class III management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 27 on a BLM access road to Courthouse Rock and the Eagletail Mountains.	SCE Harquahala-West Alternative	**V-3a.** Reduce visual contrast of towers and conductors.
V-36. Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on eastbound Interstate 10.	DSWTP Alternative	**V-3a.** Reduce visual contrast of towers and conductors.
V-37. Inconsistency with Interim BLM VRM Class III management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing the Chuckwalla Mountains from Key Viewpoint 31 on southbound Kaiser Road, north of Desert Center.	Alligator Rock–North of Desert Center Alternative	**V-3a.** Reduce visual contrast of towers and conductors.
V-38. Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 32 on westbound Interstate 10, east of Desert Center.	Alligator Rock–Blythe Energy Transmission Alternative	**V-3a.** Reduce visual contrast of towers and conductors.
V-39. Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on eastbound Interstate 10 *(Same as V-36)*.	Alligator Rock–South of I-10 Frontage Alternative	**V-3a.** Reduce visual contrast of towers and conductors.
V-40. Increased structure contrast and skylining when viewing the San Jacinto Mountains from Key Viewpoint 33 on the Pacific Crest Trail in the vicinity of the Snow Creek Village residential community (VS-VC)	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors. **V-40b.** Reduce visual contrast of towers and conductors on San Bernardino National Forest land. **V-40c.** Reduce visual contrast of towers and conductors near the Pacific Crest Trail.
V-41. Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing the San Jacinto Mountains from BLM-managed lands within the Santa Rosa and San Jacinto Mountains National Monument (in the vicinity of KVP 33) (VRM)	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors.
V-42. Inconsistency with U.S. Forest Service Scenic Integrity Objective (SIO) due to introduction of structure contrast and industrial character	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors.
V-43. Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 34 in the residential community in Cabazon (VS-VC)	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors.
V-44. Increased structure contrast and skylining when viewing the San Jacinto Mountains and San Gorgonio Pass from Key Viewpoint 35 on southbound State Route 243 (VS-VC)	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors.

Table ES-4. Summary of Class I Impacts for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
V-45. Increased structure contrast, skylining, and view blockage when viewed from residential areas in southern Banning and Beaumont	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors.
V-46. Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing from BLM-managed lands within the Potrero ACEC (VRM)	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors.
V-47. Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 36 on Mapes Road (VS-VC)	Devers-Valley No. 2 Alternative	**V-40a.** Reduce visual contrast of towers and conductors.
Land Use		
~~**L-2.** Operation would result in permanent preclusion of land uses it traverses or adjacent land uses.~~No Class I Impacts.	~~SCE Harquahala-West Alternative~~	~~**L-1b.** Coordinate with the Central Arizona Project regarding canal crossings.~~
Wilderness and Recreation		
WR-2. Operation would change the character of a recreation or wilderness area, diminishing its recreational value.	Desert Southwest Transmission Project Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative	No mitigation proposed.
Agriculture		
Ag-3. Operation would permanently convert Farmland to non-agricultural use	SCE Harquahala-West Alternative	No mitigation proposed.
Cultural and Paleontological Resources		
C-1. Construction of the project would cause an adverse change to known historic properties	All project alternatives.	**C 1a.** Inventory and evaluate cultural resources in Final APE **C 1b.** Avoid and protect potentially significant resources. **C 1c.** Develop and implement Historic Properties Treatment Plan. **C 1d.** Conduct data recovery to reduce adverse effects. **C 1e.** Monitor construction. **C 1f.** Train construction personnel.
C-2. Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains	All project alternatives.	**C 1c.** Develop and implement Historic Properties Treatment Plan. **C 1d.** Conduct data recovery to reduce adverse effects. **C 1e.** Monitor construction. **C 1f.** Train construction personnel. **C 2a.** Consult agencies and Native Americans.

Table ES-4. Summary of Class I Impacts for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
Noise		
N-2. Permanent noise levels along the ROW would increase due to corona noise from operation of the transmission lines.	Desert Southwest Transmission Project Alternative, Devers-Valley No. 2 Alternative	No mitigation proposed.
Transportation & Traffic		
No Class I Impacts	none	n/a
Public Health & Safety		
No Class I Impacts	none	n/a
Air Quality		
AQ-1. Construction would generate dust and exhaust emissions SCAQMD (SCAB, SSAB, and MDAB)	Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative	**AQ 1a.** Develop and Implement a Fugitive Dust Emission Control Plan. **AQ-1b.** Use ultra low-sulfur diesel fuel. **AQ-1c.** Restrict engine idling. **AQ-1d.** Use lower emitting offroad diesel-fueled equipment. **AQ-1e.** Use onroad vehicles that meet California onroad standards. **AQ-1f.** Use lower emitting offroad gasoline-fueled equipment. **AQ-1g.** Reduce helicopter use during construction. **AQ-1h.** Schedule deliveries outside of peak hours. **AQ-1i.** Obtain NOx emission offsets.
Hydrology and Water Resources		
No Class I Impacts	none	n/a
Geology, Mineral Resources, and Soils		
No Class I Impacts	none	n/a
Socioeconomics		
No Class I Impacts	none	n/a

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
Biological Resources		
B-1. Construction activities would result in temporary and permanent loss of native vegetation	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan.
B-2. Construction activities would result in the introduction invasive non-native or noxious plant species	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan. **B-2a.** Conduct invasive and noxious weed inventory. **B-2b.** Implement control measures for invasive and noxious weeds
B-5. Construction activities during the breeding season would result in a potential loss of nesting birds	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-5a.** Conduct pre-construction surveys and monitoring for breeding birds
B-6. Construction activities would result in indirect or direct loss of listed plants	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Devers-Valley No. 2 Alternative	**B-6a.** Develop a transplanting plan

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
B-7. Construction activities would result in indirect or direct loss of listed wildlife or habitat	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan. **B-5a.** Conduct pre-construction surveys and monitoring for breeding birds. **B-7b.** Conduct pre-construction tortoise surveys. **B-7c.** Purchase mitigation lands for impacts to tortoise habitat. **B-7e.** Conduct focused surveys for California gnatcatchers. **B-7f.** Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat. **B-9f.** Perform construction outside of breeding and lambing period.
B-8. Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-8a.** Conduct surveys for listed plant species.
B-9. Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan. **B-5a.** Conduct pre-construction surveys and monitoring for breeding birds. **B-9a.** Conduct pre-construction surveys. **B-9b.** Conduct biological monitoring. **B-9c.** Implement a Worker Environmental Awareness Program. **B-9d .** Conduct pre-construction reptile surveys. **B-9e.** Conduct pre-construction surveys and owl relocation. **B-9h.** Conduct pre-construction surveys for roosting bats. **B-9i.** Schedule construction when the Coachella Valley round-tailed squirrel is dormant.

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
B-10. The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-1a.** Prepare and implement a Habitat Restoration/Compensation Plan.
B-13. Construction activities may conflict with local policies or ordinances protecting biological resources	Desert Southwest Transmission Project Alternative, Devers-Valley No. 2 Alternative	**B-7b.** Conduct pre-construction tortoise surveys. **B-7c.** Purchase mitigation lands for impacts to tortoise habitat. **B-9f.** Perform construction outside of breeding and lambing period. **B-7d.** Purchase mitigation lands for impacts to fringe-toed lizard habitat. **B-9i.** Schedule construction when the Coachella Valley round-tailed squirrel is dormant. **B-13a.** Demonstrate compliance with the Western Riverside County MSHCP. SCE shall provide documentation that it has complied with the provisions of the MSHCP. **B-13b.** Implement the Best Management Practices required by the Western Riverside County MSHCP.
B-15. Operation of the transmission line may result in collisions by listed bird species	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-15a.** Utilize collision-reducing techniques in installation of transmission lines.

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
B-16. Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Devers-Valley No. 2 Alternative	**B-16a.** Prepare and implement a raven control plan.
B-18. The Project would result in disturbance to Management Indicator Species.	Devers-Valley No. 2 Alternative	**B-5a** Conduct preconstruction surveys. **B-18a.** No activities in riparian conservation areas.
Visual Resources		
V-2. Long-term visibility of land scars in arid and semi-arid landscapes.	DSWTP Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative.	**V 2a.** Reduce in-line views of land scars. **V 2b.** Reduce visual contrast from unnatural vegetation lines. **V 2c.** Reduce color contrast of land scars.
V-35. Increased structure contrast, industrial character, structure prominence, view blockage, and skylining when viewing the Harquahala Junction Switchyard Alternative site from Viewpoint 29 on Salome Highway.	Harquahala Junction Switchyard Alternative	**V-6a:** Reduce Visual Contrast Associated with Ancillary Facilities. **V-6b.** Screen ancillary facilities. **V-6c:** Reduce night lighting impacts. **V-35a.** Screen alternative switchyard site from Salome Highway views.
Land Use		
L-1. Construction would temporarily disturb the land uses it traverses or adjacent land uses.	SCE Harquahala-West Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative	**L-1a.** Prepare Construction Notification Plan. **L-1b.** Coordinate with the Central Arizona Project regarding canal crossings. **L-1c.** Provide proof of resolution of land acquisition issues for crossing of Aqua Caliente Band of Cahuilla Indians tribal lands.
L-2. Operation would result in permanent preclusion of land uses it traverses or adjacent land uses.	SCE Harquahala-West Alternative	**AG-4a.** Locate transmission towers and pulling/splicing stations to avoid agricultural operations

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
Wilderness and Recreation		
WR-1. Construction activities would temporarily reduce access and visitation to recreation or wilderness areas.	SCE Harquahala-West Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative	**WR-1a.** Coordinate construction schedule and activities with the authorized officer for the recreation area.
WR-3. Operation would permanently preclude recreational activities.	Desert Southwest Transmission Project Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative	**WR-3a.** Coordinate tower and road locations with the authorized officer for the recreation area.
Agriculture		
AG-1. Construction activities would temporarily convert Farmland to non-agricultural use	SCE Harquahala-West Alternative, SCE Palo Verde Alternative	**AG-1a.** Establish agreement and coordinate construction activities with agricultural landowners.
AG-2. Construction activities would interfere with agricultural operations	SCE Harquahala-West Alternative, SCE Palo Verde Alternative	**L-1a.** Prepare Construction Notification Plan. **AG-1a.** Establish agreement and coordinate construction activities with agricultural landowners.
AG-4. Operation would interfere with agricultural operations	SCE Harquahala-West Alternative	**AG-4a.** Locate transmission towers and pulling/splicing stations to avoid agricultural operations.
Cultural and Paleontological Resources		
C-1. Construction of the project would cause an adverse change to known historic properties	All project alternatives.	**C-1b.** Avoid and protect potentially significant resources. **C-1c.** Develop and implement Historic Properties Treatment Plan. **C-1d.** Conduct data recovery to reduce adverse effects. **C-1e.** Monitor construction. **C-1f.** Train construction personnel.

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
C-2. Construction of the project could cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains	All project alternatives.	**C-1c.** Develop and implement Historic Properties Treatment Plan. **C-1d.** Conduct data recovery to reduce adverse effects. **C-1e.** Monitor construction. **C-1f.** Train construction personnel. **C-2a.** Consult agencies and Native Americans.
C 3. Construction of the project could cause an adverse change to Traditional Cultural Properties	All project alternatives.	**C-3a.** Complete consultation with Native American and other Traditional Groups.
C-4. Construction of the project could destroy or disturb significant paleontological resources	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Harquahala Junction Switchyard Alternative, Devers-Valley No. 2 Alternative	**C-4a.** Inventory paleontological resources in Final APE. **C-4b.** Develop Paleontological Monitoring and Treatment Plan. **C-4c.** Monitor construction for paleontology. **C-4d.** Conduct paleontological data recovery. **C-4e.** Train construction personnel.
C-5. Operation and long-term presence of the project could cause an adverse change to known historic properties	All project alternatives.	**C-2a.** Consult agencies and Native Americans. **C-3a.** Complete consultation with Native American and other Traditional Groups. **C-5a.** Protect and monitor NRHP-eligible properties.
Noise		
N-1. Construction noise could substantially disturb sensitive receptors or violate local rules, standards, and/or ordinances.	SCE Palo Verde Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative, Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative	No mitigation proposed.
Transportation and Traffic		
T-7. Construction vehicles and equipment would potentially cause physical damage to roads in the project area.	All project alternatives.	**T-7a.** Repair roadways damaged by construction activities.

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
Public Health & Safety		
P-1. Soil contamination could~~as a~~ result from ~~of~~ improper handling and/or storage of hazardous materials during construction activities	All project alternatives.	**P-1a.** Develop Hazardous Substance Control and Emergency Response Plan. **P-1b.** Conduct environmental training and monitoring program. **P-1c.** Ensure proper disposal of construction waste. **P-1d.** Maintain emergency spill supplies and equipment.
P-2. Residual pesticides and or herbicides could be encountered during grading or excavation in agricultural areas	SCE Harquahala-West Alternative, Devers-Valley No. 2 Alternative	**P-2a.** Identify pesticide/herbicide contamination.
P-3. Previously unknown contamination could be encountered during grading or excavation	SCE Palo Verde Alternative	**P-3a.** Observe exposed soil for evidence of contamination.
P-4. Soil contamination could result from accidental spill or release of hazardous materials during operations and maintenance	SCE Palo Verde Alternative, Harquahala Junction Switchyard Alternative, Desert Southwest Transmission Project Alternative, Devers-Valley No. 2 Alternative	**P-4a.** Prepare Spill Prevention, Countermeasure, and Control Plans.
Air Quality		
AQ-1. Construction would generate dust and exhaust emissions [MCAQD, ADEQ, MDAQMD, SCAQMD (SSAB and MDAB)]	SCE Harquahala-West Alternative, Desert Southwest Transmission Project Alternative	**AQ-1a.** Develop and Implement a Fugitive Dust Emission Control Plan. **AQ-1b.** Use ultra low-sulfur diesel fuel. **AQ-1c.** Restrict engine idling. **AQ-1d.** Use lower emitting offroad diesel-fueled equipment. **AQ-1e.** Use onroad vehicles that meet California onroad standards. **AQ-1f.** Use lower emitting offroad gasoline-fueled equipment. **AQ-1g.** Reduce helicopter use during construction. **AQ-1h.** Schedule deliveries outside of peak hours. **AQ-1i.** Obtain NOx emission offsets.
Hydrology and Water Resources		

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
H-2. Degradation of water quality through spill of potentially harmful materials used in construction	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Harquahala Junction Switchyard Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Alligator Rock–Blythe Energy Transmission Alternative , Alligator Rock–South of I-10 Frontage Alternative, Devers-Valley No. 2 Alternative	**P 1a.** Develop Hazardous Substance Control and Emergency Response Plan. **P 1b.** Conduct environmental training and monitoring program. **P 1c.** Ensure proper disposal of construction waste. **P 1d.** Maintain emergency spill supplies and equipment.
H 4 . Water quality degradation caused by accidental releases of oil from project facilities	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Harquahala Junction Switchyard Alternative, Desert Southwest Transmission Project Alternative, Devers-Valley No. 2 Alternative	**P 4a.** Prepare Spill Prevention, Countermeasure, and Control Plans.
H-6. Encroachment into a floodplain or watercourse by permanent aboveground project features resulting in flooding, flood diversions, or erosion.	Devers-Valley No. 2 Alternative	**H-6a.** Design diversion dikes or other site remediations to avoid damage to adjacent property.
Geology, Mineral Resources, and Soils		
G-1. Construction could accelerate erosion	SCE Harquahala-West Alternative, SCE Palo Verde Alternative, Harquahala Junction Switchyard Alternative, Desert Southwest Transmission Project Alternative, Alligator Rock–North of Desert Center Alternative, Devers-Valley No. 2 Alternative	**G-1a.** Protect desert pavement.
G-2. Project structures could be damaged by problematic soils	All project alternatives.	**G-2a.** Conduct geotechnical studies for ~~problematic~~ soils to assess characteristics and aid in appropriate foundation design.
G-3. Excavation or grading during construction could cause slope instability.	Devers-Valley No. 2 Alternative	**G-3a.** Conduct geotechnical surveys for landslides.
G-4. Project structures could be damaged by landslides, earthflows, and/or debris flows	Devers-Valley No. 2 Alternative	**G-3a.** Conduct geotechnical surveys for landslides.
G-5. Project structures could be damaged by seismically included groundshaking and ground failure	Devers-Valley No. 2 Alternative	**G-5a.** Protect project facilities from ground failure.

Table ES-5. Summary of Class II Impacts and Mitigation for Alternative Routes

Impact	Applicable Alternatives	Mitigation Measure(s)
G-7. Project structures could be damaged by surface fault rupture at crossings of active and potentially active faults.	Harquahala Junction Switchyard Alternative, Desert Southwest Transmission Project Alternative, Devers-Valley No. 2 Alternative	**G-7a.** Minimize project structures within active fault zones.
Socioeconomics		
No Class II Impacts	none	n/a

A. Introduction

On April 11, 2005, Southern California Edison Company (SCE) submitted to the California Public Utilities Commission (CPUC) an application for a Certificate of Public Convenience and Necessity (CPCN), accompanied by its Proponent's Environmental Assessment (PEA) for the Devers–Palo Verde 500 kV No. 2 (DPV2) Transmission Line Project (Proposed Project). The CPUC identifies the DPV2 Project as Application A.05-04-015. This Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) has been prepared by the California Public Utilities Commission as Lead Agency under the California Environmental Quality Act (CEQA) and the U.S. Department of the Interior, Bureau of Land Management (BLM) under the National Environmental Policy Act (NEPA) to inform the public and to meet the needs of local, State, and federal permitting agencies to consider the project proposed by SCE (or "the Applicant").

The project proposed by SCE is described briefly below, and in detail in Section B of this EIR/EIS. This EIR/EIS does not make a recommendation regarding the approval or denial of the project; it is purely informational in content, and will be used by the CPUC and BLM in considering whether or not to approve the Proposed Project or an alternative.

This EIR/EIS evaluates and presents the environmental impacts that are expected to result from construction and operation of SCE's Proposed Project, and presents recommended mitigation measures that, if adopted, would avoid or minimize the significant environmental impacts identified. In accordance with CEQA and NEPA requirements, this EIR/EIS also identifies alternatives to the Proposed Project that could avoid or minimize significant environmental impacts associated with the project as proposed by SCE (including the No Project Alternative), and evaluates the environmental impacts associated with these alternatives. Based on this environmental impact assessment, as well as the relative sensitivities of impacts in the study region, this EIR/EIS identifies the Environmentally Superior Alternative as required by CEQA and NEPA.

The contents of this Draft EIR/EIS reflects input by government officials, agencies, nongovernmental organizations, and concerned members of the public during the EIR/EIS scoping period following the CPUC's publication of the Notice of Preparation (NOP) of an EIR/EIS (October 25, 2005) and the BLM's publication of the Notice of Intent (NOI) (December 7, 2005). During these comment periods, several public involvement activities were completed: distribution of the NOP, NOI, and a scoping meeting notice, establishment of an Internet web page and a telephone hotline, eight public scoping meetings (November 2005 and January 2006), and meetings with a number of affected local jurisdictions (see details in Section H). Consultation with agencies also continued after the formal scoping period ended.

This section is organized as follows: Section A.1 briefly gives a historical background of the Devers–Palo Verde 500 kilovolt (kV) No. 1 (DPV1) Project and the DPV2 Project and describes the DPV2 Project as currently proposed by SCE; Section A.2 explains the area's electric system and presents information related to the need for the Proposed Project. Section A.3 describes agency use of the EIR/EIS, and includes a brief description of the CPUC and BLM processes for consideration of project approval; and Section A.4 presents a Reader's Guide to this EIR/EIS, explaining how it is organized.

A.1 History and Overview of Proposed Project

A.1.1 Historical Background of DPV1 and DPV2 Projects

Southern California Edison Company (SCE) submitted an Application for a Certificate of Public Convenience and Necessity (CPCN) and Proponent's Environmental Assessment (PEA) to the CPUC for the Devers–Palo Verde 500 kilovolt (kV) No. 1 (DPV1) project in 1978. The CPUC prepared a Final Environmental Impact Report (FEIR) for the DPV1 project and issued a CPCN for DPV1 in 1979. A Record of Decision (ROD) also was issued by the Bureau of Land Management (BLM) and U.S. Nuclear Regulatory Commission (NRC), which approved the DPV1 project.

Electrical systems and siting studies were conducted prior to construction of the DPV1 line. A regional siting study was conducted by SCE in 1976-1977 to identify alternative routes between Devers Substation and the Palo Verde Nuclear Generating Station (PVNGS) within a 6,000-square-mile area. Several alternative routes were evaluated in the DPV1 Draft Environmental Impact Statement (DEIS) prepared by the U.S. Department of the Interior, Bureau of Land Management (BLM) and Nuclear Regulatory Commission (NRC) (BLM and NRC, July 1978). These agencies selected the preferred route for the DPV1 transmission line that was constructed in 1982 following State approvals by the CPUC and the Arizona Corporation Commission (ACC).

After construction of the DPV1 line, applications to construct the Devers–Palo Verde ~~Harquahala~~ No. 2 500 kV (DPV2) line between Devers Substation and PVNGS were submitted by SCE in 1985. The CPCN application and PEA included the proposed route and four alternative routes that were also considered in the DPV1 studies that were completed in 1978. Following reviews of SCE's PEA (1985) and the CPUC EIR (1987) in compliance with the California Environmental Quality Act (CEQA) and subsequent filing and review of SCE's 1988 Amended Application and PEA (SCE, 1988), the CPUC issued a decision approving the DPV2 project as then proposed. The Interim Order issued in December 1988 granted a CPCN to SCE that allowed construction of the project, conditioned upon compliance with an environmental mitigation program and other conditions as specified in the CPUC Final EIR (1987).

The BLM approved the DPV2 project and the proposed route following completion of a Final Supplemental EIS (BLM, 1988) in compliance with NEPA, and issued a Record of Decision in 1989. Later that year, the BLM issued a Right-of-Way Grant to SCE for the construction, operation, and maintenance of DPV2 across federal land, pursuant to Title V of the Federal Land Policy and Management Act of 1976. In 1989, the U.S. Fish and Wildlife Service issued a Certificate of Right-of-Way Compatibility for the portion of the DPV2 route that crosses the Kofa National Wildlife Refuge in Arizona, but a Right-of-Way Permit was never issued. In 1997, intervening events, including electric industry restructuring, led SCE to request abandonment of construction of the DPV2 project, and the CPUC granted SCE's request. Previous agency approvals and other actions pertaining to the DPV2 project are described as follows, and listed in Table A-1.

Table A-1. Previous DPV2 Agency Approvals and Other Actions

Document	Date	Agency	Action
CPCN Application including PEA	12/85	CPUC	Initial filing
Draft Environmental Impact Report	03/87	CPUC	State of California public and agency review
Supplemental Draft Environmental Impact Statement	05/87	USDOI/ BLM	Review in compliance with NEPA
Final EIR	08/05/87	CPUC	Compliance with California Environmental Quality Act
Arizona Certificate of Environmental Compatibility Application filed (Case No. 76)	11/16/87	ACC	Filed application for State of Arizona review (withdrawn)
Amended CPCN Application/PEA filed (No. 85-12-012)	08/88	CPUC	Incorporated SCE/Division of Ratepayer Advocates cost/benefit study
Addendum to FEIR	09/88	CPUC	Review required for amended PEA
Final SEIS	10/88	USDOI/ BLM	Proposed Project and route adjacent to DPV1 approved
Interim Opinion (Decision No. 88-12-030)	12/09/88	CPUC	Interim Order Granting conditional approval for CPCN and route
Record of Decision	02/21/89	BLM	Approved project and preferred route in compliance with NEPA
Certificate of Right-of-Way Compatibility	03/01/89	USFWS	Certified compatibility of 500 kV transmission line on KOFA NWR land
Right-of-Way Grant (CA-17905/AZ-23805)	08/11/89	BLM	Right-of-way permitted across federal land
SCE Ten-Year Plan filed	02/28/94	ACC	Notice of SCE's plan to construct in Arizona

Source: SCE, 2005a.

The route that was proposed in the 1985 Application and PEA, and 1988 Amended Application and PEA, followed the existing DPV1 line and terminated at PVNGS. The eastern termination point of the 500 kV transmission line that is proposed in the current application is the Harquahala Generating Station Switchyard, located approximately 15 miles northwest of PVNGS. The distance of the proposed route between Devers Substation and the Harquahala Generating Station is approximately 230 miles, following the existing DPV1 line for a distance of 225 miles. Therefore, the proposed Devers-Harquahala route would require the construction of new transmission line from the Harquahala Generating Station switchyard, for a distance of 4.8 miles east to the junction with the DPV1 corridor, adjacent to the existing Harquahala-Hassayampa 500 kV transmission line. Because the currently proposed route does not go as far as PVNGS, it is approximately 10 miles shorter than the route proposed in the previous DPV2 applications.

The proposed route for the DPV2 transmission line is located generally parallel to SCE's existing DPV1 transmission line route. The majority of the proposed Devers-Harquahala 500 kV transmission line would be constructed within the 130-foot-wide ROW on public land granted in perpetuity to SCE for the DPV2 project by the BLM in 1989. The ROW was granted for a total of 149.9 linear miles of public land between Devers and PVNGS, 57.2 miles in California and 92.7 miles in Arizona, including land managed by the BLM, USFWS, U.S. Department of Defense (DOD), and U.S. Bureau of Reclamation (BOR).

A.1.2 Devers–Palo Verde No. 2 500 kV Project as Currently Proposed

SCE proposes to construct a new 230-mile, 500 kV electric transmission line between Devers Substation in California and Harquahala Generating Substation in Arizona (referred to as "Devers-Harquahala" or D-H) and also to replace 48.2 miles of 230 kV transmission lines in California (referred to as "West of Devers" or WOD upgrades). The upgraded lines would connect directly to the Devers 230 kV bus. The entire project would span 278 miles, with approximately 176 miles in California and 102 miles in Arizona. Section B presents a detailed description of the Proposed Project; the general location is illustrated in Figure ES-1 in the Executive Summary. The Proposed Project is the Environmentally Superior Alternative/Environmentally Preferred Alternative with three exceptions.[1] Each of the components of the Proposed Project is described below.

Devers-Harquahala

- Construction of a 500 kV transmission line from the Harquahala Generating Station switchyard, located near the Palo Verde Nuclear Generating Station (PVNGS) west of Phoenix, Arizona, to SCE's Devers Substation (Devers), located near Palm Springs, California
- Construction of the Midpoint Substation approximately 10 miles southwest of Blythe, California, and adjacent to the proposed Devers-Harquahala 500 kV transmission line (this is an optional component of the Proposed Project that SCE may not construct)
- Construction of a new optical repeater facility 3 miles west of Blythe, California, within the DPV2 ROW
- Construction of two series capacitor banks, each adjacent to an existing DPV1 series capacitor bank: one in Arizona approximately 55 miles west of the Harquahala Switchyard and one in California approximately 64 miles east of Devers near I-10
- Installation of a dead-end structure, circuit breakers, and disconnect switches at the Harquahala and Devers Switchyards
- Construction and installation of telecommunication systems related to the Proposed Project, including a new telecommunications facility on Harquahala Mountain and a new Optical Ground Wire (OPGW) on the Devers–Harquahala transmission line towers.

West of Devers

- Replacement two existing 230 kV lines with a new double-circuit 230 kV line and reconductoring of a third 230 kV line[2] for a distance of 40 miles between Devers Substation and San Bernardino Junction in San Bernardino County, California
- Reconductoring of 4.8 miles of 230 kV transmission line between San Bernardino Junction and Vista Substation, also located in San Bernardino County, California

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[1] As discussed in Section E, alternatives in the areas near Palo Verde Nuclear Generating Station and the Alligator Rock ACEC were found to environmentally superior/preferable. In the West of Devers segment, the Proposed Project is environmentally superior/preferable, but it may not be feasible.

[2] Reconductoring involves removal of the existing conductors on an existing tower, and installation of new, larger capacity conductors. This is generally done with no change to the tower itself, although in some cases towers need to be strengthened or replaced.

- Reconductoring of 3.4 miles of 230 kV transmission line between San Bernardino Junction and San Bernardino Substation located in San Bernardino County, California.

System Improvements

- Construction of a 500 kV shunt line reactor bank and associated disconnect switches within Devers Substation; and
- Installation of Special Protection Scheme (SPS) relays at the Devers, Padua, and Vista Substations in California, and the PVNGS, Hassayampa, and Harquahala Switchyards in Arizona.

A.1.3 Past Documents

This EIR/EIS utilizes information from the following existing documents that covered portions of the Proposed Project (in chronological order):

Devers–Palo Verde 500 kV Transmission Line Project

- Devers–Palo Verde 500 kV Transmission Line: Environmental Report (1978)
- Palo Verde–Devers 500 kV Transmission Line: Final Environmental Statement (1979, February)
- Devers–Palo Verde 500 kV Transmission Line: Final Environmental Impact Report (1979, April)

Devers–Palo Verde 500 kV No. 2 Transmission Line Project

- Devers–Palo Verde #2 500 kV Transmission Line Project: Engineering Report (1987, January)
- Devers–Palo Verde #2 500 kV Transmission Line Project: Draft Environmental Impact Report, Volume I Project Specific Analysis (1987, March) and Volume II Engineering and Environmental Assessment of Transmission Line Planning Issues for the Southern California Transmission System (1987, March)
- Second Devers to Palo Verde 500 kV AC Transmission Line: Final Need and Alternatives Report, Volume II: Appendices (1987, April)
- Devers–Palo Verde No. 2 500 kV Transmission Line Project: Supplemental Draft Environmental Impact Statement (1987, May)
- Devers–Palo Verde No. 2 500 kV Transmission Line Project: Final Environmental Impact Report, Volume 1 and Volume 2 (1987, August)
- Devers–Palo Verde #2 500 kV Transmission Line Project: Amended Proponent's Environmental Assessment (1988, August)
- Second Devers to Palo Verde 500 kV AC Transmission Line: Second Supplemental Report on Need and Alternatives (1988, September)
- Devers–Palo Verde No. 2 500 kV Transmission Line Project: Addendum to the Final Environmental Impact Statement (1988, September)
- Devers–Palo Verde No. 2 500 kV Transmission Line Project: Final Supplemental Environmental Impact Statement (1988, October)
- Devers–Palo Verde 500 kV No. 2 Transmission Line Project: Proponent's Environmental Assessment (2005, April)

Documents for Other Projects Near the DPV1/DPV2 Corridor

- Desert Southwest Transmission Line Project (DSWTP): Final EIS/EIR (2005, October)
- Blythe Energy Project Transmission Line Modifications (BEPTL): Petition for Post-Certification Amendment (2004, October) and CEC ~~Final~~ Revised Staff Assessment/Draft Environmental Assessment (~~expected~~ September, 2006).

A.1.4 CPUC Proceeding on the Economic Assessment of Transmission Lines

In addition to environmental issues, which are considered under CEQA/NEPA and are addressed in this EIR/EIS, the DPV2 project has raised other non-environmental issues for the CPUC's consideration, including the need for the project and ratemaking issues. Therefore, as a coordinated but independent proceeding, the CPUC has opened an Order Instituting Investigation (OII) (I.05-06-041) to consider appropriate principles and methodologies for assessment of the economic benefits of transmission projects, including DPV2, that are submitted for CPUC approval.

The application that SCE submitted for DPV2 on April 11, 2005 (A.05-04-015) is supported in a large part with an evaluation of DPV2's economic benefits, which SCE states is consistent with the Transmission Economic Assessment Methodology (TEAM) developed by the California Independent System Operator (CAISO). The OII initiating I.05-06-041 noted that, in considering SCE's proposed DPV2 project, CAISO staff performed an independent economic assessment of DPV2 using the TEAM approach. The OII identifies that the scope of I.05-06-041 shall include, but not be limited to, the following issues:

- What general principles or methodologies should be employed in assessing the economic benefits of transmission projects within the CPUC's jurisdiction?
- Is the CAISO's TEAM approach a reasonable methodology for assessing the economic benefits of transmission projects?
- What validation is needed by the CPUC in order to rely on a CAISO assessment of need in a CPUC transmission project certification proceeding? If the CPUC determines in a transmission project certification proceeding that a CAISO assessment of need has been adequately validated, are there additional requirements that must be met in the CPUC's determination of economic benefits? For those transmission project certification cases where there is no validated CAISO assessment of need, what requirements should the CPUC adopt for consideration of economic benefits?

As the OII stated, the CPUC's investigation regarding the appropriate methodology for assessment of the economic benefits of transmission projects will be undertaken while an environmental assessment of the DPV2 project is underway (in A.05-04-015). Consistent with that guidance, assigned Administrative Law Judge (ALJ) Charlotte TerKeurst stated that evidence regarding DPV2 should be received in two phases. Phase 1 would address economic methodology and need issues, with testimony to be received and evidentiary hearings to be held on a consolidated basis with I.05-06-041. Phase 2 in A.05-04-015 would address environmental and routing issues related to DPV2, with evidentiary hearings after the Draft EIR/EIS is released. Phase 1 issues would be addressed through one or more interim decisions or in a decision following Phase 2 hearings in A.05-04-015. Table A-2 depicts the schedule of the parallel processes for Phases 1 and 2 of the General Proceeding.

Table A-2. CPUC General Proceeding Schedule

Phase I		Phase 2	
CAISO Report and Workshops	September 2005	First Pre-Hearing Conference	July 20, 2005
Comments and Direct Testimony	October 2005	Scoping Memo for General Proceeding	August 26, 2005
Direct and Rebuttal Testimony	November–December 2005	Ruling Addressing Schedule and Other Procedural Matters	September 27, 2005
Evidentiary Hearings	January 2006	Testimony Exchanged	June 2006
File Briefs	February 2006	Evidentiary Hearings	July 2006
Proposed Decision	May 2006	ALJ's Proposed Decision	November 2006
		Final Decision by CPUC	December 2006

A.2 Purpose and Need for the Proposed Project

As stated in SCE's PEA submitted to the CPUC in April 2005, the DPV2 project is primarily driven by the need to provide additional high-voltage electrical transmission infrastructure to enhance competition among energy suppliers, and increase reliability of supply, which will enable California utilities to reduce energy costs to customers by about $1.1 billion over the life of the project. Specifically, DPV2 will increase transmission capacity by 1,200 megawatts (MW), allowing California access to cost-effective energy in the southwestern United States, and thereby displacing higher-cost generation in California (SCE, 2005a).

A.2.1 Statement of Purpose and Objectives

As was demonstrated in the 2000-2001 electricity crisis, the market for electricity in California is susceptible to volatile commodity prices, the exercise of market power, and the risk of supply shortages. Development of new transmission facilities to gain greater access to generation may help California avoid or limit similar experiences. Additionally, development of new transmission facilities to areas where generation has been more easily sited and constructed may spur development of new competitive generation to provide further insurance against future electricity crises.

As stated by SCE in the PEA, the objectives for building DPV2 are to:

- Increase California's access to low-cost energy by adding 1,200 MW of transmission import capability into California from the Southwest. This is expected to substantially benefit California by reducing energy costs.
- Enhance competition among generating companies supplying energy to California.
- Provide additional transmission infrastructure to support and provide an incentive for the development of future energy suppliers selling energy into the California energy market.
- Provide increased reliability of supply, insurance value against extreme events, and flexibility in operating the Southwest's ~~California's~~ transmission grid.

These objectives are discussed below in more detail. In addition, the CAISO conducted an independent review of DPV2 and also found the DPV2 project to be a necessary and cost-effective addition to the CAISO-controlled grid.[3] The CAISO Board approved the DPV2 project on February 24, 2005 and

[3] http://www.caiso.com/docs/09003a6080/34/e4/09003a608034e440.pdf.

directed SCE to proceed with the permitting and construction of the transmission project, preferably to the completed by the summer of 2009.

Increase California's Transmission Import Capability

DPV2 will increase California's transmission import capability by 1,200 MW providing greater access to sources of low-cost energy currently operating in the Southwest. The Southwest region currently has over 6,000 MW of surplus generation, which may be imported into California. The Southwest Transmission Expansion Plan~~ning~~ (STEP)[4] working group independently concluded a similar magnitude of generation is available for import into California. Increased access to energy in the Southwest is forecasted to lower total energy costs and substantially benefit California consumers. As described in Section A.2.3 below, SCE's economic analysis demonstrates that DPV2 provides $1.1 billion of benefits to California consumers over the life of the project, and has a benefit-cost ratio of 1.7:1.

Enhance the Competitive Energy Market

As a public policy matter, California can encourage investment in new generation infrastructure through (1) the construction of needed high-voltage transmission lines and (2) through reducing the time to permit such transmission lines. For example, on May 8, 2004, regulatory agencies in California adopted the *Energy Action Plan* for California. The *Energy Action Plan* concluded that adequate, reliable, and reasonably priced energy supplies can be achieved, in part, by upgrading and expanding the electricity transmission and distribution infrastructure and reducing the time needed before facilities are brought online.[5] In particular, "Action IV" of the *Energy Action Plan* states that ([t]he State will reinvigorate its planning, permitting, and funding processes to assure that necessary improvements and expansions to the bulk electricity grid are made on a timely basis."

Transmission infrastructure is necessary for a competitive market, and is vital to integrating new generation additions.[6] The Federal Energy Regulatory Commission (FERC) recently stated that FERC's Goal 1 is to "Promote a Secure, High Quality Environmentally Responsible Infrastructure through Consistent Policies." Under this goal is objective 1.1:

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4 STEP's Purpose and Scope states "Southwest Transmission Expansion Plan (STEP) is a sub-regional planning group that was formed to address transmission concerns in the Arizona, southern Nevada, southern California, and northern Mexico area. As a result of a large amount of new generation developed in this area, it was apparent to many that the transmission grid would be inadequate to efficiently deliver that power to the major load areas. The goal of STEP is "To provide a forum where all interested parties are encouraged to participate in the planning, coordination, and implementation of a robust transmission system between the Arizona, Nevada, Mexico, and southern California areas that is capable of supporting a competitive efficient and seamless west-side wholesale electricity market while meeting established reliability standards."(See, Jan. 17th 2003 PDF file at: http://www1.caiso.com/docs/2003/01/22/2003012211380012544.pdf and the May 8th, 2003 document at http://www1.caiso.com/docs/2003/05/13/2003051315061917183.pdf).

5 The California Energy Commission's Electricity and Natural Gas Infrastructure Assessment Report (December 2003) available at http://www.energy.ca.gov (http://www.energy.ca.gov/reports/100-03-014F.PDF). Similarly, the report highlights the need for additional transmission infrastructure investment, particularly to support generation infrastructure.

6 See R.04-01-026, Order Instituting Rulemaking on policies and practices for the Commission's transmission assessment process (January 28, 2004) (Attachment B, Report of Current Planning Process for Investor-Owned Utilities).

- Expedite appropriate infrastructure development to ensure sufficient energy supplies; and
- Identify transmission and pipeline projects with high public interest benefits and facilitate their speedy completion, consistent with the Commission's (FERC) statutory mandates and due process.[7]

The California Legislature, likewise, has encouraged investment in transmission facilities to facilitate competition in the generation market. It has stated that reasonable expenditures to expand transmission facilities are in the public's interest, if made for the purpose of facilitating competition in electric generation markets.[8]

DPV2 is expected to enhance competition among energy suppliers by increasing access to the California energy market, providing siting incentives for future energy suppliers, and providing additional import capability. Facilitating a competitive energy market in the Southwest may also create employment opportunities, which are beneficial to the economy and industries in Arizona and California.

Support the Energy Market in the Southwest

The Western Electricity Coordinating Council (WECC) transmission system is an interstate regional system (including northwestern Mexico and two western Canadian provinces) that links power generation resources with customer loads in a complex electrical network. DPV2 will expand this network and increase the ability for California and the Southwest to pool resources for ancillary services, and provide emergency support in the event of generating unit outages or natural disasters.

Provide Increased Reliability, Insurance Value, and Operating Flexibility

DPV2 would improve the reliability of the regional transmission system, providing insurance against major outages such as the loss of a major generating facility or of another high-voltage transmission line; i.e., DPV2 will provide a hedge against low-probability, high-severity events such as short- and long-term outages of generating facilities, substations, and transmission lines. For example, if an earthquake disabled lines from the Pacific Northwest into California, then a line importing power from the Southwest, such as DPV2, would provide significant benefits above what is quantified by DPV2's economic analysis. In fact, some experts conclude that past experience demonstrates that high-voltage transmission lines can pay for themselves in just a few years because of the benefits they provide during low probability, high-impact events.[9]

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7 See Federal Energy Regulatory Commission Strategic Plan FY2004-FY2008, September 10, 2003, http://ferc.gov/about/strat-docs/09-29-03-detail-strategic-plan.pdf.

8 Cal. Pub. Util. Code § 454.1 ("(a) Reasonable expenditures by transmission owners that are electrical corporations to plan, design, and engineer reconfiguration, replacement, or expansion of transmission facilities are in the public interest and are deemed prudent if made for the purpose of facilitating competition in electric generation markets, ensuring open access and comparable service, or maintaining or enhancing reliability, whether or not these expenditures are for transmission facilities that become operational.")

9 http://www.electricpowergroup.com/Downloads/Planning/Planning_CA_FutureTrans_Grid_Final_Task1.pdf

A.2.2 Electric Supply Issues

This section describes the electricity system (generation and transmission) in Arizona and southern California as background for understanding the context of the Proposed Project.

~~Power Plant Construction Boom in Arizona~~Generation Resources in the Palo Verde (AZ) Area

Merchant power plant developers have been attracted to Arizona by the availability of natural gas infrastructure, the low cost of land, and a favorable regulatory environment. Major interstate pipelines from gas fields in west Texas, New Mexico, and the Rocky Mountains traverse the State and converge in western Arizona. About 40 miles west of Phoenix, the Palo Verde and Hassayampa area of Maricopa County is becoming known as "Power Town" with possibly the highest concentration of generating plants in the nation.

Table A-3 illustrates how dramatically the generation in western Arizona has expanded in recent years. Nearly 10,000 MW of generation located near Palo Verde is either recently completed or anticipated to come online before the proposed DPV2 in-service date of 2009. As stated in the project objectives, SCE intends to use DPV2 to deliver the lower-cost power available from these competitive plants in Arizona directly to its customers in the SCE service area.

Table A-3. Recent Generation Additions in Western Arizona

Power Plant	Owner	Arizona Location	Capacity & Online Date
Arlington Valley	Duke Energy	Hassayampa Area	570 MW in 2002
Red Hawk	Pinnacle West Energy	Hassayampa Area	1,000 MW in 2002, and 1,000 MW by 2007
Mesquite Power	Sempra Energy Resources	Hassayampa Area	1,265 MW in 2003
Harquahala Generating Project	PG&E National Energy Group	Hassayampa Area	1,170 MW in 2003
Gila River	Panda Energy/Tampa Electric	Gila Bend Area	2,080 MW in 2002 and 2003
West Phoenix 4 & 5	Calpine and Pinnacle West	West Phoenix Metro Area	545 MW in 2002
Santan Expansion	Salt River Project	East Valley Phoenix Area	825 MW by 2006
La Paz Energy	Allegheny Energy Supply	La Paz County	1,080 MW by 2006

Arizona-to-California Transmission Capacity

Electricity is currently imported to southern California from Arizona through three major transmission corridors: the 500 kV Palo Verde-to-Devers path; the North Gila-to-Imperial Valley path (i.e., the Southwest Power Link or SWPL, near the Mexico border); and to the north through southern Nevada. The major transmission lines are shown in Figure A-1 (see enclosed CD).

The import path~~paths~~ to southern California (east of the Colorado River, or EOR) ~~are currently constrained to~~is currently rated at 8,055 MW ~~roughly 7,550 MW by the existing system,~~ and the existing 500 kV DPV1 line is allocated 1,800 MW~~carries about 1,950 MW~~. The proposed DPV2 could provide about 1,200 MW of additional capacity on the combined paths into southern California.

Southwest Transmission Expansion Plan

The primary forum for regional transmission planning in ~~this region,~~the southwest is called Southwest Transmission Expansion Plan (STEP). STEP is a ~~sub~~-regional planning group for transmission and generation stakeholders in Arizona, Nevada, and southern California. Since its formation in late 2002, STEP

has reviewed dozens of upgrade scenarios to enhance the deliverability of low-cost power from new generation facilities, primarily in Arizona.

The current STEP recommendations include many "short-term" upgrades in California and Arizona. Some were approved by the CAISO board in June 2004. These include upgrades to increase the capacity on the Hassayampa–North Gila–Imperial Valley line (SWPL) and increase the capacity of the existing DPV1 500 kV line. ~~Additional short term upgrades in Arizona could be used to bring the combined capacity of the import paths (east of the Colorado River) from the present 7,550 MW to 9,000 MW using a plan called EOR (East of River) 9000.~~

STEP also envisions ~~longer~~mid-term upgrades such as new 230 kV and 500 kV lines between Arizona and California and a line into San Diego. In its March 2004 Status Report and October 2004 meeting, STEP identified the following recommendations for new transmission between Arizona and California:

- Rebuild the four 230 kV lines west of Devers (included in DPV2)
- Install new Harquahala-Devers 500 kV line (the major component of DPV2)
- Create a connection of the Blythe Substation to the Devers–Palo Verde 500 kV line
- Add a new 230 kV double-circuit line north out of Blythe to Parker Substation.

CAISO Board Approval

In June 2004, the CAISO Board approved the "STEP Short-Term Transmission Upgrades." These upgrades increase the ability of the existing transmission system to import power from Arizona without adding any new transmission lines. These short-term upgrades are planned to be in place in June 2006. Additional upgrades are planned for the existing transmission lines between Arizona and Nevada. However, even after these additions have been completed, the CAISO analysis indicated that there will still be substantial congestion on the grid between Arizona and California.

DPV2 is an economic transmission project as described under Section 3.2.1.1 of the CAISO Tariff. As provided in Section 3 of the CAISO Tariff, SCE submitted a report to the CAISO for their use in evaluating the cost-effectiveness of constructing the DPV2 Project.[10] SCE's analysis conformed to the principles and methods the CAISO has outlined in its Transmission Economic Assessment Methodology (TEAM), and demonstrates that DPV2 is cost effective to ratepayers in the CAISO area.

The CAISO completed an independent analysis of the benefits of DPV2 using TEAM and concluded that the project would further reduce this congestion and would provide significant reliability and economic benefits to CAISO ratepayers as well as the Western interconnection as a whole. The DPV2 Project would improve reliability by increasing voltage support in southern California and enhance system operational flexibility by providing CAISO operators with more options in responding to transmission and generation outages (CAISO, 2005).

The Proposed Project's primary economic benefit would be the increased ability to import low-cost generation from the southwest and displace higher-cost generation in California. The DPV2 Project would also provide access to additional capacity that can serve to meet the State's resource adequacy requirements and lower transmission system power losses. DPV2 would significantly augment the transmission infrastructure critical to support competitive wholesale energy markets for California consumers.

[10] On April 7, 2004, SCE provided a report entitled "Devers–Palo Verde No. 2 Cost-Effectiveness Report."

As part of the evaluation of the Proposed Project, alternatives to the project were considered such as other transmission projects and new generation. Demand-side and renewable resources were not considered alternatives since the CAISO stated that it believes these resources should be maximized first, before other traditional resources are considered. For its analysis, the CAISO reviewed several alternatives. One alternative the CAISO examined was the East-of-River (EOR) 9000 transmission project, which upgrades lines between Nevada and Arizona. The CAISO's analysis indicated that the EOR 9000 project would be complementary to DPV2 and is therefore appropriately included in the base case.

Another alternative examined by the CAISO was siting additional in-state generation. The resource mix the CAISO used in the study assumed additions of gas-fired plants known to be under consideration. The mix also met California's adopted renewable portfolio standards. Because the southwest has less expensive permitting, land, emission-offset, and labor expenses, the CAISO estimated the fixed costs of a new combined-cycle plant to be about 13 percent less in Arizona than in California. The CAISO also estimated that with the addition of the PVD2 costs the fixed costs associated with the delivery of Arizona generated energy would be approximately 25 percent more expensive than California generation. However, the CAISO also expects that California generation interconnection costs — those necessary to make California generation deliverable to load — would offset the fixed cost differential noting that these interconnection costs could be substantial. In addition, the CAISO expects units in the southwest to have approximately 10 percent lower operating costs due to lower natural gas costs forecast for that region. Thus, from strictly a net energy cost perspective, the CAISO ratepayer is expected to benefit from having access to lower cost units in the southwest. Constructing new in-state gas-fired generation would also not increase access to the more diverse fuel supply available in the southwest.

Therefore, overall the quantified benefits of the DPV2 project as concluded in the CAISO's evaluation include (CAISO, 2005):

- A reduction in production costs (energy cost savings)
- Operational savings (reduced uneconomic generation dispatch for reliability purposes)
- Capacity savings (lower capacity costs from the Southwest)
- NOx emission reduction (displacement of inefficient California generation with more efficient Southwest generation)
- Loss reduction (WECC total system losses are reduced due to increased transmission capacity).

The energy benefits were determined in accordance with the TEAM and the CAISO estimated that benefits from the Proposed Project would exceed its costs under a wide range of future system conditions. Because no single point estimate can adequately capture its value, the CAISO calculated its costs and benefits under a number of likely system conditions. The CAISO analysis indicated that expected benefit-cost ratio for CAISO Ratepayers would range from 1.2 to 3.2 depending on input assumptions and allocation of transmission congestion rents (CAISO, 2005). The CAISO's analysis of DPV2 further indicated that the project scope and cost appear to be appropriate.

Based on findings of the independent review that indicated the economic and reliability benefits of the DPV2 Project, the CAISO Board approved the project on February 24, 2005 and directed SCE, as the project sponsor, to proceed with the necessary permitting and construction of the project, preferably to the completed by the summer of 2009.[11]

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[11] CAISO Board of Governors Approval of PV Devers No. 2 Transmission Project: http://www.caiso.com/docs/09003a6080/34/e4/09003a608034e440.pdf.

Imperial Irrigation District, Desert Southwest Transmission Project

The Imperial Irrigation District (IID) operates a transmission system south of the Devers–Palo Verde corridor. A major upgrade to this system, called the Desert Southwest Transmission Line Project (DSWTP) was proposed by IID and BLM in 2003. ~~and t~~The Final EIS/EIR was published in October 2005 and BLM issued a Record of Decision for it on September 15, 2006. The DSWTP proposal includes a new 500 kV transmission line between a new Keim Substation (near Blythe, CA) and Devers Substation. According to IID, the purpose of this project is to access new generation facilities near Parker (Arizona) and Blythe (California).

The IID and Western systems at Blythe are isolated from the higher-voltage SCE system, and therefore, the new generation in Blythe creates a need for either the IID DSWTP or some other major transmission connection in Blythe. SCE may propose to provide this connection with DPV2. Elements of the IID DSWTP project appear to overlap with the proposed SCE DPV2 project and the project proponents may explore options of building only one of the proposed 500 kV lines between Blythe and Devers Substation.

Blythe Energy Project Transmission Line Modifications

The ~~proposed~~ Blythe Energy Project Transmission Line Modifications project, ~~currently under review at~~approved by the California Energy Commission (CEC) on October 11, 2006, would allow electrical output from the Blythe Energy Project (BEP) to be delivered to the southern CAISO-controlled electrical transmission system. There are two distinct components to the proposed BEP transmission line modifications: the Buck Boulevard Substation to Julian Hinds transmission line component and the Buck Boulevard Substation to the Devers–Palo Verde transmission line component.

The Buck Boulevard Substation to Julian Hinds transmission line component includes:

- Upgrades to Buck Boulevard Substation.
- Installation of approximately 67.4 miles of new 230 kilovolt kV transmission line between the Buck Substation located adjacent to the BEP and the Julian Hinds Substation located approximately 60 miles to the west.
- The proposed transmission line route would generally follow SCE's existing 500 kV DPV1 transmission line.
- Transmission line structures would be concrete, single-pole structures.
- Upgrades to the Julian Hinds Substation.

The Buck Boulevard Substation to the Devers–Palo Verde transmission line component includes:

- Upgrades to Buck Boulevard Substation.
- Installation of approximately 6.7 miles of a new 230 kV transmission line (initially operated at 161 kV) between the Buck Boulevard Substation and SCE's existing DPV1 500 kV transmission line.
- Transmission line structures would be concrete single-pole structures.
- Construction of a new 161 kV to 500 kV substation ("Midpoint Substation") at the point of interconnection with SCE's existing DPV1 500 kV transmission line.

A.2.3 Project Need and SCE's Economic Analysis

SCE examined DPV2's impact on total production costs, and uncertainty of major assumptions to determine the project's expected economics. Using production cost models, SCE estimated total production costs in California with and without the project and found that total energy production costs for electricity consumers in the CAISO area would be over $1 billion lower with the project than they would otherwise be without the project. SCE determined that the lifecycle benefits of DPV2 are greater than the lifecycle costs of constructing and operating DPV2.

To provide confidence in these results, SCE analyzed DPV2's benefits over a wide range of load forecasts, natural gas prices, and available hydro-generation, providing ample analysis of volatility affects. This analysis was performed using stochastic tools (also known as Monte Carlo Analysis). This type of analysis is important as it provides an expected value of benefits over a wide range of possible futures. SCE's cost-effectiveness analysis of DPV2 determined that the benefit-cost ratio is 1.7:1.

DPV2's economic benefits are largely derived from lowering California energy costs, with the main component of economic benefit centered around the assumption that energy prices for ratepayers in the CAISO area would be expected to fall 2 percent with the addition of DPV2 (energy prices would be $37.36/MWh without DPV2 and $36.75/MWh with DPV2 in the CAISO area [2010 nominal]).[12]

Description of Assumptions

SCE first evaluated DPV2 in the context of its July 2004 LTPP,[13] which identifies the baseline assumptions used in the benefits analysis of DPV2. The baseline assumptions were designed around the overall intent and "loading order" of the joint agency Energy Action Plan.[14] The 2004 LTPP was found reasonable and adopted[15] by the CPUC on December 16, 2004, subject to modifications that do not significantly affect the need, timing, or cost effectiveness analysis of DPV2.

In performing its analysis for DPV2, SCE updated the LTPP assumptions for gas prices, loads, and resources to better reflect more recent forecast conditions. In addition, SCE incorporated in this analysis as many of the Commission directed modifications as appropriate in order to maintain consistency with other regulatory forums that also make use of SCE's 2004 LTPP assumptions and analysis.[16] Those modifications include the acceleration of resource adequacy requirements from 2008 to 2006, updated natural gas prices, and updated procurement activities since the initial filing. In addition to these modifications, the 2004 LTPP also was updated for announced resource additions and retirements (generation and transmission alike), load forecasts throughout the WECC, and generic resource additions due to changes in the load forecast. Major assumptions in the adopted 2004 LTPP include:[17]

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[12] Estimated average 2010 energy prices for region under the operational control of the CAISO (does not include capacity prices). Market prices are weighed against total annual load.

[13] Rulemaking (R.)04-04-003. SCE's LTPP can be found at http://www3.sce.com/law/cpucproceedings.nsf/vwUFiling?SearchView&Query=long+term+procurement+plan&Start=1&Count=30. Specifically, the analysis performed to evaluate DPV2's economics ties directly to SCE's Medium Load Scenario.

[14] State of California Energy Action Plan, adopted May 8, 2003. http://www.energy.ca.gov/energy_action_plan.

[15] Decision (D.)04-12-048.

[16] For example, the California Energy Commission's IEPR Compliance Filing (Docket 04-IEP-1D), Advanced Metering Initiative (R.02-06-001), and the SCE's 2006 General Rate Case, Phase 2 (A.04-12-014).

[17] A more detailed description of SCE's LTPP can be found in Rulemaking (R.)04-04-003.

- SCE meeting 20 percent Renewable Portfolio Standard by 2010 per the Energy Action Plan
- Mohave Generating Station Units No.1 and 2 shutdown on December 31, 2005
- Mountainview Generating Station operational by summer of 2006
- San Onofre Nuclear Generating Station (SONGS) steam generator replacement in 2009-2010 time frame
- Compliance with Southern California Import Transmission nomogram import limits
- Significant increases in cost effective energy efficiency and demand response programs

Results of the Economic Analysis

DPV2's transmission revenue requirement will be paid by ratepayers of utilities (Participating Transmission Owners, or PTOs) whose facilities are under the operational control of the CAISO. SCE estimated benefits and revenue requirements based upon DPV2's estimated average service life.

The economic benefit of DPV2 is $1.1 billion, comprised of energy cost savings ($1.07 billion), and third-party transmission use revenues ($30 million). With the addition of DPV2, the revenue requirement used to develop rates for both CAISO wheeling service and Existing Transmission Contracts will increase, and the benefit calculation reflects the increasing revenues from existing and forecast transmission service users. Edison estimates wheeling service and Existing Transmission Contracts' (ETCs) benefits will provide approximately $0.6 million annually of increased revenue to SCE from certain ETCs and approximately $2.4 million annually of increased CAISO wheeling revenues to SCE or about $30 million (2005 NPV) over the life of the project. This estimate includes only the revenues to SCE, and does not reflect increased revenues to other CAISO entities. If these revenues were taken into account, the benefit would be greater.

The 2005 present value revenue requirement for DPV2 is estimated at $650 million. With a benefit-cost ratio of about 1.7:1, DPV2 was found to be a cost-effective project for ratepayers in the CAISO area.[18]

Non-Quantifiable Benefits

Some examples of potential benefits not quantified in DPV2's benefit-cost ratio of 1.7:1 include:

- **New Generation Development.** Developing the DPV2 could attract new generation development east of Devers Substation, such as in the Blythe and Palo Verde areas, providing additional supply to the California energy market. If new generation is developed, then DPV2's benefits should increase due to increased access to this new low-cost generation.
- **Market Power.** DPV2 also may provide benefits by reducing the potential for generators to exercise market power. By helping to increase the quantity of generation and number of suppliers available to serve California markets, DPV2 should help to increase competitive pressure on generators. This, in turn, should help to reduce the ability for generators to exercise market power as California experienced in the energy crisis.
- **Emergency Value.** A new transmission line such as DPV2 could provide benefits during an emergency outage of another major import line or generating facility. For instance, if fire or an earthquake disables lines from the Pacific Northwest into California, then a line importing power from the Southwest, such as DPV2, would provide benefits above what is quantified in this report. A similar emergency value could accrue during the long term or untimely outage of generation located in Southern California.

[18] Ratepayers in the CAISO area are those served by utilities, which are CAISO Participating Transmission Owners who have placed their transmission facilities under the operational control of the CAISO.

Using a production simulation modeling assessment to evaluate a transmission project will undervalue a transmission project, since it will not capture the benefits listed above. These benefits are difficult to quantify because they involve uncertainties that are hard to predict. But historically, transmission lines can pay for themselves in just a few years because of low probability, but high-impact events.[19]

As discussed under project objectives, DPV2 would provide real economic benefit to ratepayers by providing access to low-cost energy, supporting SCE's energy procurement goals, and enabling competitive new generation to develop, and providing significant operational benefits because grid operators have more facilities in which to depend upon.

A.3 Agency Use of This Document

The proposed route crosses federal, State, private, and tribal lands. The majority of the proposed Devers-Harquahala 500 kV transmission line would be constructed within the ROW located on federal lands, granted in perpetuity to SCE for the DPV2 project by the U.S. Department of Interior (DOI), BLM in the 1989 ROD and Right-of-Way Grant. The ROW crosses approximately 57 miles of public land in California and approximately 79 miles of public land in Arizona. The majority of the proposed route is within utility corridors designated in the BLM's Resource Management Plans (RMPs), and approved in compliance with the National Environmental Policy Act (NEPA) by the BLM following completion of a Final Supplemental Environmental Impact Statement (FSEIS) in 1988 and ROD in 1989. Also, the USFWS issued a Certificate of Right-of-Way Compatibility (CRC) in 1989 for the portion of the proposed Devers-Harquahala 500 kV transmission line that crosses the Kofa NWR in Arizona, but a Right-of-Way Permit was never issued.

SCE has submitted an application and PEA to the CPUC so that the CPUC may issue a CPCN for the project and issue and certify an EIR for the California portion of the project pursuant to CEQA. SCE has also submitted an application to the BLM for an Amended ROW Grant and, if approved, the BLM would issue a Notice to Proceed, allowing construction to be administered by the BLM in California and Arizona. Finally, the Arizona Corporation Commission (ACC) must issue a Certificate of Environmental Compatibility to an applicant, such as SCE, before the applicant can construct a transmission line. Thus, for a project that traverses State and federal land in California and Arizona, the CPUC and ACC will conduct permitting processes within their respective states, while the BLM will conduct permitting on federal land in both states.

A.3.1 CPUC Process

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of investor-owned public utilities, including SCE. The CPUC is the lead State agency for CEQA compliance in evaluation of the SCE's proposed DPV2 Project, and along with BLM has directed the preparation of this EIR/EIS. This EIR/EIS will be used by the Commission, in conjunction with other information developed in the Commission's formal record, to act on SCE's application for a Certificate of Public Convenience and Necessity (CPCN) for construction and operation of the Proposed Project. Under CEQA requirements, the CPUC will determine the adequacy of the Final EIR/EIS and, if adequate, will certify the document as complying with CEQA. The CPUC will also act on SCE's application for a CPCN. If it approves a project with significant and unmitigable impacts, it must state why in a "Statement of Overriding Considerations," which would be included in the Commission's decision on the application.

[19] http://www.electricpowergroup.com/Downloads/Planning/Planning CA FutureTrans Grid Final Task1.pdf.

The CPUC has assigned Administrative Law Judge (ALJ) Charlotte TerKeurst to oversee the hearings on the Proposed Project, and Commissioner Diane Grueneich is the Assigned Commissioner for the CPCN application. The Notice of Preparation (NOP) describing the Proposed Project was published on October 18, 2005. ~~The ALJ, in accordance with her Scoping Memo, will issue a Proposed Decision on the project in November 2006.~~ The ALJ's Proposed Decision, and the Evidentiary Hearings, will cover issues of project need, project cost, and other considerations. The CPUC expects a final decision from the Commission in ~~December 2006~~early 2007.

A.3.2 BLM Process

The Proposed Project would traverse federal BLM land in both California and Arizona. Although the Proposed Project would be located primarily within SCE's existing easement, there may be some areas where additional ROW would need to be acquired. Therefore, SCE would be required to apply for a Right-of-Way Grant Permit from BLM to implement the project. The issuance of a Right-of-Way Grant Permit is considered a proposed action and would trigger the NEPA process.

Therefore, the BLM is the federal Lead Agency for the preparation of this EIS/EIR in compliance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulation for implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508), and the BLM NEPA guidance handbook (H-1790-1). NEPA mandates that federal agencies consider the environmental consequences of a wide variety of proposed actions. Specifically, NEPA requires federal agencies to prepare an EIS for "proposals for legislation and other major federal actions significantly affecting the quality of the human environment." When the federal agency determines that a proposed action may "significantly affect the quality of human environment," production of an EIS is required (42 U.S.C 4332 (2)(c)).

The EIS preparation process consists of a series of procedural steps to ensure an adequate and open analysis of environmental issues. The BLM Handbook (Chapters IV.2.and IV.3) specifically notes that when analyzing impacts, effects on future generations and on long-term productivity of resources and the irreversible and irretrievable commitment of resources should be considered as well as direct physical impacts to existing populations and resources. Impacts of all alternatives must be compared because BLM must select a preferred alternative. The process provides and encourages opportunities for interagency coordination and public involvement. The NOI describing the Proposed Project was published in the Federal Register on Wednesday, December 7, 2005 (Volume 70, Number 234, pages 72845-72846) announcing the preparation a joint EIS/EIR addressing a proposed 500 kV transmission line project.

Once approved internally, the Draft EIS/EIR will be printed,[20] filed with the U.S. EPA, and issued for public review and comment. Chapter VIII of the BLM Handbook presents guidance on all of the administrative procedures for completing and circulating a BLM EIS. The public review period must be at least 60 days from the date the Draft EIS/EIR is transmitted to the U.S. EPA. Depending on the comments received and any additional analysis, the BLM is required to either select or revise the preferred alternative, if necessary. The BLM will then issue the Final EIS/EIR. BLM will issue a press release announcing the Final EIS/EIR, which will be available to the public for 30 days. BLM may only make a decision on the Proposed Project after completion of the 30-day availability period.

[20] Printing must occur in accordance with BLM Manual Section 1551, which specifies standards for BLM-printed materials, including paper, ink, and design. However, given that this is a joint CEQA/NEPA document, these issues must be agreed upon by both the CPUC and the BLM.

Unlike under CEQA, after the Final EIS is prepared, the lead agency must circulate the Final EIS for at least 30 days prior to making a decision on the proposed action. Once the Final EIS is finalized, the Final EIS must be filed with the U.S. EPA's Office of Federal Activities for notification in the Federal Register. The 30-day time period for public review of a Final EIS is measured from the date of the publication in the Federal Register. The lead agency may adopt an EIS only after it determines that the EIS meets the standards for EIS adequacy under NEPA. After EIS has been adopted, the lead agency should make a decision on the proposed action, which may not be made until 90 days after publication of the NOI for the Draft EIS or 30 days after EPA has published the notice that the Final EIS has been filed, whichever is later. After preparing and adopting the EIS, and after making a decision on the proposed action, the lead agency must prepare a Record of Decision (ROD) explaining why the lead agency has taken a particular course of action. The BLM expects to make a decision in late ~~October~~ 2006 or early 2007.

A.3.3 Arizona Corporation Commission Process

Approximately 106 miles of the proposed alignment would traverse lands in Arizona, the majority of which would be on BLM lands. This portion of the alignment would extend from the State border at Blythe to switchyards in Hassayampa and Harquahala. Although Arizona does not have an equivalent to the CEQA process, the Arizona Corporation Commission (ACC), which governs electrical transmission line siting, requires environmental analysis to be performed for new transmission lines.

The Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) and the ACC are responsible for the environmental review on State-jurisdictional land in Arizona, and the BLM has jurisdiction for environmental review for federal land. Pursuant to Arizona Revised Statute 40-360 et seq., the ACC will conduct the environmental review of the Arizona portion of the project.

The ACC must issue a Certificate of Environmental Compatibility to an applicant, such as SCE, before the applicant can construct a transmission line. To begin the Certificate of Environmental Compatibility process, SCE must prepare and submit an application to the ACC to build the transmission line. The application itself is usually little more than a few pages, but the environmental studies performed by the applicant and attached as exhibits or appendices to the application may fill hundreds of pages. Exhibits and appendices typically include such items as reports on land use, biological resources, scenic and recreational areas, historic and archaeological sites, and noise/communication interference. This application would serve the same general purpose as the PEA submitted to the CPUC. The ACC then reviews the project for compliance with Arizona environmental laws and analyzes purpose and need.

The application will be distributed to the members of the Arizona Power Plant and Transmission Line Siting Committee. This committee has 180 days from the date the application is filed to come to a decision, unless an extension is approved by the applicant. The committee holds a public hearing for the project, at which testimony and exhibits from the applicant and interveners are presented. Witnesses for the parties are also cross-examined at the hearing and committee members may also ask questions of the witnesses. After the committee has received all of the information regarding the project, committee members consult on the project and vote to grant or deny the Certificate of Environmental Compatibility.

If the Certificate of Environmental Compatibility is granted, the certificate is forwarded to the ACC for review and action. The ACC must confirm, deny, or modify the certificate granted by the committee. Even if the committee refuses to grant a Certificate of Environmental Compatibility, the ACC, as final decision-maker,

may still issue a certificate. Decisions on certificates are also made in open meetings with opportunities for additional public comment.

Staff of the ACC ~~have~~ had indicated a preference that SCE time the filing of its application for a Certificate of Environmental Compatibility to coincide with the CPUC's and BLM's issuance of their draft environmental document. This is to allow the Siting Committee and ACC to complete their environmental permitting process concurrently with the final decision by the CPUC and BLM. (The ACC process timelines are shorter than CEQA and NEPA.) Therefore, SCE ~~has stated its intention to~~ filed its application with the ACC on May 1, 2006~~in late April 2006~~.

A.3.4 Other Agencies

Several other State and federal agencies will rely on information in this EIR/EIS to inform them in their decision over issuance of specific permits related to project construction or operation. In addition to the CPUC, BLM, and ACC, State agencies such as the Department of Transportation, Department of Fish and Game, Regional Water Quality Control Board, and Office of Historic Preservation would be involved in reviewing and/or approving the project. On the federal level, agencies with potential reviewing and/or permitting authority include the U.S. Fish and Wildlife Service, Advisory Council on Historic Preservation, and the Occupational Safety and Health Administration.

No local discretionary (e.g., use) permits are required, since the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of SCE facilities in California. SCE would still have to obtain all ministerial building and encroachment permits from local jurisdictions, and the CPUC's General Order 131-D requires SCE to comply with local building, design, and safety standards to the greatest degree feasible to minimize project conflicts with local conditions. The CPUC's authority does not preempt special districts, such as the South Coast Air Quality Management District, or other State agencies or the federal government.

A.3.5 Permits Required for the DPV2 Project

Table A-4 lists the federal, State, and local permits and authorization required for the Proposed Project.

Table A-4. Permits or Other Actions Required Prior to Construction of the DPV2 in Arizona and California

Agency	Jurisdiction	Permit
FEDERAL		
Bureau of Land Management (BLM)	Construction on or in lands administered by the BLM	• Amendment to Right-of-Way Grant / Record of Decision / Notice to Proceed for transmission line • Amendment to Right-of-Way Grant / Record of Decision / Notice to Proceed and Temporary Use Permits for Harquahala Telecomm Facility • Temporary Use Permit
U.S. Department of Defense – Army	U.S. Army Military Facilities	• Right-of-Way Grant on Yuma Proving Ground – BLM land withdrawal
U.S. Fish and Wildlife Service	Federal Listed, Threatened, and Endangered Species	• Certificate of Environmental Compatibility for the Kofa NWR • Right-of-Way Grant – crossing Kofa NWR and Coachella Valley NWR • Consultation for Section 7 of the Endangered Species Act • Habitat Conservation Plans – Riverside County

Table A-4. Permits or Other Actions Required Prior to Construction of the DPV2 in Arizona and California

Agency	Jurisdiction	Permit
U.S. Army Corps of Engineers	Construction or operation of facilities which may result in any discharge into U.S. navigable waters	• Section 10 Permit – crossing Colorado River • Section 401/404 Permit – streambed alteration/crossing
Federal Aviation Administration	Airports and airline safety	• 7460(1) Permit and Notice to Airmen – Shavers Summit Airport and "Airstrip" near Const. D-151
U.S. Bureau of Reclamation	Construction on or in land administered by the U.S. Bureau of Reclamation	• Right-of-Way Grant – crossing CAP Canal
Federal Communications Commission (FCC)	Licenses/permits related to FCC frequencies and paths	• Telecomm Permit (as required)
Federal Energy Regulatory Commission (FERC)	Ratemaking for transmission facilities	• Ratemaking
TRIBAL LAND / BUREAU OF INDIAN AFFAIRS		
Agua Caliente Indian Reservation	Tribal lands	• Conditional Use Permit or a land acquisition process to be determined by consultations between Agua Caliente Tribe and SCE.*
Morongo Band of Mission Indians	Tribal lands	• Right-of-Way Grant/Easement
ARIZONA – STATE		
Arizona Corporation Commission	Transmission, substation, and generation projects	• Certificate of Environmental Compatibility
Arizona Department of Transportation	Arizona streets and highways	• Encroachment/Crossing Permits • U.S. 95 between Const. D-35 and D-36 • I-10 between Const. D-35 and D-36 • I-10 between Const. D-112 and D-113
State Historic Preservation Office	Any archaeological and paleontological work	• Consultation for Section 106 of the National and Arizona State Historic Preservation Act
Arizona State Land Department	State lands and Arizona Native Plant Law	• Right-of-Way Easement
Arizona Department of Game and Fish		• TBD
Arizona Department of Environmental Quality	La Paz County	• Air Quality Permit for Harquahala Mountain Engine/ Generator (if greater than 325 hp) – prior to installation of engine.
Arizona Department of Environmental Quality		• Stormwater Pollution and Prevention Plan
ARIZONA – LOCAL AND REGIONAL		
Maricopa County	County roads and highways, flood control/drainage channels	• Road/Highway Encroachment/Crossing Permit • Flood Control/Drainage Channel Encroachment/Crossing Permit
La Paz County	County roads and highways, flood control/drainage channels	• Road/Highway Encroachment/Crossing Permit • Flood Control/Drainage Channel Encroachment/Crossing Permit
Harquahala Irrigation District	District irrigation/drainage channels	• Encroachment/Crossing Permit
Palo Verde Irrigation District	District irrigation/drainage channels	• Encroachment/Crossing Permit
Maricopa County Air Quality Department	Maricopa County	• Earthmoving Permit

Table A-4. Permits or Other Actions Required Prior to Construction of the DPV2 in Arizona and California

Agency	Jurisdiction	Permit
Cities	City roads and highways, flood control/drainage channels, lands	• Road/Highway Encroachment/Crossing Permit • Flood Control Channel • Encroachment/Crossing Permit • Temporary Use/Occupancy Permit – Material and Storage Yards
CALIFORNIA – STATE		
California Public Utilities Commission	Transmission, substation, generation projects 50 kV and above	• Certificate of Public Convenience and Necessity
California Independent System Operator	Purpose and Need for new transmission, substation and generation projects	• Interconnection approval
State Lands Commission	State lands	• Right-of-Way Easement
California Department of Fish and Game	Manage fish, wildlife, plant resources and habitats	• Streambed Alteration 1602 Permit (if required)
California Department of Transportation, District 7	CA streets and highways Code 660-711.21 CCR 1411.1-1411.6	• Overload Permit • Road/Highway Encroachment/Crossing Permit (as required)
Department of Water Resources	Water crossings, such as Colorado Aqueduct	• Colorado Aqueduct Encroachment/Crossing Permit (as required)
Department of Toxic Substations Control	Hazardous Waste Control Act of 1972	• EPA Hazardous Waste Generator ID
State Historic Preservation Office	Any archaeological or paleontological work	• Cultural Resources Use Permit, Field Use Authorization, or an ARPA Permit (if required) • Consultation for Section 106 of the National Historic Preservation Act
California Air Resources Board	State-wide	• Portable Engine Registration for specified non-mobile portable engines.
CALIFORNIA – LOCAL AND REGIONAL		
Riverside County	County roads and highways, flood control/drainage channels	• Road/Highway Encroachment/Crossing Permit • Flood Control/Drainage Channel Encroachment/Crossing Permit
San Bernardino County	County roads and highways, flood control/drainage channels	• Road/Highway Encroachment/Crossing Permit • Flood Control/Drainage Channel Encroachment/Crossing Permit
Regional Water Quality Control Board, Region 4 (LA County)	Clean Water Act, Section 401	• 401 Certification • Storm Water Construction General Permit 99-08-DWD • National Pollutant Discharge and Elimination System (NPDES) Permit • Waste Discharge Requirements (WDRs)
Palo Verde Irrigation District	District irrigation/drainage channels	• Encroachment/Crossing Permit
Coachella Valley Water District		• Utility Clearance and Encroachment Permit
Mojave Desert Air Quality Management District	Eastern Riverside County	• Air Quality Permit for Midpoint Substation Engine/ Generator (if greater than 50 hp) – prior to installation of engine. • Air Quality Permits for portable engines greater than 50 hp not registered under the CARB Portable Engine Registration Program

Table A-4. Permits or Other Actions Required Prior to Construction of the DPV2 in Arizona and California

Agency	Jurisdiction	Permit
South Coast Air Quality Management District	Riverside County and San Bernardino County	• Fugitive Dust Control Plan • Air Quality Permits for portable engines greater than 50 hp not registered under the CARB Portable Engine Registration Program
Cities	City roads and highways, flood control/drainage channels, lands	• Road/Highway Encroachment/Crossing Permit • Flood Control Channel • Encroachment/Crossing Permit • Temporary Use/Occupancy Permit – Material and Storage Yards • Regional Water Quality Control Board – Storm Water Pollution Prevention Plan • Fugitive Dust Control Plans (only for cities in Coachella Valley with SCAQMD approved fugitive dust control ordinances)
OTHER UTILITIES		
El Paso Natural Gas Pipeline	Activities in area of pipelines	• Pipeline Encroachment/Crossing Permit
Southern California Gas Pipeline	Activities in area of pipelines	• Pipeline Encroachment/Crossing Permit
AT&SF Railroad	Activities in area of railroad	• Encroachment/Crossing Permit Const. D-2738 and D-2739
Imperial Irrigation District	Crossing of transmission lines	• Line crossing permit for two 161 kV transmission lines
Metropolitan Water District	Crossing of transmission lines and aqueduct	• Line crossing permit for Julian Hinds-Mirage 220 kV transmission line and Colorado River Aqueduct crossing

Source: SCE, 2005a

* December 16, 2005, the Agua Caliente Band of Cahuilla Indians submitted a letter to the CPUC and the BLM stating that the Proposed Project would cross the exterior boundaries of its Reservation, and that the project would be subject to a 1979 ordinance passed by the Tribe that regulates the development of public utility projects on tribal lands (see Appendix 8 on the enclosed CD). In its letter, the Tribe states that it will require SCE to secure approval of a Conditional Use Permit (CUP) for this portion of the route. SCE has stated that the Proposed Project would traverse allotments that are owned by tribal members, but that these allotments have not been incorporated into the boundaries of the Reservation. Therefore, land acquisition issues for this portion of the route would be negotiated between SCE, Bureau of Indian Affairs (BIA), and members of the Agua Caliente Band of Cahuilla Indians.

A.4 Reader's Guide to This EIR/EIS

A.4.1 Incorporation by Reference

SCE's Proponent's Environmental Assessment (submitted as part of its Application No. A.05-04-015 for the DPV2 Project) contains certain information that is incorporated by reference in some sections of this EIR/EIS. This document is available for public review during normal business hours at the CPUC's Central Files (505 Van Ness Avenue, San Francisco), in local libraries (see Section I), and also via the Internet at the CPUC website at http://www.cpuc.ca.gov/environment/info/aspen/dpv2/dpv2.htm and at the BLM website at http://www.ca.blm.gov/palmsprings/devers_paloverde.html.

A.4.2 EIR/EIS Organization

This EIR/EIS is organized as follows:

Executive Summary. A summary description of the Proposed Project, the alternatives, their respective environmental impacts and the Environmentally Superior Alternative.

Impact Summary Tables. A tabulation of the impacts and mitigation measures for the Proposed Project and alternatives.

Section A (Introduction/Overview). A discussion of the background, purpose and need for the project, briefly describing the proposed DPV2 Project, and outlining the public agency use of the EIR/EIS.

Section B (Project Description). Detailed descriptions of the proposed DPV2 Project.

Section C (Alternatives Process and Description). Description of the alternatives evaluation process, description of alternatives considered but eliminated from further analysis and the rationale thereof, and description of the alternatives analyzed in Section D.

Section D (Environmental Analysis). A comprehensive analysis and assessment of impacts and mitigation measures for the Proposed Project and several alternatives, including the No Project Alternative. This section is divided into main sections for each of 13 environmental issue areas (e.g., Air Quality, Biological Resources) that contain the environmental settings and impacts of the Proposed Project and each alternative. At the end of each issue area analysis, a Mitigation Monitoring table is provided.

Section E (Comparison of Alternatives). Identification of the CEQA/NEPA Environmentally Superior Alternative and a discussion of the relative advantages and disadvantages of the Proposed Project and alternatives that were evaluated.

Section F (Cumulative Impacts). A discussion of the cumulative scenario and impacts with regard to the Proposed Project and alternatives.

Section G (Additional CEQA and NEPA Considerations). A discussion of environmental justice, growth-inducing impacts, significant irreversible and irretrievable changes, significant environmental effects which cannot be avoided if the Proposed Project is implemented, and the relationship between short-term uses and long-term productivity of the environment.

Section H (Proposed Mitigation Monitoring, Compliance, and Reporting Plan). A discussion of the CPUC's and BLM's mitigation monitoring program requirements for the project as approved by the CPUC and BLM.

Section I (Public Participation). A brief description of the public participation program for this EIR/EIS.

Section J (Glossary)

Section K (Index)

Appendices:

Appendix 1	Alternatives Screening Report
Appendix 2	Policy Screening Report (on enclosed CD)
Appendix 3	Tower Height Tables
Appendix 4	Persons & Organizations Consulted (on enclosed CD)
Appendix 5	Preparers of this Document (on enclosed CD)
Appendix 6	EMF Design Guidelines for Electrical Facilities (on enclosed CD)
Appendix 7	Biological Resources (on enclosed CD)
Appendix 8	Cultural Resources / Tribal Consultation (on enclosed CD)
Appendix 9	Air Quality Data (on enclosed CD)
Appendix 10	Detailed Maps (not provided electronically due to SCE's security restrictions; please request paper copies if needed)

A.5 References

CAISO (California Independent System Operator). 2005. Memorandum to ISO Board of Governors: Palo Verde–Devers No. 2 500 kV Transmission Project. Prepared by Armando J. Perez, Director of Grid Planning, and Anjali Sheffrin, Director of Market Analysis. http://www.caiso.com/docs/09003a6080/34/cf/09003a608034cf20.pdf. Dated February 11. Accessed December 9.

SCE (Southern California Edison). 2005a. Proponent's Environmental Assessment Devers–Palo Verde No. 2 Transmission Line Project. April 11.

B. Description of Proposed Project

B.1 Introduction

Section B describes the Devers–Palo Verde 500 kV No. 2 Transmission Project (the "Proposed Project") proposed by Southern California Edison (SCE). This section provides a detailed description of the Proposed Project, including proposed route, facilities and equipment, construction methods and schedule, and operations. The potential environmental effects of the project elements identified and described here are analyzed in Section D. Section B.2 provides a description of the Proposed Project and its components. Section B.3 describes the construction that would be associated with the Proposed Project, and Section B.4 describes operation and maintenance procedures. The Proposed Project presented in this section is the Environmentally Superior Alternative/Environmentally Preferred Alternative with three exceptions. As discussed in Section E (Comparison of Alternatives), alternatives in the areas near Palo Verde Nuclear Generating Station and the Alligator Rock ACEC were found to environmentally superior/preferable to the Proposed Project. In the West of Devers portion, the Proposed Project was found to be environmentally superior/preferable, but it may not be feasible.

This section includes overview maps of the Proposed Project that illustrate land ownership and general routing. Volume 3 of the EIR/EIS is a Map Volume, presenting detailed maps that illustrate the preliminary locations of each transmission tower in the Devers-Harquahala segment. For the West of Devers segment, detailed maps are presented at the end of this section, illustrating the locations of towers to be removed as well as towers that would be reconductored or rebuilt.

B.2 Description of the Proposed Project

B.2.1 Overview of the Proposed Project

SCE proposes to construct a new 230-mile, 500 kilovolt (kV) electric transmission line between Devers Substation in California and Harquahala Generating Substation in Arizona and to upgrade 48.2 miles of 230 kV transmission lines in California. The upgraded lines would connect directly to the new line. The entire project would span 278 miles, with approximately 176 miles in California and 102 miles in Arizona. The proposed transmission line and facility upgrades are known collectively as the Devers–Palo Verde 500 kV No. 2 Transmission Project, or DPV2. The location of the Proposed Project is illustrated in Figures B-1 and B-2 (Devers-Harquahala portion; see enclosed CD) and Figure B-3 (West of Devers portion; see enclosed CD). The Proposed Project has two major components: a new 500 kV line between Devers Substation and the Harquahala Generating Station (referred to as "Devers-Harquahala" or D-H), and the upgrade of a 230 kV line west of the Devers Substation (referred to as "West of Devers" or WOD). Other system upgrades would occur in certain locations along the route. Each of these components is described below.

Devers-Harquahala

- Construction of a 500 kV transmission line from the Harquahala Generating Station switchyard, located near the Palo Verde Nuclear Generating Station (PVNGS) west of Phoenix, Arizona, to SCE's Devers Substation (Devers), located near Palm Springs, California

- Construction of the Midpoint Substation approximately 10 miles southwest of Blythe, California, and adjacent to the proposed Devers-Harquahala 500 kV transmission line (this is an optional component of the Proposed Project that SCE may not construct)
- Construction of a new optical repeater facility 3 miles west of Blythe, California, within the DPV2 ROW
- Construction of two series capacitor banks, each adjacent to an existing DPV1 series capacitor bank: one in Arizona approximately 55 miles west of the Harquahala Switchyard and one in California approximately 64 miles east of Devers near I-10
- Installation of a 500 kV line shunt reactor, a dead-end structure, circuit breakers, and disconnect switches at the Harquahala Switchyard
- Installation of a 500 kV line shunt reactor, a dead-end structure, circuit breakers, and disconnect switches at the Devers Substation
- Construction and installation of telecommunications systems related to the Proposed Project, including a new telecommunications facility on Harquahala Mountain and a new Optical Ground Wire (OPGW) on the Devers–Harquahala transmission line towers

West of Devers

- Removal of two existing 40-mile 230 kV single-circuit transmission lines
- Construction of a new 40-mile double-circuit 230 kV transmission line
- Upgrade of 40 miles of double-circuit 230 kV transmission line between Devers Substation and San Bernardino Junction in San Bernardino County, California (accomplished by reconductoring[1] the line only)
- Upgrade of 4.8 miles of double-circuit 230 kV transmission line between San Bernardino Junction and Vista Substation, also located in San Bernardino County, California (reconductoring only)
- Upgrade of 6.8 miles of 230 kV transmission line between San Bernardino Junction and San Bernardino Substation located in San Bernardino County, California (reconductoring only, one circuit on each of two existing double-circuit transmission lines)

System Improvements

- Upgrades and replacement of circuit breakers, disconnects, relays, and switchrack conductors within the fenced area at Devers, Vista, Lewis, and San Bernardino Substations and the San Onofre Nuclear Generating Station (SONGS) switchrack
- Installation of Special Protection Scheme (SPS) relays at the Devers, Padua, and Vista Substations in California, and the PVNGS, Hassayampa, and Harquahala Switchyards in Arizona

Table B-1 presents a summary of the major components of the Devers-Harquahala 500 kV segment of the Proposed Project, and Table B-2 presents a summary of the major components of the proposed 230 kV WOD upgrades. The sections that follow provide additional detail about each of the subject components.

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[1] Reconductoring involves removal of the existing conductors on an existing tower, and installation of new, larger capacity conductors. This is generally done with no change to the tower itself, although in some cases towers need to be strengthened or replaced.

B.2.2 Devers-Harquahala

Between Devers Substation and Harquahala Generating Substation, the project would roughly parallel the route of Interstate 10 (I-10). Figure B-4 (see enclosed CD) shows photographs of the existing ROW in different areas along the Proposed Project route.

Impact analysis in Section D divides the Devers-Harquahala route into six segments. These segments are presented below:

- Harquahala to Kofa National Wildlife Refuge – MP E0.0–MP E53.3
- Kofa National Wildlife Refuge – MP E53.3–MP E77.6
- Kofa National Wildlife Refuge to Colorado River – MP E77.6–MP E102.2
- Palo Verde Valley (Colorado River to Midpoint Substation) – MP E102.2–MP E113.7
- Midpoint Substation to Cactus City Rest Area – MP E113.7–MP E188.2
- Cactus City Rest Area to Devers Substation – MP E188.2–MP E228.0

B.2.2.1 Harquahala to the Colorado River

The Arizona portion of the Proposed Project would consist of 102 miles of 500 kV transmission line between the Harquahala Generating Station switchyard (located near Wintersburg and approximately 11 miles west-southwest of Tonopah, Maricopa County, approximately 17 miles northwest of the PVNGS) to the Colorado River, as illustrated in Figure B-1 (see enclosed CD). The Proposed Project would terminate at the Harquahala Switchyard and SCE would use the existing Harquahala-Hassayampa 500 kV transmission line and the existing Hassayampa–PVNGS 500 kV interconnection to provide a path to the PVNGS Switchyard.

Table B-1. Proposed Devers-Harquahala 500 kV Transmission Line Summary

Dimensions	
Length of line (miles, rounded to 1 mile)	230
Total ROW area (acres, rounded to 10 acres)	3,910
New Permanent Area Occupied (acres)	
Tower footings	7.4
Access roads	18.1
Spur roads	32.8
Substation	44.0
Series compensation	4.0
Telecommunications	~~0.8~~ 0.25
Total	~~107.1~~ 106.5
New Temporary Area Occupied (acres)	
Transmission line structures	694.0
Access roads	None
Construction yards, pulling/splicing and batch plant areas	134.7
Substation/switchyard (Harquahala and shunt reactor)	7.0
Series capacitor banks (2 sites)	2.0
Telecommunications (optical repeater)	~~2.0~~ 0.125
Total	~~839.6~~ 837.7
Number of Structures (approximate)	
New single-circuit lattice steel towers	709
Existing double-circuit lattice steel towers	13
New single-circuit H-frame structures	39
New single-circuit tubular steel poles	23
Total	784 (771 new)
Land Ownership (miles)	
State, California	0.6
State, Arizona	10.8
Federal (BLM, USFWS, USDOD, USBR)	136.5
Private	81.6
Indian Reservation	0.1
Total	229.6
Existing Utility Corridors (miles)	
Parallel to existing DPV1 500 kV ROW	225
Parallel to existing Harquahala-Hassayampa 500 kV ROW	5.0
Number of Crossings	
Primary highways	4
Secondary highways	15
Rivers and streams	1
Railroads	2

Note: Affected area estimates are based on the following factors:
0.010 acres per lattice steel tower – permanent
0.005 acres per H-frame structure – permanent
0.002 acres per tubular steel pole – permanent
14' (width) x 130' (length) spur roads at every tower – permanent
0.9 acres per tower pad – temporary
0.9 acres per pulling station, one every 3 miles – temporary
0.2 acres per splicing station, one every 3 miles – temporary
5.0 acres per construction yard, one every 40 miles – temporary
2.0 acres per batch plant, one every 30 miles – temporary

Areas occupied by facilities installed within existing substation and communications site properties are not included in estimates.
Source: SCE, 2005a.

From the Harquahala Switchyard, the proposed DPV2 500 kV transmission line route would head east, paralleling the existing Harquahala-Hassayampa 500 kV line for approximately 5 miles. At Mile Post (MP) E5.0, the route would turn north and parallel the existing DPV1 single-circuit 500 kV line, which it would then follow to Devers Substation. The route would cross I-10 at MP E7.4, then proceeding 3.7 miles to MP E11.1, northwest of Burnt Mountain. From there the route would turn west and roughly parallel the north side of I-10 and the CAP Canal for approximately 20 miles, passing through the Big Horn Mountains and across the Harquahala Plain to MP E30.4. After entering La Paz County, the route would turn southwest, crossing to the south of I-10 and proceeding approximately 5 miles to MP E35.3, where it would intersect the El Paso Natural Gas Company's existing pipeline ROW near the Wenden Compressor Station north of the Eagletail Mountains.

Table B-2. Proposed West of Devers 230 kV Upgrade Summary

Length of segment from Devers Substation to San Bernardino Junction	40 miles
Length of segment from Vista Substation to San Bernardino Junction	4.8 miles
Length of segment from San Bernardino Substation to San Bernardino Junction	3.4 miles
Span length (spacing between towers)	1,400–1,500 feet 3.5–3.8 structures/mile (avg)
Number of existing structures removed	415
Total number of new structures to be installed	~~173~~182
Number of existing structures to be raised	4
Number of existing structures to be reinforced	34
Area affected by structure removal	24.9 acres (temporary)
Area affected by new structure installation	~~50.2~~52.8 acres (permanent)
Area affected by new spur roads	2.8 acres (permanent)
Area affected by pulling/splicing sites	27.5 acres (temporary)

Note: Affected area estimates are based on the following factors:
0.06 acres per structure removed – temporary
0.29 acres per new structure installed – permanent
14' (width) by 200' (length) spur roads at 25 percent of new tower sites – permanent
0.6 acres per pulling and/or mile pulling/splicing sites, approximately every 3 miles – temporary
Source: SCE, 2005a.

The route would parallel the El Paso Natural Gas pipeline and DPV1 transmission line for approximately 56 miles. This section of the route would cross the Ranegras Plain, where a series capacitor bank would be constructed at MP E52.9. The route would pass through approximately 25 miles of Kofa NWR (MP E53.3–MP E77.6), and through the La Posa Plain. It would cross over Arizona State Highway 95 (MP E78.5) and proceed into the Dome Rock Mountains and through Copper Bottom Pass (MP E88.1 through MP E93.0). The route would turn southwest, departing from the pipeline. It would descend the western slope of the Dome Rock Mountains to reach the Colorado River (MP E102.2).

Two types of transmission towers, tubular steel poles and lattice steel towers, would be constructed along the route in Arizona. Along the 5-mile segment of the route parallel to the existing Harquahala-Hassayampa 500 kV line, the DPV2 line would be constructed on 23 new single-circuit tubular steel poles, matching the structures of the existing line. These tubular steel poles would be approximately 140 feet tall. From where the DPV2 route turns north at MP E5.0 to parallel the existing DPV1 line, approximately 320 new four-legged single-circuit lattice steel towers would be constructed along the route to Copper Bottom Pass (MP E88.1). Where feasible, the DPV2 towers would match the horizontal alignment and height of the DPV1 towers. These towers would typically be approximately 150 feet tall. No new towers would be required though Copper Bottom Pass. When DPV1 was constructed through the pass it was installed on 13 four-legged double-circuit bundled-conductor lattice steel towers. The DPV2 500 kV transmission line would be located on these existing towers as a second circuit. Table 1 of Appendix 3, Tower Height Tables, provides structure information for the existing towers along the DPV1 500 kV transmission line.

Although USFWS issued a CRC in 1989 for the portion of the Proposed Project crossing the Kofa NWR, the USFWS has asked SCE to submit a new application to construct and operate the DPV2 line across the refuge. The USFWS has indicated that they will re-evaluate the project and update or reissue the 1989 CRC and will need to issue a Right-of-Way Permit.

B.2.2.2 Colorado River to Devers Substation

The California portion of the proposed 500 kV transmission line is illustrated in Figure B-2 (see enclosed CD). It would continue to follow the DPV1 ROW, extending 128 miles through Riverside County, California, from the Colorado River south of the City of Blythe, to SCE's Devers Substation, near Palm Springs.

From the Colorado River, the route would pass into Palo Verde Valley, located 5 miles south of Blythe, California. The route would proceed westerly for approximately 10 miles across the Palo Verde Valley. At MP E105.4, adjacent to the transmission line, a fiber optic repeater site would be constructed in the ROW. At the top of the Palo Verde Mesa (MP E113.4), the Midpoint Substation (if included as a part of the project) would be constructed at MP E113.7. The route would turn northwest, running 5.3 miles to MP E118.7, located south of I-10 approximately 5 miles southwest of the Blythe Airport. The route would continue in a westerly direction, generally parallel to I-10 and the DPV1 line, for approximately 38 miles, crossing Alligator Rock near Desert Center at MP E155.5 and continuing west for another 25 miles to MP E184.1 in Shavers Valley. A second series capacitor bank would be constructed in the ROW along this portion of the route at MP E163.7. Here the route would turn north and cross I-10 at MP E185.6, approximately 2 miles east of the Cactus City rest stop. After crossing I-10, the DPV2 route would continue northwest, paralleling SCE's existing DPV1 and other transmission lines for 46 miles to Devers Substation at MP E228.0.

Two types of transmission towers, lattice steel towers and H-frame towers, would be constructed along the route in California. Approximately 389 towers constructed in this portion of the Proposed Project would be four-legged single-circuit lattice steel towers similar to those described for the Arizona segment, approximately 39 H-frame towers would be used to cross farmland in the Palo Verde Valley area. The two-legged H-frame single-circuit towers would be used to minimize impacts to farming operations. Where feasible, the DPV2 towers would match the horizontal alignment and height of the DPV1 towers. The four-legged lattice steel towers would typically be approximately 150 feet tall while the two-legged H-frame towers would be approximately 144 feet tall. Table 1 of Appendix 3, Tower Height Tables, provides structure information for the existing towers along the DPV1 500 kV transmission line.

B.2.3 West of Devers

In addition to the Devers Substation to Harquahala Substation component, the Proposed Project would include improvements to the West of Devers ~~Substation~~230 kV system. Figure B-3 (see enclosed CD) presents an overview of the West of Devers component of the project and Figure B-5 (see enclosed CD) presents photographs of the existing corridor within which the WOD project component would be constructed. Maps in Appendix 10[2] illustrate the details of the route from Devers Substation to the Vista and San Bernardino Substations.

[2] Appendix 10 maps were included in the Draft EIR/EIS. They are not available on the enclosed CD due to SCE security restrictions, but paper copies can be provided upon request to CPUC or BLM.

Impact analysis in Section D divides the WOD route into five segments. These segments are presented below:

- Devers Substation to East Border of Banning – MP W0.0–MP W14.3
- Banning and Beaumont – MP W14.3–MP W29.6
- Calimesa and San Timoteo Canyon – MP W29.6–MP W40.1
- San Bernardino Junction to Vista Substation – MP W40.1–MP V4.8
- San Bernardino Junction to San Bernardino Substation – MP W40.1–MP W43.5

B.2.3.1 Devers to San Bernardino Junction

This portion of the Proposed Project would involve the replacement and reconductoring of 40 miles of 230 kV transmission lines from the Devers Substation to the San Bernardino Junction, located in unincorporated San Bernardino County. As illustrated in the detailed West of Devers maps in Appendix 10[3], the WOD route departs west from the Devers Substation, paralleling to the northern side of I-10 through San Gorgonio Pass. The route crosses portions of the Morongo Indian Reservation and the Cities of Banning and Beaumont. Because part of the route is through the Morongo Indian Reservation, SCE would need to negotiate an agreement with the Morongo Tribal Council to obtain approval for upgrades to the existing lines and for any new construction. Negotiations are in progress for these approvals. As of this writing this approval has not been obtained.

Approximately 26 miles west of Devers, at MP W26.4, the Proposed Project crosses to the south side of I-10, after passing through parts of the Cities of Banning and Beaumont. It would then proceed west across the southern portion of the City of Calimesa and into San Timoteo Canyon. The route would continue northwest through San Timoteo Canyon for approximately 7 miles to MP W36.1, where it enters the County of San Bernardino, crossing the southwestern corner of the City of Redlands. Exiting San Timoteo Canyon, the route enters the City of Loma Linda at San Bernardino Junction, located at MP W40.1.

Proposed Project activities between Devers and San Bernardino Junction include the following:

- Removing an existing 40-mile, single-circuit 230 kV line (approximately 63 percent of structures are wood H-frame and 37 percent are single-circuit lattice steel)
- Removing an existing 40-mile, single-circuit lattice steel 230 kV line
- Constructing a new 40-mile, double-circuit 230 kV transmission line within the existing ROW, which includes approximately ~~157~~ 166 new structures and a new OPGW
- Reconductoring the existing 40-mile, double-circuit 230 kV lattice steel towers, which includes one additional new structure and raising four structures

Where feasible, the new 230 kV towers would match the horizontal alignment and height of the existing 230 kV towers. These towers would typically be approximately 150 feet tall.

Tower Configuration Between Devers and San Bernardino Junction

Between Devers Substation and San Bernardino Junction, SCE would remove two single-circuit and construct one new double-circuit line, reducing the number of transmission lines in the corridor from

[3] Appendix 10 maps were included in the Draft EIR/EIS. They are not available on the enclosed CD due to SCE security restrictions, but paper copies can be provided upon request to CPUC or BLM.

two single-circuit lines and a double-circuit line to two double-circuit lines. Currently, to the east of Banning (MP 17.1), the double-circuit line carrying the Devers–San Bernardino No. 2 and Devers-Vista No. 2 circuits is the northernmost line in the ROW. The middle line in the ROW is Devers–San Bernardino No. 1 circuit on a single-circuit lattice steel tower and the southernmost line in the ROW is the Devers-Vista No. 1 circuit on a wood H-frame line. West of Banning, however, the northernmost line in the ROW is Devers–San Bernardino No. 2 on a wood H-frame line, the middle line is the double-circuit line with Devers-Vista Nos. 1 and 2, and the southernmost line in the ROW is Devers–San Bernardino No. 1. The routing of these lines currently requires the crossing of Devers–San Bernardino No. 1 and Devers-Vista No. 1. The top of Figure B-6 presents a schematic diagram of the existing routes of these lines WOD.

The Proposed Project, however, would eliminate line-crossing with the removal of the single-circuit towers, installation of a new double-circuit line, and reconductoring of the existing double-circuit line. The bottom of Figure B-7 (see enclosed CD) presents a schematic diagram of the new routes of Devers–San Bernardino Nos. 1 and 2 and Devers-Vista Nos. 1 and 2. Under the Proposed Project, east of MP 17.1, the existing double-circuit line would be on the northern side of the ROW and the new double-circuit line would be on the southern side. West of MP 17.1, the new double-circuit line would be on the northern side of the ROW and the existing double-circuit line would be on the southern side. To eliminate the line-crossing at this point, the circuits on the new double-circuit towers east of MP 17.1 would be conductored through the existing double-circuit towers at Tower M17-T1 to continue west of Banning. The circuits on the existing double-circuit towers east of MP 17.1 would be strung across to the new double-circuit towers. With this new configuration, Devers–San Bernardino No. 1 and No. 2 would be conductored on the northern double-circuit towers and Devers-Vista No. 1 and No. 2 would be conductored on the southern double-circuit towers.

From San Bernardino Junction the route divides, with one leg going north to San Bernardino Substation and one leg going west to Vista Substation. Table 2 of Appendix 3, Tower Height Tables, provides structure information for the Devers–San Bernardino #1 230 kV Transmission Line. Table 3 of Appendix 3, Tower Height Tables, provides structure information for the Devers–San Bernardino #2 and Devers-Vista 230 kV Transmission Lines.

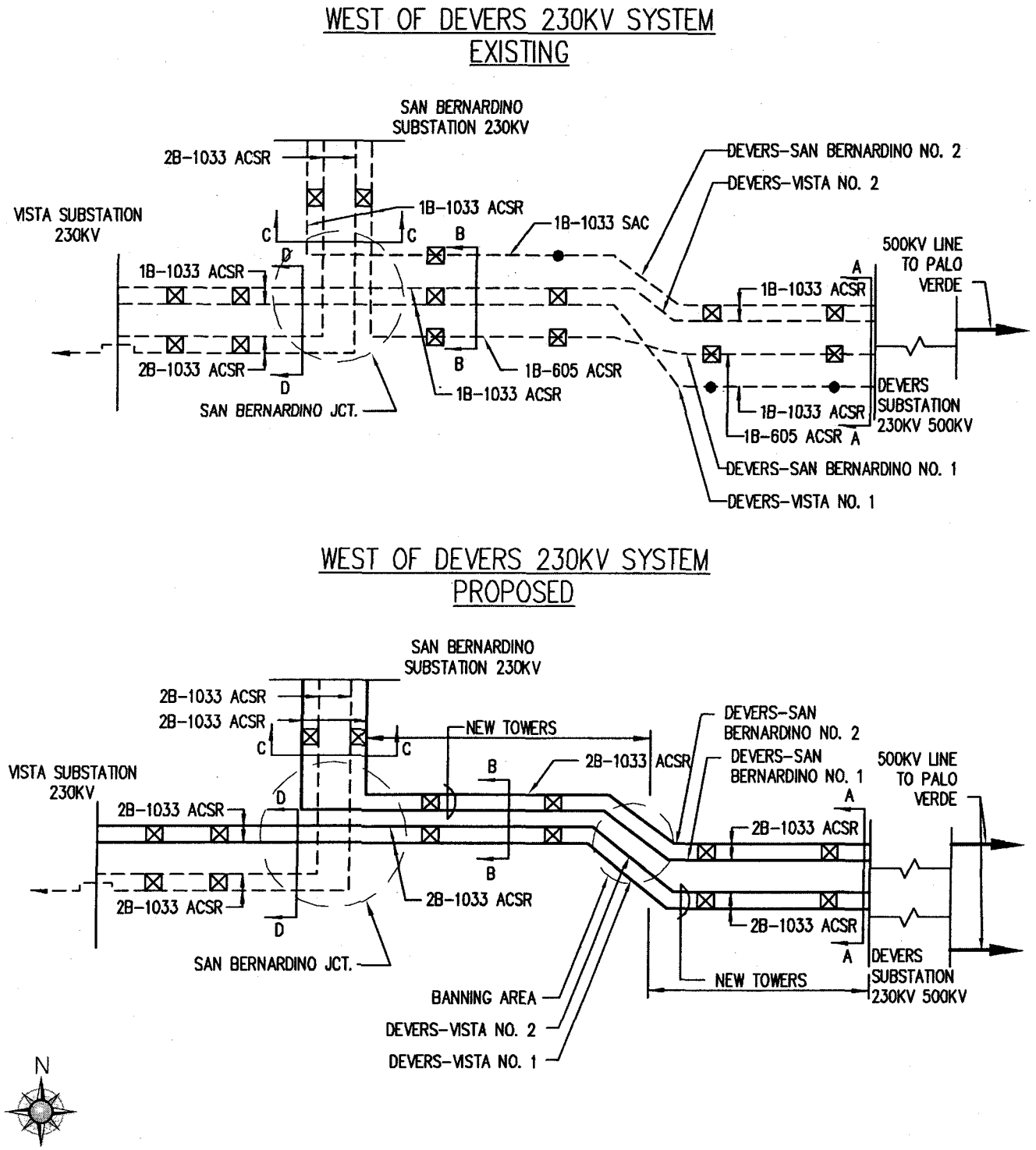
B.2.3.2 San Bernardino Junction to San Bernardino Substation

From San Bernardino Junction in Loma Linda, this leg of the route would proceed north 3.4 miles, across I-10 through a section of the city of Redlands and back into unincorporated San Bernardino County where it connects to the San Bernardino Substation. The San Bernardino Junction to San Bernardino Substation portion of the Proposed Project would consist of reconductoring one circuit on each of the two existing 3.4-mile, double-circuit 230 kV lattice steel tower lines. The existing fiber optic cable would be replaced with a new OPGW. Detailed maps of this segment are presented in Appendix 10[4].

B.2.3.3 San Bernardino Junction to Vista Substation

The San Bernardino Junction to Vista Substation leg of the route would leave San Bernardino Junction and continue west for 5 miles through the City of Grand Terrace, crossing I-215 and terminating at the Vista Substation. This portion of the Proposed Project would consist of 4.8 miles of reconductoring both circuits of an existing double-circuit 230 kV transmission line. The reconductoring will require the

[4] Appendix 10 maps were included in the Draft EIR/EIS. They are not available on the enclosed CD due to SCE security restrictions, but paper copies can be provided upon request to CPUC or BLM.



Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

LEGEND

PREPARED BY Aspen Environmental Group

500KV LINE
230KV LINE
NEW CONDUCTOR
DOUBLE-CIRCUIT TOWER
DOUBLE-CIRCUIT TOWER
SINGLE-CIRCUIT TOWER
WOOD H-FRAME

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-6
Banning Junction Switch Diagram/Map

replacement of approximately 14 structures and one inter-set structure. In addition, the existing fiber optic cable would be replaced with a new OPGW.

B.2.4 Related Transactional Issues

In PEA Section 2.3, SCE describes three issues in which third-party agreements could affect the DPV2 Project. Each of these agreements is described below.

Los Angeles Department of Water and Power

SCE and the Los Angeles Department of Water and Power (LADWP) have an existing contractual arrangement that provides for participation by LADWP in the DPV2 project. The Los Angeles–Edison Exchange Agreement was entered into on December 18, 1987 (Exchange Agreement). The Exchange Agreement is summarized in Table B-3.

Under the Exchange Agreement, LADWP will receive 30.7 percent of the DPV2 line capacity and share in 30.7 percent of the DPV2 project costs. The Exchange Agreement provides that the parties will enter into a participation agreement to more fully describe the parties' respective rights and obligations regarding the ownership of DPV2. Provided LADWP participates in DPV2, its transmission capacity between Palo Verde and Devers will remain essentially the same. LADWP's 368 MW of existing transmission service rights between Devers and Palo Verde will terminate and LADWP will acquire a 30.7 percent ownership interest in DPV2. LADWP's ownership share would equal 368 MW at the planned rating for DPV2 of 1200 MW.

Table B-3. Summary of Exchange Agreement

Eastern Transmission Service

- SCE shall make available to LADWP 368 MW of firm bidirectional transmission service between Devers and Sylmar for the life of DPV1 or upon construction of DPV2 the life of DPV2.
- SCE shall make available to LADWP 368 MW of firm bidirectional transmission service between Palo Verde and Devers beginning June 1, 1990 and shall continue service until the earliest of any of the following events: (i) the in-service date of the DPV2 Line, (ii) the in-service date of any other transmission line connecting Palo Verde and Devers in which LADWP has obtained either an ownership share or entitlement to transmission service, (iii) the date when the DPV1 Line is permanently removed from service, (iv) four years after SCE has obtained the CPUC approval, pursuant to California Public Utilities Code Section 851 to transfer rights of way for DPV2 to LADWP, or (v) upon 12 months' prior written notice by LADWP, on or after January 1, 2003; provided, however, that upon written notice by SCE, provided within three months following the date of such notice by LADWP, such termination date may be extended for an additional period not to exceed 24 months, if and to the extent necessary to allow SCE to reflect fully the revenue impact of such termination in its CPUC and FERC jurisdictional rates.
- SCE shall make available to LADWP 100 MW of firm bidirectional transmission service over SCE's transmission facilities between Palo Verde and Sylmar through May 2012.

Northwest Transmission Rights

- LADWP shall make available to SCE from LADWP's ownership share of the extra-high voltage (EHV) Pacific DC Intertie Line, 500 MW of firm bidirectional Transmission Capacity on the EHV DC Line between Sylmar and the Nevada-Oregon border.
- SCE shall make available to LADWP 320 MW of bidirectional Transmission Capacity on the EHV Pacific AC Intertie Lines.
- The exchange of Pacific Intertie transmission service terminates when SCE's rights to the Pacific AC Intertie terminate.

Castaic Service

- LADWP shall make available to SCE 200 MW from the Castaic Power Plant for a term of five years from the effective date of the Exchange Agreement. This provision expired on December 18, 1992.
- Commencing upon the effective date of the Exchange Agreement and continuing for a term of 22 years, LADWP shall use its best efforts to make Additional Service available to SCE at LADWP sole discretion. Additional Service is any weekly service for spinning reserve, generation and pumping purchased by SCE.

Table B-3. Summary of Exchange Agreement

DPV2 Line Ownership

- LADWP has the obligation to acquire a 30.7 percent ownership interest in the DPV2 line.
- SCE shall use its best efforts to construct DPV2 with a minimum 1,200 MW Transmission Capacity Rating. LADWP has the option to purchase firm bi-directional transmission service over DPV2 to make up a total of 368 MW in the event DPV2 Transmission Capacity Rating is less than 1,200 MW.

Source: SCE, 2005a, Section 2.3

~~LADWP has not yet committed to participate in DPV2; however, SCE stated on April 14, 2006 that it believes that the parties are close to finalizing an agreement that would provide for SCE's construction of DPV2 as proposed. Although most of the outstanding issues have been resolved, some still require further discussion between LADWP and the CAISO.~~SCE and LADWP have continued to discuss issues concerning LADWP's participation in DPV2. Recently, LADWP has indicated to SCE that it will remain involved in DPV1, but will not participate in DPV2.

Harquahala Generating Company Option Agreement

SCE and Harquahala Generating Company (HGC) entered into an Option Agreement on February 13, 2001 (Option Agreement). The Option Agreement provides that SCE has the option to purchase the 500 kV switchyard at Harquahala; the 500 kV transmission line from the Harquahala Switchyard to the Hassayampa Switchyard, and the Harquahala transmission line terminal facilities at the Hassayampa Switchyard.

SCE also entered into a License Agreement with HGC on February 13, 2001 that provides for HGC to construct a portion of the Hassayampa-Harquahala transmission line on SCE right-of-way. The agreement also allows HGC to purchase SCE's land rights between Harquahala and Hassayampa if SCE does not exercise the option by 2011, or if SCE desires to terminate the License Agreement. If SCE exercises the Option Agreement, the License Agreement would terminate.

At the time SCE entered into the Option Agreement, HGC was proceeding to build and own a 500 kV transmission line to interconnect its new 1,040 MW natural gas-fired generating plant in Maricopa County, Arizona, with the regional transmission system in central Arizona at the Hassayampa 500 kV switchyard. SCE was concerned with the potential for HGC building near SCE's DPV2 right-of-way and potentially adversely affecting SCE's ability to build DPV2. SCE entered into the Option Agreement with HGC to preserve the right-of-way for DPV2.

For the DPV2 project, SCE proposes to construct a new 500 kV line from Devers to the Harquahala Switchyard. SCE would then use the existing Harquahala-Hassayampa 500 kV line to complete the connection of the DPV2 Project to the Hassayampa Switchyard. The Hassayampa Switchyard is a satellite switchyard, and is functionally equivalent to connecting at the PVNGS Switchyard.

SCE requested that the SCE Harquahala-West Alternative be evaluated because there is the possibility that the DPV2 line may not be able to be constructed exiting the Harquahala Switchyard to the east.

Arizona Public Service TS-5 Project

At the time that SCE submitted its application to the CPUC, APS had informally proposed to the Arizona Corporation Commission (ACC) that it construct a 45-mile 500 kV transmission facility from the Palo Verde hub to a new TS-5 substation located in western Arizona. Since then, a Certificate of Environmental Compatibility for the project was approved by the ACC (on August 17, 2005; Case 128). The final con-

struction plan has not been determined, although the approval provides for the northern portion of the route to be constructed within a 1,000-foot-wide corridor east of the existing DPV1 centerline (the proposed DPV2 line will be constructed within the existing BLM right-of-way on the west side of the existing DPV1 line).

The ACC decision on the TS-5 project provides APS the flexibility to select from several project routing and scope alternatives for the TS-5 project. APS was granted the ability to interconnect at one or more of the following locations: (1) the Duke Arlington Power Plant; (2) a new Harquahala Junction Switchyard; or (3) the Palo Verde Switchyard. It was the preference of both APS and the ACC staff for APS to interconnect at either the Duke Arlington Plant or a new Harquahala Junction Switchyard. Therefore, subject to a joint project arrangement among SCE, APS and Harquahala Generation Company (HGC), the parties would share the existing Harquahala-Hassayampa transmission line and potentially a Harquahala Junction Switchyard, if constructed. Discussions among SCE, APS and HGC regarding the potential joint project arrangement are ongoing but have not yet resulted in an agreement. APS has stated that it will file a report to the ACC at the time a final decision is reached or no later than December 31, 2006. SCE has stated that the approval of the APS project does not affect the DPV2 project.

B.2.5 Tribal Lands

The Proposed Project ROW and its access roads cross through or are adjacent to lands associated with three Native American groups:

- Colorado River Indian Tribe (CRIT)
- Agua Caliente Band of Cahuilla Indians
- Morongo Band of Mission Indians.

The ROW requirements would be different for the Proposed Project through each of these areas. Figure B-7a (see enclosed CD) shows an overview of tribal lands.

Colorado River Indian Tribe

Under the 2005 Colorado River Indian Reservation Boundary Correction Act (Act), a portion of the southern boundary of the CRIT Reservation in Arizona was expanded south to the existing DPV1 ROW. The language of this Act was amended to protect the existing ROWs issued by the BLM, including SCE's DPV1 and DPV2 ROW easements. Although the DPV ROW is outside the new boundary of the CRIT Reservation, existing access roads for the transmission ROW cross CRIT lands. The access road ROWs for the transmission line are also included under the amendment to the Act. Consequently, both the transmission ROW and the access road ROWs granted by the BLM do not require further permitting by the CRIT. Figure B-7b (see enclosed CD) shows the southern boundaries of the CRIT Reservation.

Agua Caliente Band of Cahuilla Indians

The existing DPV1 ROW in California crosses an approximately 0.1-mile stretch of ~~allottee~~ fee lands held by members under ~~the~~ jurisdiction of the Agua Caliente Band of Cahuilla Indians east of Palm Springs. Figure B-7c (see enclosed CD and the end of Volume 3 of this EIR/EIS) shows the portion of Agua Caliente fee lands crossed by the Proposed Project. On December 16, 2005, the Agua Caliente Band of Cahuilla Indians submitted a letter to the CPUC and the BLM stating that the Proposed Project would cross the exterior boundaries of its lands, and that the project would be subject to a 1979 ordinance passed by the Tribe that regulates the development of public utility projects on tribal lands (see Appendix 8 on the enclosed CD). In its letter, the Tribe states that it will require SCE to secure

approval of a Conditional Use Permit (CUP) for this portion of the route, and requested that the requirement for a CUP be added as a mitigation measure to the EIR/EIS. SCE has stated that the Proposed Project would traverse allotments that are owned by tribal members, but that these allotments have not been incorporated into the boundaries of the tribal lands. Land acquisition issues for this portion of the route still need to be resolved between SCE, the Bureau of Indian Affairs, and members of the Agua Caliente Band of Cahuilla Indians.

Morongo Band of Mission Indians

The existing West of Devers 230 kV ROW in California crosses 4.4-mile stretch of Morongo Band tribal lands west of Palm Springs within San Gorgonio Pass. SCE's ROW across Morongo tribal lands is 450 feet wide with 150 feet for the Devers-Vista No. 1 line and 300 feet for both the Devers–San Bernardino No. 1 line and the double-circuit Devers–San Bernardino No. 2 and Devers-Vista No. 2 lines. The Morongo Tribe lease for the 150-foot Devers-Vista No. 1 ROW expires in 2010 and the lease for the 300-foot ROW expires in 2019. Under the Proposed Project, SCE would remove the Devers–San Bernardino No. 1 line from the 300-foot ROW, reconductor the double-circuit towers in the 300-foot ROW, and would replace the Devers-Vista No. 1 in the 150-foot ROW with a new double-circuit 230 kV line. Consequently, SCE is currently negotiating with the Morongo tribe for renewal of the ROWs. Figure B-7d (see enclosed CD and the end of Volume 3 of this EIR/EIS) shows the portion of the Morongo Band tribal lands crossed by the Proposed Project.

B.3 Project Construction

This section describes methods typically used for constructing and installing transmission, substation modifications, and other features of the Proposed Project. An overview of the transmission line structures that SCE expects to use in the Proposed Project is presented in Section B.3.1, followed by descriptions of hardware and ROW requirements necessary to construct the Proposed Project (Sections B.3.2 and B.3.3). Section B.3.4 describes construction activities associated with substations, series capacitors, and switchyards. Section B.3.5 describes the special protection scheme and telecommunications facilities that would be installed as a part of the Proposed Project. Finally, Section B.3.6 details the construction methods and activities associated with different components of the project.

B.3.1 Structures

The proposed 500 kV transmission line and upgraded 230 kV transmission lines would consist of overhead wires (conductors), which form three electrical phases. The conductors would be supported by steel structures and steel poles and would be electrically isolated from the structures by insulators.

The proposed 500 kV transmission line is designed to operate at a nominal voltage of 525 kV phase to phase and a maximum voltage of 550 kV phase to phase. The transmission line capacity rating is limited to 2,700 amps under normal conditions and 3,600 amps under emergency conditions.

The proposed 500 kV line would use four types of structures:

- Four-legged single-circuit lattice steel towers
- Four-legged double-circuit lattice steel towers (these are existing structures in Copper Bottom Pass; no new 500 kV double-circuit lattice steel towers would be constructed under the Proposed Project)
- Two-legged H-frame single-circuit steel towers

- Single-pole, tubular steel poles

Figure B-8 provides a diagram of a typical 500 kV four-legged single-circuit lattice steel tower. The 709 new four-legged single-circuit lattice steel towers would be constructed of galvanized steel angle members connected by bolts. These towers would support one circuit consisting of three phases of conductors arranged in a horizontal (flat) configuration.

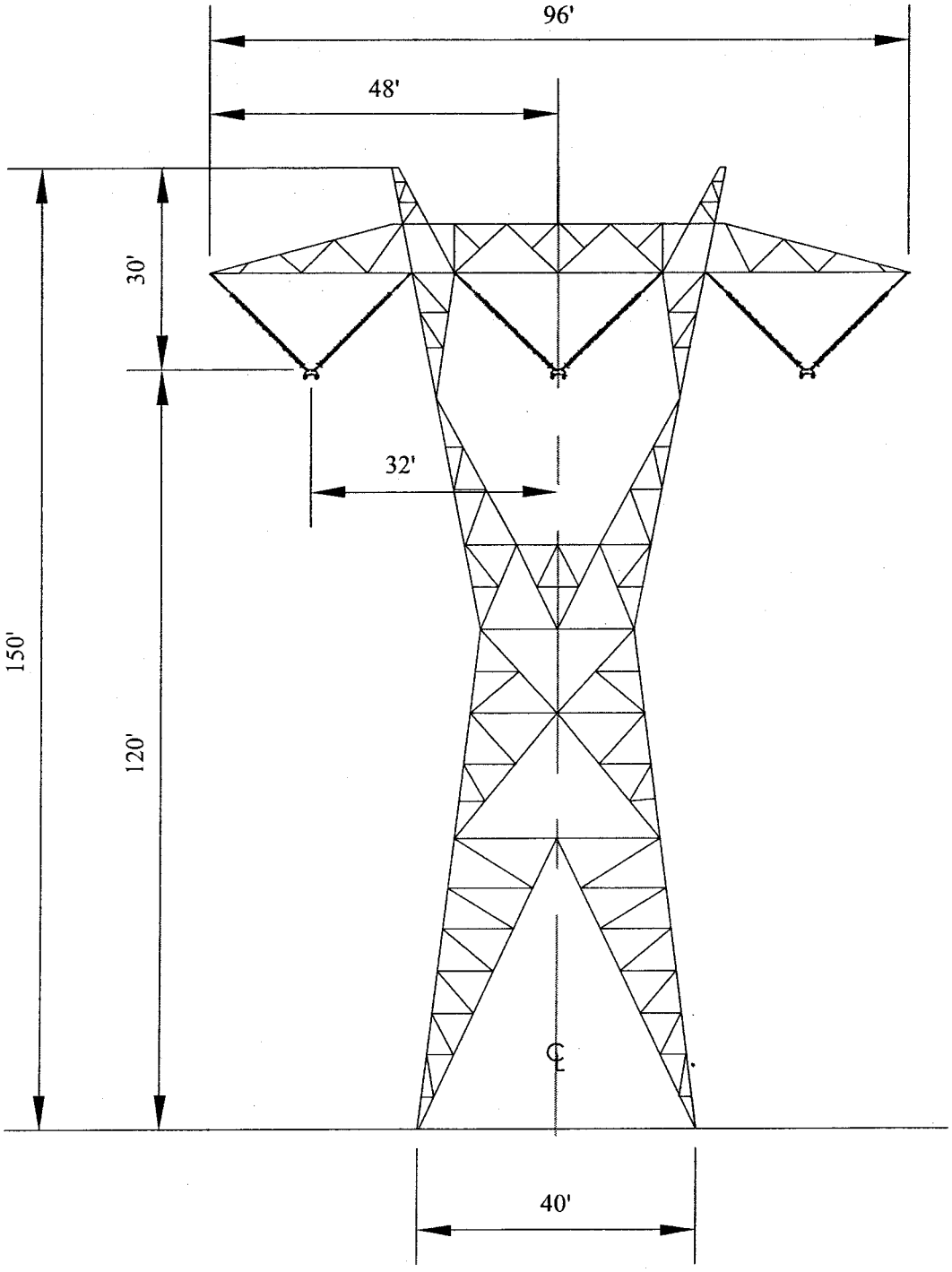
Thirteen four-legged double-circuit lattice steel towers were constructed in Copper Bottom Pass during the construction of DPV1. These towers support two circuits, each consisting of three phases of conductors arranged in a vertical configuration. As described in Section B.2.2, the DPV1 line is located on one side of the towers in one circuit location. The DPV2 line would utilize the second circuit location on the other side of the towers. Because of the placement of these existing towers, no new towers would be constructed in Copper Bottom Pass and no double-circuit lattice steel towers would be constructed as a part of the Proposed Project. The existing static ground wire would be replaced with a new OPGW. The tower diagram is shown in Figure B-9.

Approximately 39 new two-legged H-frame single-circuit towers would be used in farm lands. They would be constructed of galvanized steel angle members bolted together. These towers would support one circuit consisting of three phases of conductors arranged in a horizontal (flat) configuration. The tower diagram is shown in Figure B-10. Along the portion of the Proposed Project paralleling the existing Harquahala-Hassayampa 500 kV line, 23 new single-circuit tubular steel poles would be used, matching the type of poles used for the existing line. The pole diagram is shown in Figure B-11. Photos of all tower types are presented in Figure B-12 (see enclosed CD).

The proposed 230 kV transmission system modifications west of Devers Substation include use of the existing double-circuit lattice steel towers between Devers and San Bernardino Junction and between San Bernardino Junction and the San Bernardino and Vista Substations. A new double-circuit line between Devers and San Bernardino Junction would be constructed on lattice steel structures similar in size and appearance to the existing towers. In addition, approximately four existing lattice steel towers may be raised by installing lattice steel extensions set on new concrete foundation under the existing structures. Two new towers would be set between existing towers to support new conductors.

Each of the 230 kV transmission lines is designed to operate at a nominal voltage of 230 kV phase to phase. When upgrades are completed, each 230 kV circuit would be capable of transferring nominally 988 MW of power on a continual basis and 1,335 MW under emergency conditions. For a nominal power flow of 988 MW, each of the upgraded lines would have a current of 2,480 amps. Using an assumed annual load growth of 2.5 percent, the two 230 kV lines to San Bernardino Substation would reach 2,480 amps in the 2067 and the two 230 kV lines to Vista Substation would reach 2,480 amps in the year 2051.

The existing and proposed placement and configurations of towers are shown in Figures B-13a through B-13d. Lattice towers, as shown in Figures B-14 and B-15 (see enclosed CD) would be constructed of galvanized steel angle members bolted together. Each tower would support two circuits consisting of three phases of conductors arrayed in a vertical configuration.



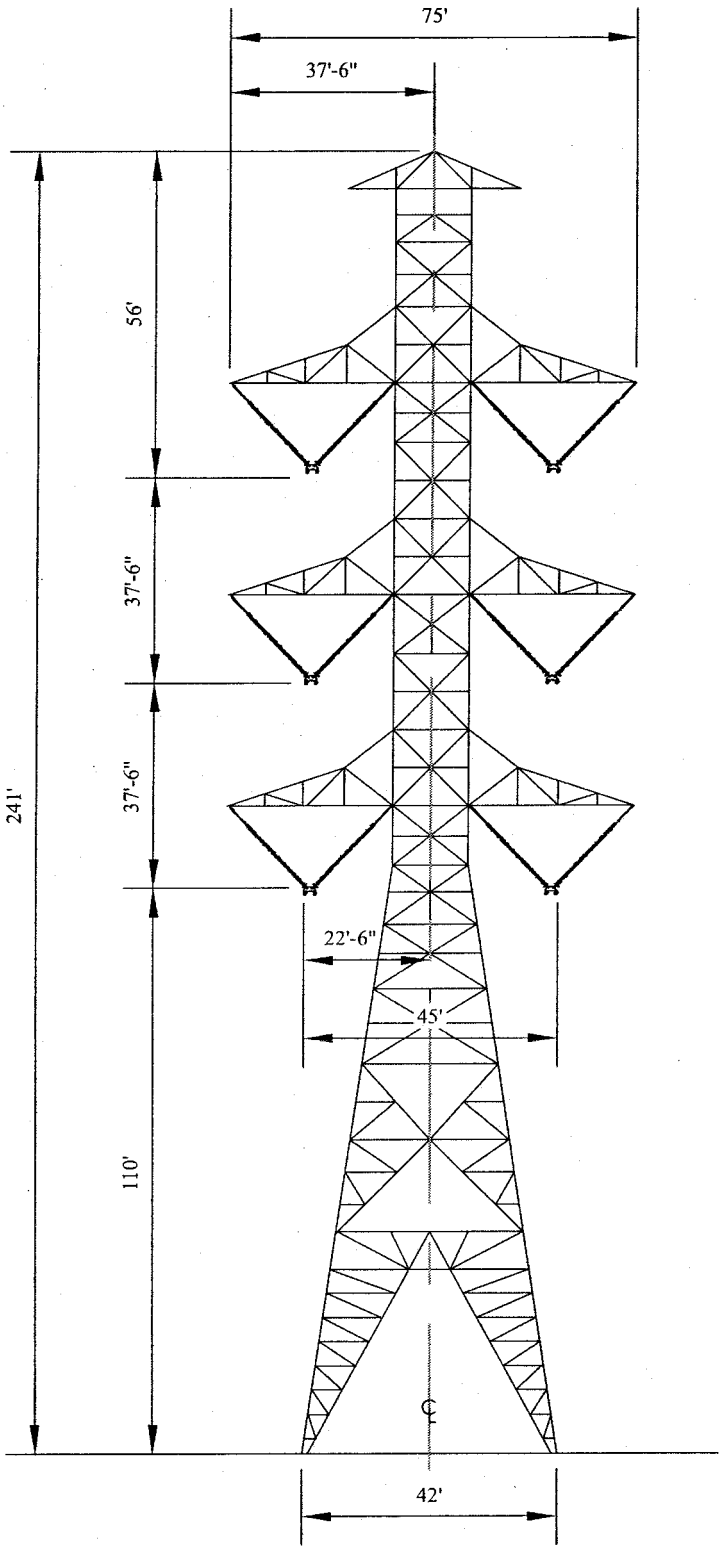
Note:
Dimensions are approximate and may vary with site conditions.

PREPARED BY Aspen Environmental Group

Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-8
Typical 500kV Single-Circuit Lattice Steel Tower



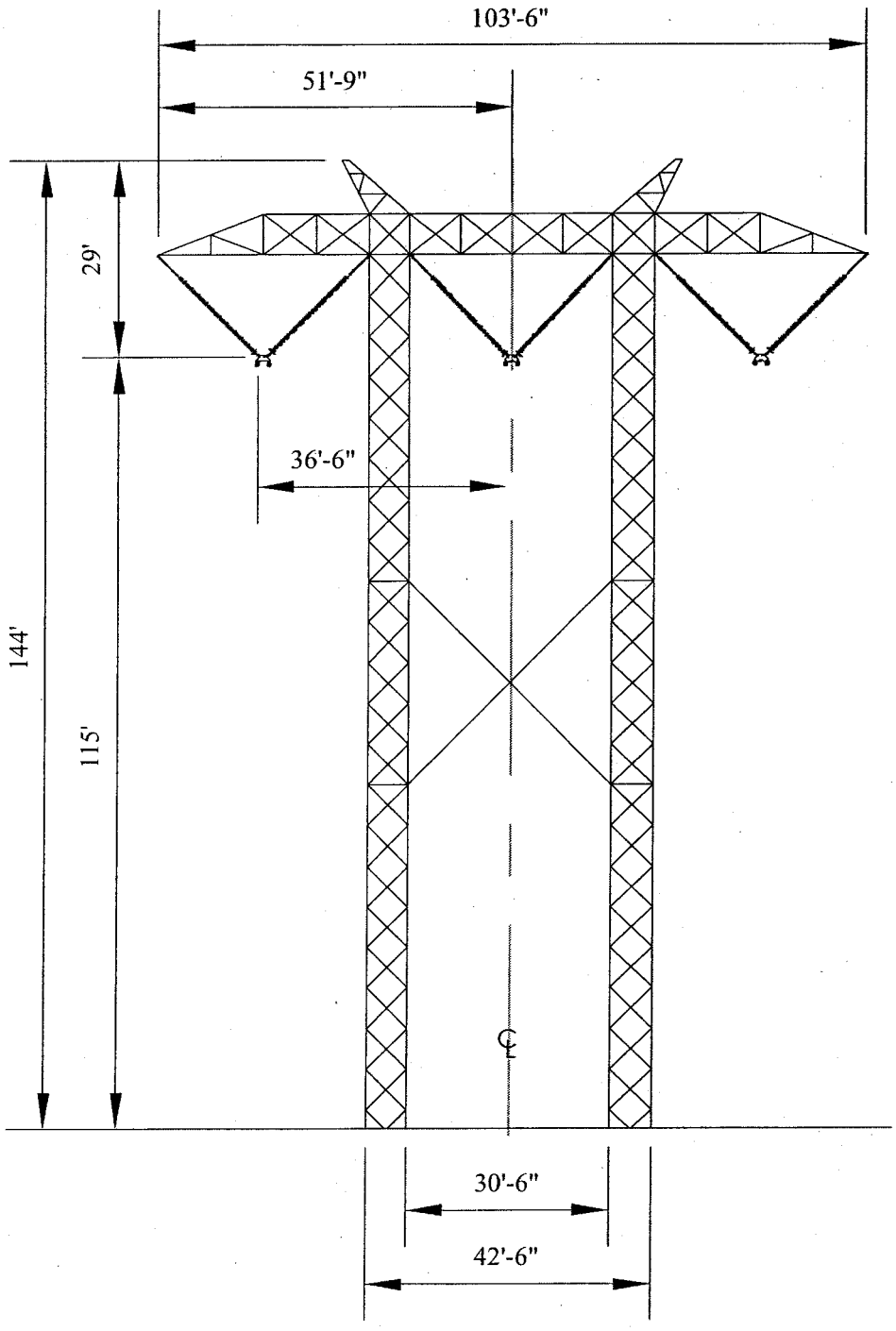
Note:
Dimensions are approximate and may vary with site conditions.

PREPARED BY Aspen Environmental Group

Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-9
Typical 500kV Double-Circuit Lattice Steel Tower



Note:
Dimensions are approximate and may vary with site conditions.

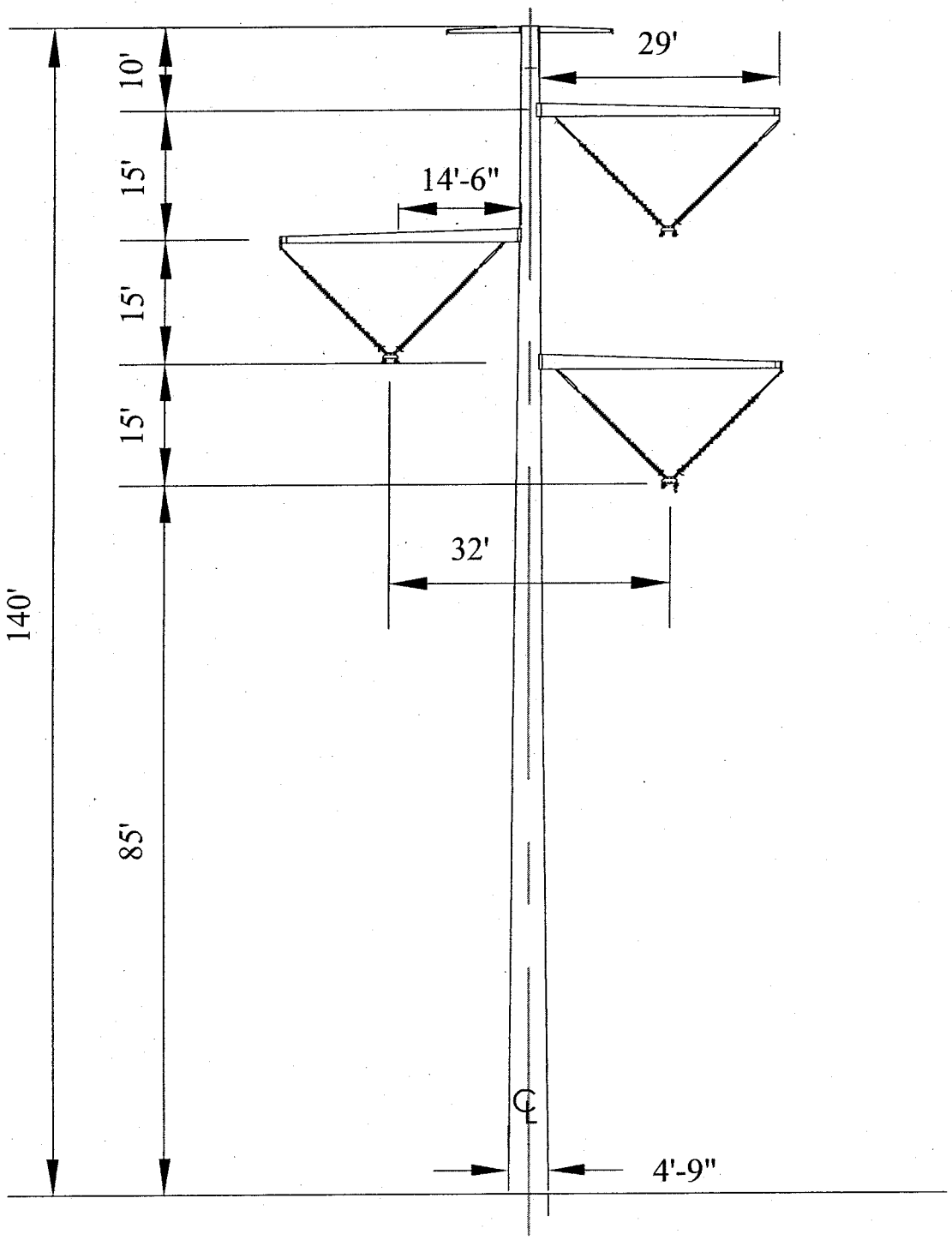
PREPARED BY Aspen Environmental Group

Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-10

Typical 500kV Single-Circuit "H-Frame" Tower



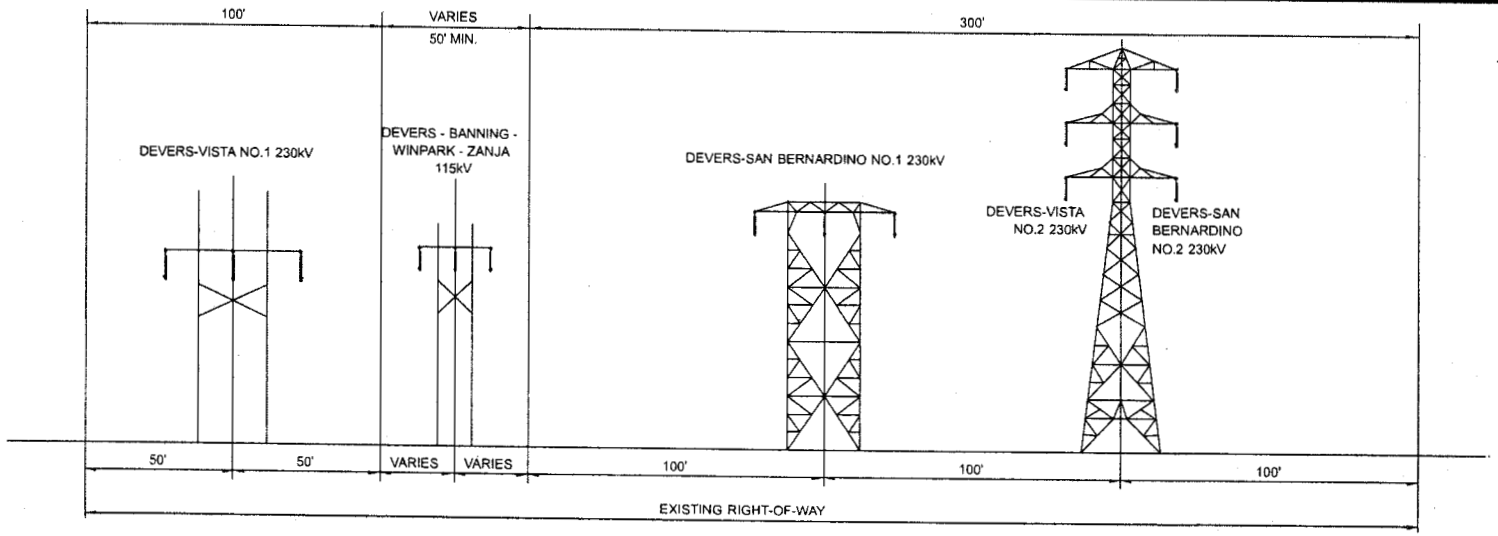
Note:
Dimensions are approximate and may vary with site conditions.

PREPARED BY Aspen Environmental Group

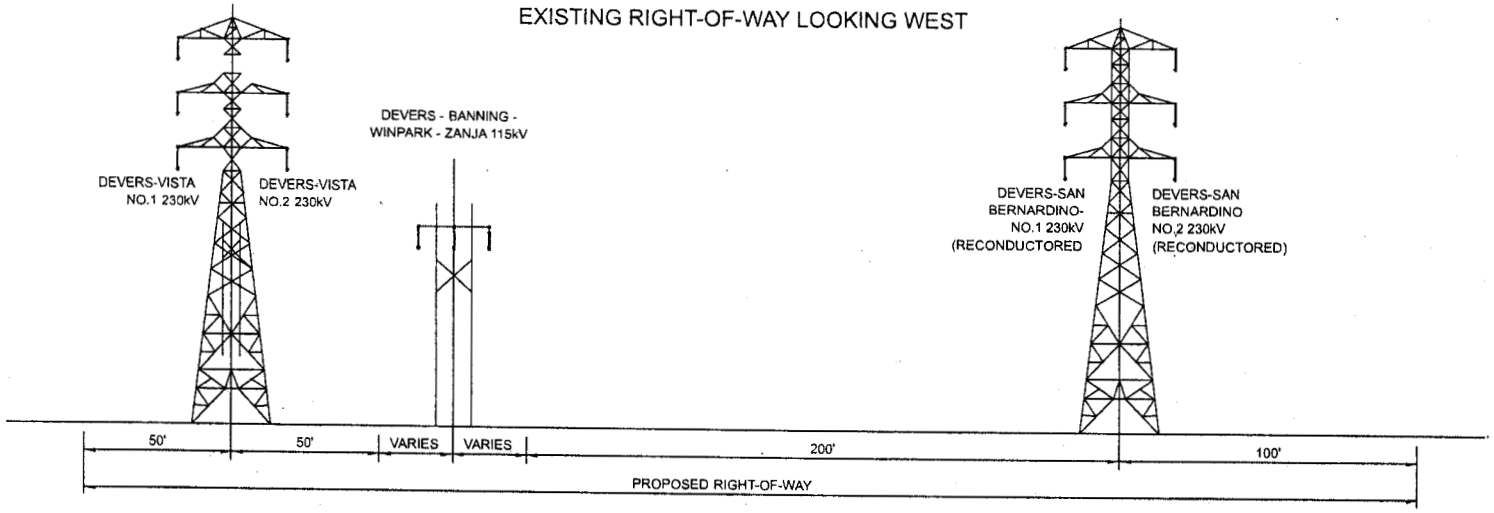
Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-11
Typical 500kV Single-Circuit Tubular Steel Pole



SECTION A-A
EXISTING RIGHT-OF-WAY LOOKING WEST



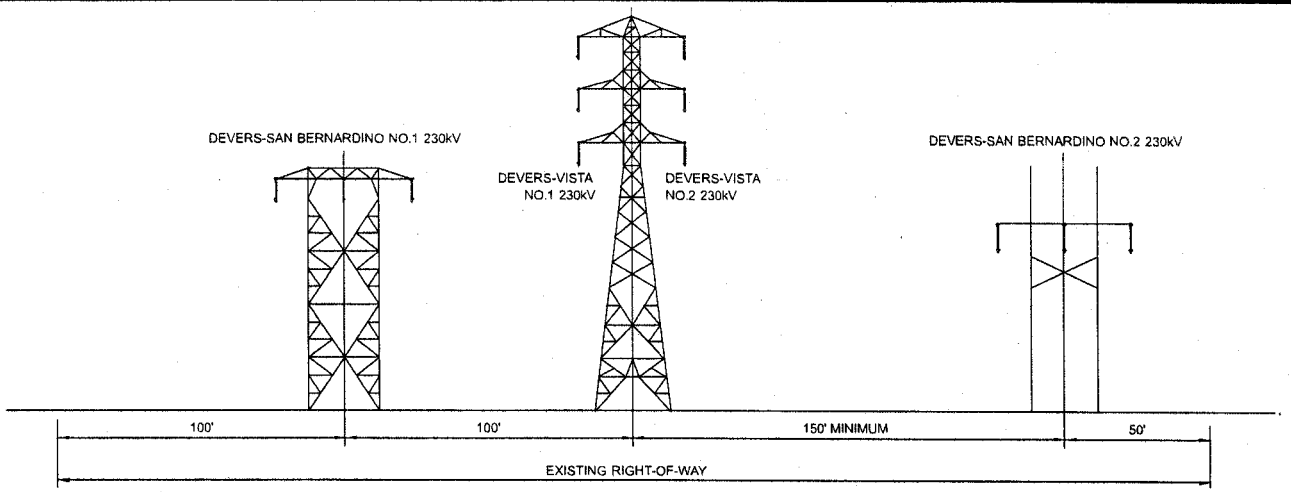
SECTION A-A
PROPOSED RIGHT-OF-WAY LOOKING WEST

PREPARED BY Aspen Environmental Group

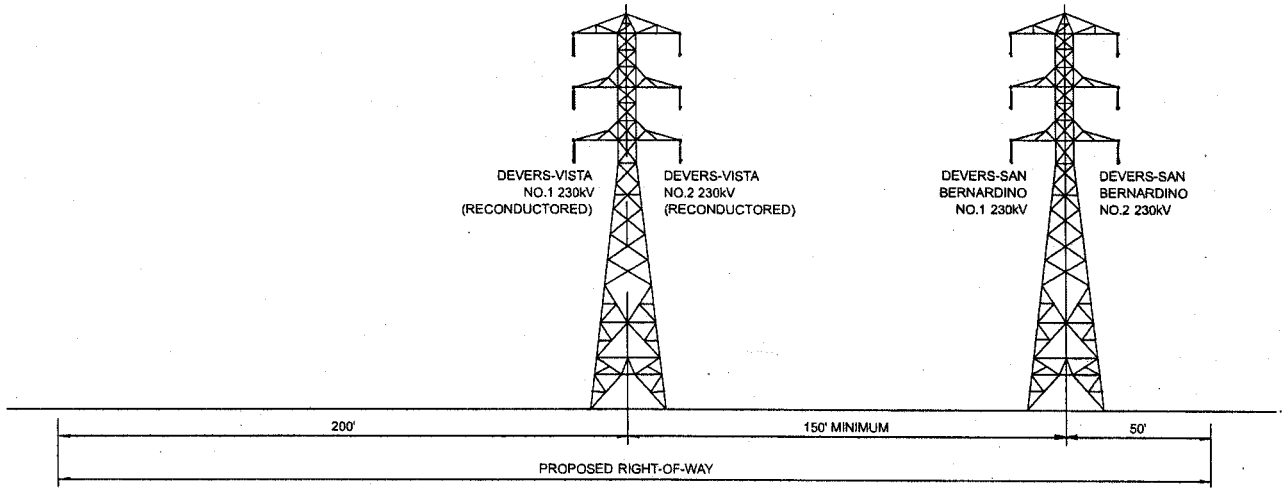
Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-13a
West of Devers: Typical Section between Devers Substation and Banning Junction



SECTION B-B
EXISTING RIGHT-OF-WAY LOOKING WEST



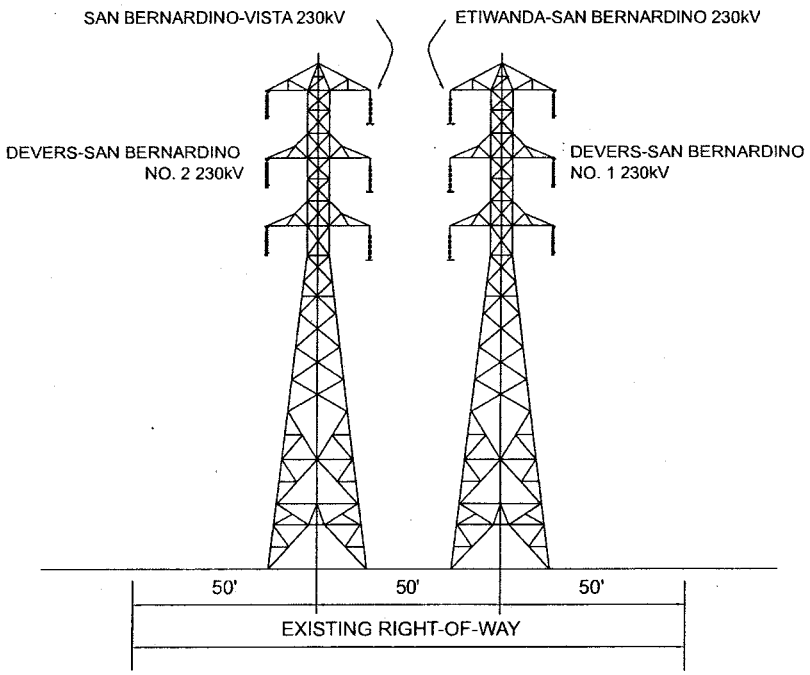
SECTION B-B
PROPOSED RIGHT-OF-WAY LOOKING WEST

PREPARED BY Aspen Environmental Group

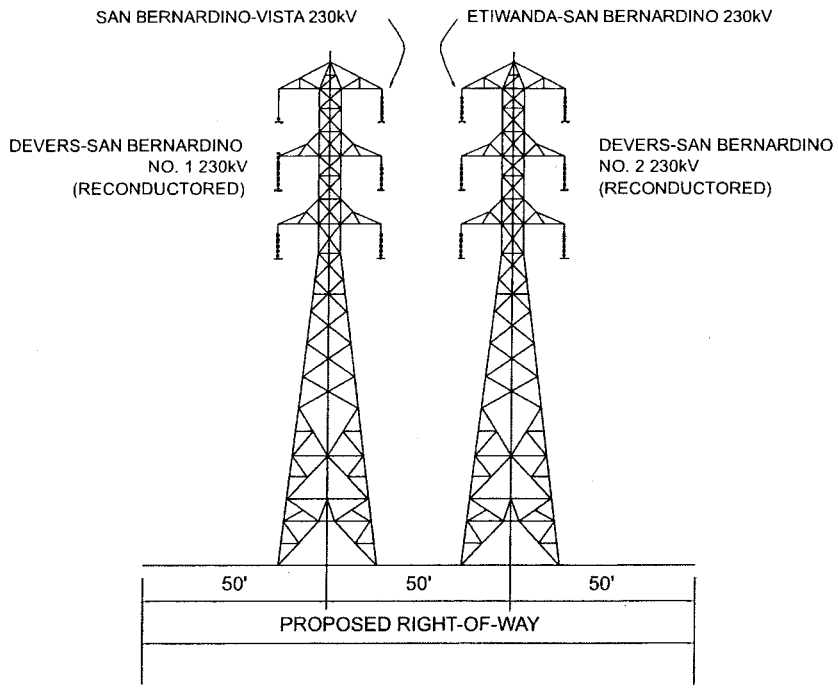
Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-13b
West of Devers: Typical Section between Banning Junction and San Bernardino Junction



SECTION C-C
EXISTING RIGHT-OF-WAY LOOKING NORTH



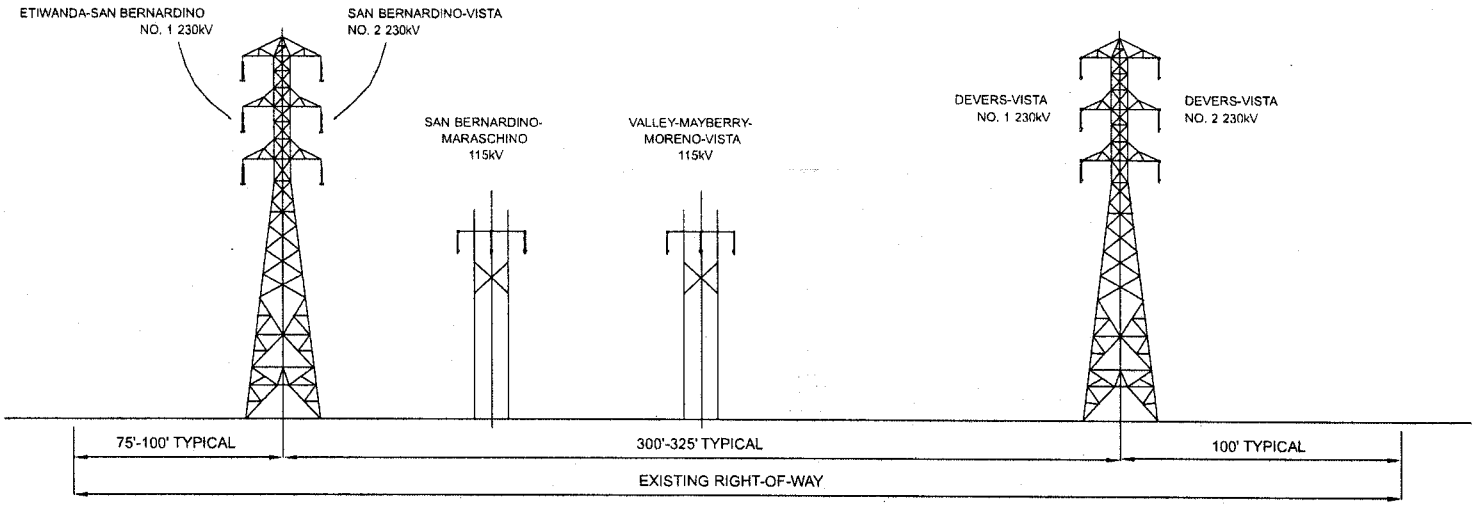
SECTION C-C
PROPOSED RIGHT-OF-WAY LOOKING NORTH

PREPARED BY Aspen Environmental Group

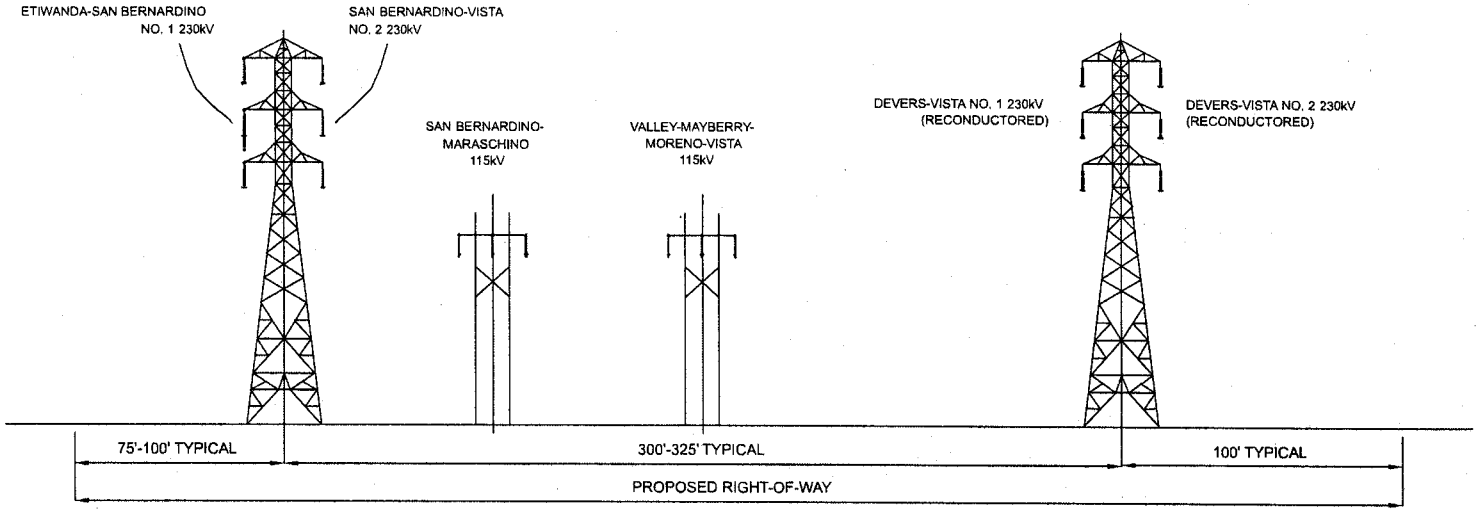
Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-13c
West of Devers: Typical Section between San Bernardino Junction and San Bernardino Substation



SECTION D-D
EXISTING RIGHT-OF-WAY LOOKING WEST



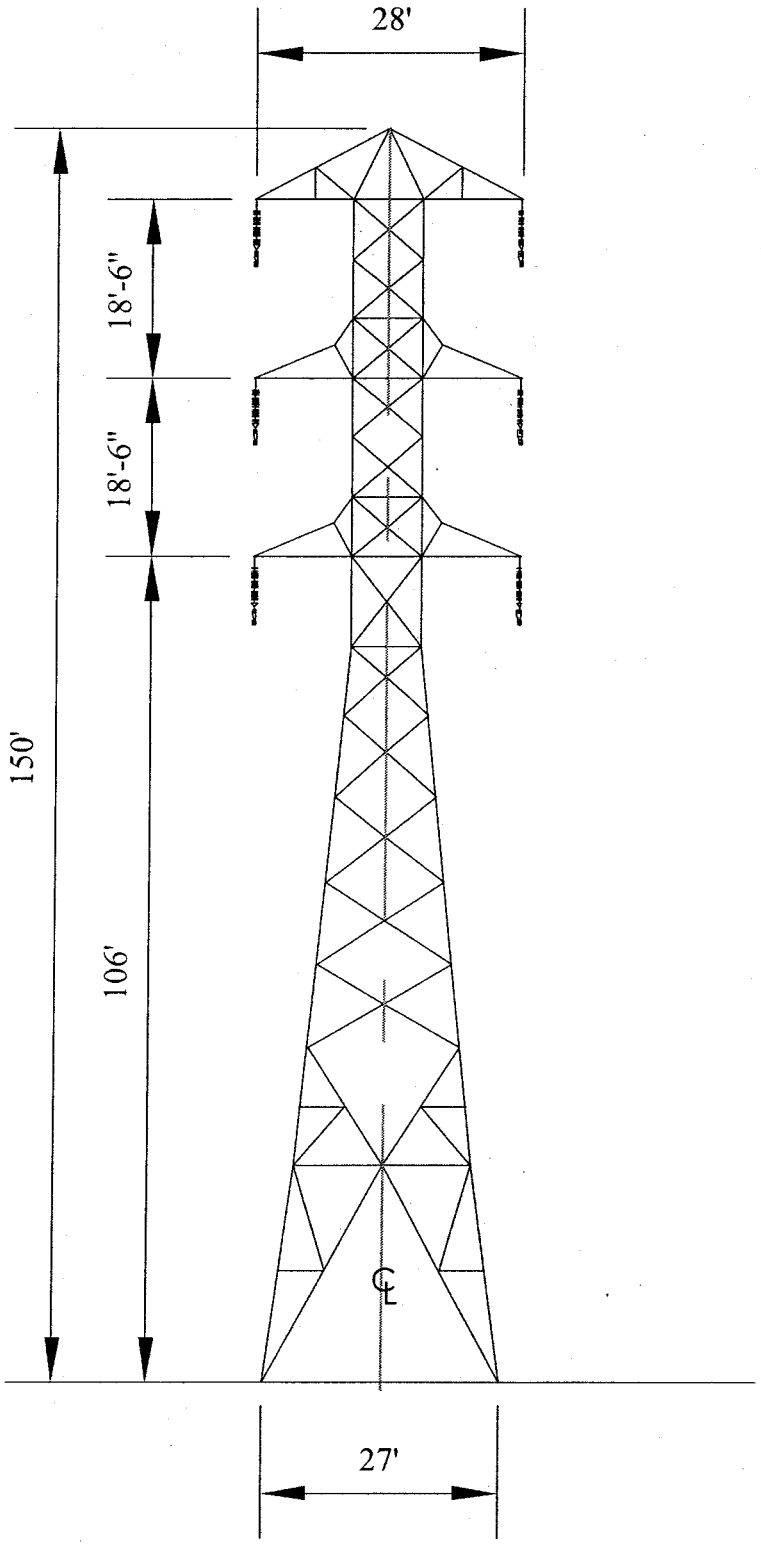
SECTION D-D
PROPOSED RIGHT-OF-WAY LOOKING WEST

PREPARED BY Aspen Environmental Group

Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-13d
West of Devers: Typical Section between San Bernardino Junction and Vista Substation



Note:
Dimensions are approximate and may vary with site conditions.

PREPARED BY Aspen Environmental Group

Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-14
Typical 230 kV Double-Circuit Lattice Steel Tower

The transmission line would be composed primarily of tangent (suspension) type structures, where conductors approach and depart the structures in a straight line. Some towers would be heavier structures. These would be either angle structures allow for a limited change in line direction, or dead-end structures used for major changes in line direction. Structure weights vary with height and specific load requirements, the approximate weight of each type of structure is listed in Table B-4.

Table B-4. Structure Type and Weight

Structure Type	Weight (pounds)
500 kV Transmission Line Structures	
Four-legged single-circuit tangent	32,000
Four-legged single-circuit angle	50,000
Four-legged single-circuit dead-end	80,000
Four-legged double-circuit tangent	125,000
Four-legged double-circuit dead-end	200,000
Two-legged single-circuit tangent	55,000
Tubular steel pole	38,000
230 kV Transmission Line Structures	
Four-legged double-circuit tangent	35,000
Four-legged double-circuit dead-end	65,000

Source: SCE, 2005a.

The heights of the structures would vary depending upon the terrain, span length, and the presence of other facilities or features that the transmission line may cross, such as rivers, roads, highways, railroads, telephone lines, or other power transmission and distribution lines.

Typical 500 kV structures would be approximately 150 feet tall for the four-legged single-circuit lattice steel towers, approximately 144 feet tall for the two-legged H-frame towers, and 140 feet tall for the tubular steel poles. Typical 230 kV towers would be approximately 150 feet tall. The final heights of the DPV2 towers may differ from the existing DPV1 towers by approximately 5 to 10 feet, due to operating system requirements.

The new towers would be aligned horizontally with the existing towers where feasible. However, the capacity rating specified by the ISO necessitates that the heights of some of the Devers-Harquahala towers be slightly taller than the adjacent DPV1 towers. Also, tower spacing may not correspond to the DPV1 structures in order to provide adequate conductor ground clearance. Minimum conductor height would be at least 35 feet above the ground for the 500 kV line and 30 feet for the 230 kV lines.

The average tower-to-tower spacing (span length) for the 500 kV line would be approximately 1,550 feet. For steel lattice towers, this would result in an average of approximately 3.4 towers per mile. Span lengths generally range from a minimum of 400 feet to a maximum of 2,200 feet. The typical span length for the 500 kV tubular steel poles would be 1,320 feet, or four towers per mile. The average tower-to-tower span length for the new 230 kV line would be approximately 1,350 feet, resulting in approximately 3.9 towers per mile. Towers would be placed at the maximum feasible distance apart at crossings of all highway and recreation routes-of-travel, including the Colorado River. Where feasible, towers would be located within the ROW to avoid skyline situations through placement of towers below a ridge or by adjusting tower placement to avoid highly visible locations and use visual screening provided by nearby landforms. Although the exact quantity and placement of the structures is determined by the final detailed design of the transmission line, detailed maps in Volume 3 (Maps) show preliminary locations of the towers.

During project construction, SCE will utilize a procedure to adjust and finalize transmission tower and stub road locations to ensure that final tower sites are located to maximize stability of the towers while minimizing construction, right-of-way and environmental issues and to accommodate future operations and maintenance needs. The procedure is also utilized to finalize the location of splicing, tensioning, and pulling sites. Under this siting procedure, a multidisciplinary SCE team would visit each proposed structure site following the completion of preliminary engineering and prior to the commencement of detailed, final engineering of the structures. Each tower site and associated stub road would be reviewed

by the team to assess the suitability of the site and a buffer area along each stub road and around each tower site would be inspected. If no environmental sensitivities are identified and there are no other issues affecting construction, maintenance, or real estate, the site would be marked as approved and the team would move to the next tower site and stub road. Final engineering would proceed on that tower at the approved location. If an environmental sensitivity is identified (e.g., a desert tortoise burrow or a tower leg would be located in a dry stream channel), the team would move the proposed structure site in-line to avoid the sensitivity (in general, towers would not be moved side to side, but only in-line). In most cases, the team would be able to move a tower site away from sensitivities to a new site. Typically, this could be accomplished with a move of 50 feet or less. The recommended new tower site would then be inspected by the team. If no environmental sensitivities and no construction, maintenance or real estate issues are identified, preliminary engineering for this new site would be checked and the new tower site and associated stub road route would be approved by the team. Once proposed structure sites are approved, final detailed engineering would proceed. During detailed engineering, no further tower site adjustments would occur without consultation with the interdisciplinary team.

Approximately 24 to 48 hours prior to construction equipment being moved onsite, a team of biologists would inspect each site to detect and remove desert tortoises. If a tortoise burrow is detected, it would be cleared of tortoises that could be inside and then closed to prevent additional tortoises from entering the burrow. This would be accomplished consistent with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) incidental take authorizations.

The foundations for the 500 kV towers could require up to eight augured, cast-in-place concrete piles. Tubular steel poles would require one pile, lattice steel towers four piles, and H-frame towers eight piles. Foundations for the 230 kV towers would consist of four cast-in-place concrete piles, the size of which would depend on the type of structure and soil conditions at each tower site. With excavations for structure foundations, tower sites may, on rare occasion, need to be moved due to excavation difficulties or discovery of some new sensitivity. During this phase of the work, site adjustments are made only if necessary to avoid an environmental sensitivity or to maintain tower integrity and sustainability. Generally, these site adjustments amount to a few feet.

B.3.2 Hardware (Conductors/Insulators/Overhead Groundwires)

B.3.2.1 Conductors

Each 500 kV phase would consist of a two-conductor bundle with the conductors spaced horizontally 18 inches between their centers. Each 230 kV phase would consist of a two-conductor bundle with the conductors spaced horizontally 16 to 18 inches between conductor centers. Installed on towers, typical conductor bundle spacing would be from 15 to 37.5 feet vertically and from 18 to 45 feet horizontally. Conductor spacing for each type of line and structure is listed below.

- 500 kV four-legged single-circuit tower as shown in Figure B-8 — 32 feet
- 500 kV four-legged double-circuit tower as shown in Figure B-9 — 37.5 feet vertically and 45 feet horizontally
- 500 kV two-legged H-frame tower as shown in Figure B-10 — 36.5 feet
- 500 kV tubular steel poles as shown in Figure B-11 — 15 feet vertically and 32 feet horizontally
- 230 kV four-legged double-circuit tower as shown in Figure B-14 — 18.5 feet vertically and 28 feet horizontally.

Each 500 kV conductor would be 1.762 inches in diameter, 2,156 kcmil, ACSR and each 230 kV conductor would be 1.244 inches in diameter, 1,033 kcmil ACSR. With these types of conductor, the current flows through aluminum strands formed in a helix around a core of steel strands. The steel strands provide the mechanical strength to support the aluminum strands.

B.3.2.2 Insulators

As shown in Figures B-8 through B-11, tangent and angle insulator assemblies for the 500 kV line consist of two strings of insulators in the form of a "V." These strings are used to suspend each conductor bundle (phase) from the structure, maintaining the appropriate electrical clearance between the conductors, the ground, and the structure. The "V" string also restrains the conductor so that it will not swing into the structure during winds. Each leg of the "V" assembly contains one or two one-piece gray polymer insulators, depending on the conductor electrical loads. On dead-end structures, insulators are arranged in a barrel configuration consisting of four polymer insulators. The polymer insulators are similar in appearance to the porcelain type insulators used on the DPV1 line, but are easier to install and maintain.

Figures B-13a through B-13d and B-14 show tangent and angle insulator assemblies for the 230 kV line, consisting of one or two one-piece gray polymer insulators hung from tower crossarms in the form of an "I." These strings are used to suspend each phase from the structure while maintaining the necessary electrical clearance of the line from both the tower and the ground. Unlike the "V" conductor assemblies used on the 500 kV structures, the "I" assemblies would swing with the conductor during winds. Each insulator is approximately 84 inches long and approximately 6 inches in diameter. Similar to 500 kV structures, 230 kV dead-end structures would also use insulators arranged in a barrel configuration, but consisting of two polymer insulators rather than four.

B.3.2.3 Overhead Groundwires

Overhead groundwires, located on the peaks of transmission line structures, are used to intercept lightning that would otherwise strike the conductors. The groundwire is approximately one-half inch in diameter. The 500 kV structures would have two overhead groundwires, while the 230 kV structures would have one. Electric current from a lightning strike would be transferred to the ground through the groundwires and the structure itself. One of the overhead groundwires on the 500 kV structures also would contain optical fibers for communication and line protection purposes. The groundwire for the Devers-Vista No. 2 230 kV line would contain optical fibers as well.

The approximately vertical distance between the overhead groundwire and the highest conductor is different for each type of transmission tower as follows:

- 500 kV four-legged single-circuit tower as shown in Figure B-8 — 30 feet
- 500 kV four-legged double-circuit tower as shown in Figure B-9 — 56 feet
- 500 kV two-legged H-frame tower as shown in Figure B-10 — 29 feet
- 500 kV tubular steel poles as shown in Figure B-11 — 25 feet
- 230 kV four-legged double-circuit tower as shown in Figure B-14 — 15 feet.

B.3.2.4 Other Associated Hardware

Hardware needed for the Proposed Project would include suspension clamps, dead-end assemblies, spacers, armor rods, vibration dampers, and other miscellaneous parts. All of the hardware used on the Proposed Project would be designed for corona-free operation up to the maximum designated voltages.

Conductor spacers would be installed along the lines to keep the bundled two-phase subconductors from contacting each other. Armor rods would be installed at the points where suspension clamps support the conductors to increase the safety and reliability of the lines by minimizing the possibility of conductor damage from flashovers of the insulator string which could mechanically weaken the support point. Vibration dampers located on the conductor help prevent fatigue of the conductor's metal strands by reducing vibration caused by the wind.

B.3.3 ROW Requirements and Access Roads

B.3.3.1 ROW

The majority of the ROW for DPV2 500 kV line is located adjacent to existing 500 kV transmission line ROWs. It includes approximately 225 miles of DPV1 ROW and 5 miles of the Harquahala-Hassayampa 500 kV ROW. As shown in Figure B-16, where located adjacent to the existing DPV1 ROW, the proposed 500 kV transmission line would be constructed within a 130-foot-wide ROW on federal and State land, and within a minimum 130-foot-wide ROW on private land and Indian Reservation land. In 1989, the BLM granted a ROW to SCE for the DPV2 transmission line proposed at that time. This ROW includes land managed by the BLM and USFWS[5]. The proposed 500 kV line would be constructed within the ROW previously granted by the BLM.

In some locations, the presence of utility or canal structures may require that the 500 kV ROW be separated from the DPV1 ROW or widened to accommodate those structures. In locations where a separate ROW would be required, the ROW width would be 160 feet on federal or State land, and a minimum of 200 feet on private land. As shown in Figure B-16, a minimum of 130 feet would separate the centerline of the proposed 500 kV transmission line structures from the centerline of the existing 500 kV transmission line structures.

SCE currently ~~owns~~ is authorized the ROW required for the majority of the project route, but will need to acquire additional ROW in a number of areas through a BLM grant of right-of-way. SCE will need to acquire additional ROW in several areas:

- Tthe Palo Verde Valley south of Blythe, California.
- At the site of existing series capacitor banks at MP E52.9 in Arizona and MP E163.7 in California, the DPV2 ROW would need to be expanded to include an area 75 feet by 320 feet in order to allow construction of new series capacitor banks adjacent to the existing ones.
- Table B-4a presents the 18 parcels for which SCE states that additional ROW would need to be acquired for the Devers-Harquahala segment of the project. The total acreage needed would be 223.9 acres (3.2 acres in California and the remainder in Arizona).

Within Copper Bottom Pass, however, for a distance of approximately 3 miles, no additional ROW would be necessary as existing double-circuit structures along the route have already been conductored on both sides.

The new 230 kV double-circuit line between Devers Substation and San Bernardino Junction would be constructed within the existing ROW along approximately the same centerline as the single-circuit H-frame

[5] Note that the USFWS, Coachella Valley National Wildlife Refuge, states that SCE acquired rights-of-way through the Refuge in 1979, which pre-dated the creation of the Refuge, which occurred in 1985.

230 kV transmission line and the single-circuit lattice steel 230 kV transmission line being removed as part of the project. No additional ROW would be needed where reconductoring is proposed between San Bernardino Junction and Vista and San Bernardino Substations.

Table B-4a. SCE Additional ROW Clearance Needed for Devers-Harquahala 500 kV Transmission Line

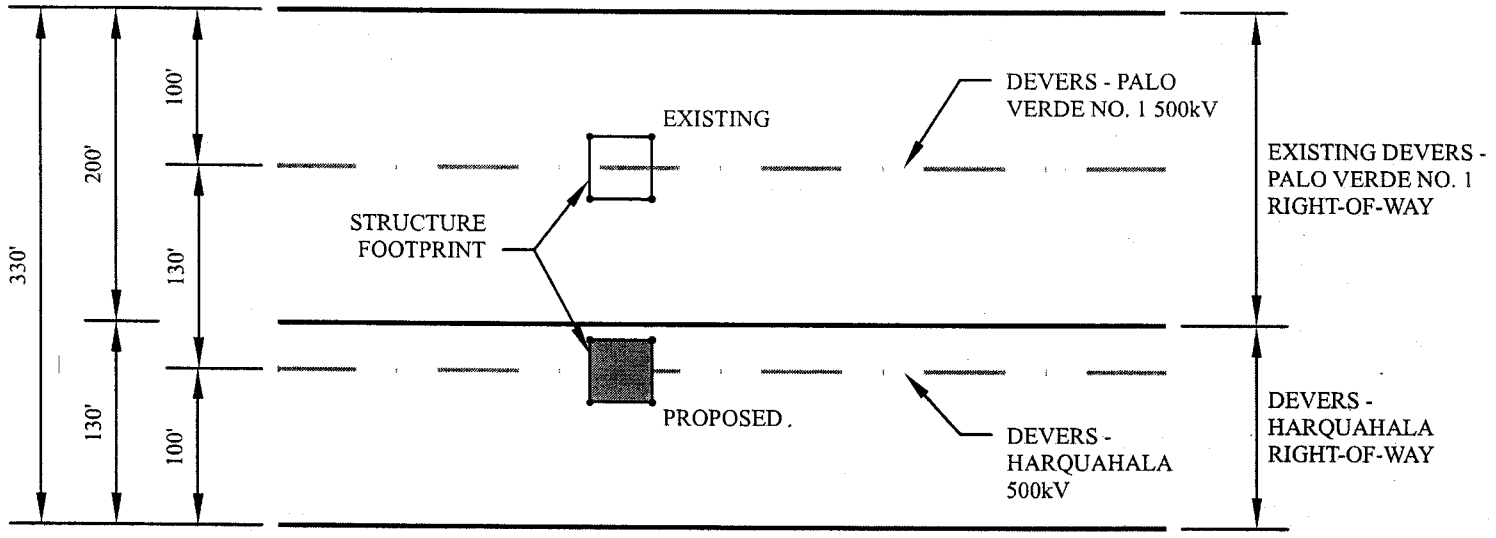
State	APN/Section #	Property Owner	Add'l ROW Needed	Acreage Req'd
CA	872-080-014	Velasco Salvador & Guadalupe R	170 feet	0.83 acres
CA	879-130-021	FHEA	170 feet	2.34 acres
AZ	T3N,R11W section 28	Southwestern Agricultural Svc. Inc. Southwestern Agricultural Svc./Water Bank	130 feet	6.89 acres
AZ	T3N,R11W section 28	St. of Arizona Dept of Transportation	170 feet	10 acres
AZ	T3N,R11W section 21 & 22	Arizona State Of / Arizona Highway Dept.	170 feet	26.8 acres
AZ	T3N,R10W section 21 & 22	Unassessed	170 feet	41.2 acres
AZ	T2N,R8W section 2	Unassessed	CA Aqueduct crossing	0.59 acres
AZ	T2N,R8W section 36	Unassessed	170 feet	21.89 acres
AZ	T1S,R7W section 2	Unassessed	170 feet	21.20 acres
AZ	506-30-024A	Giora & Arlene Ben-Horin	170 feet	20.6 acres
AZ	506-30-012B	Four Hundred Eighty Third & Thomas 40 LLC	170 feet	5.15 acres
AZ	506-30-012C	Linda A Booker	170 feet	5.15 acres
AZ	506-30-010	L Mill Iron Ranch, LLC	170 feet	10.3 acres
AZ	506-31-014F	A&M Partnership	170 feet	3.4 acres
AZ	506-31-014G	AA American Development Corp. & Kataria	170 feet	3.86 acres
AZ	506-31-014C 506-31-013 506-31-007F 506-31-008B	Flood Control District of Maricopa County	170 feet	28.25 acres
AZ	506-31-010E 506-31-010F	Subhash & Kamlesh Kataria	170 feet	5.15 acres
AZ	506-31-006B	Demuro Properties	170 feet	10.3 acres

B.3.3.2 Access and Spur Roads

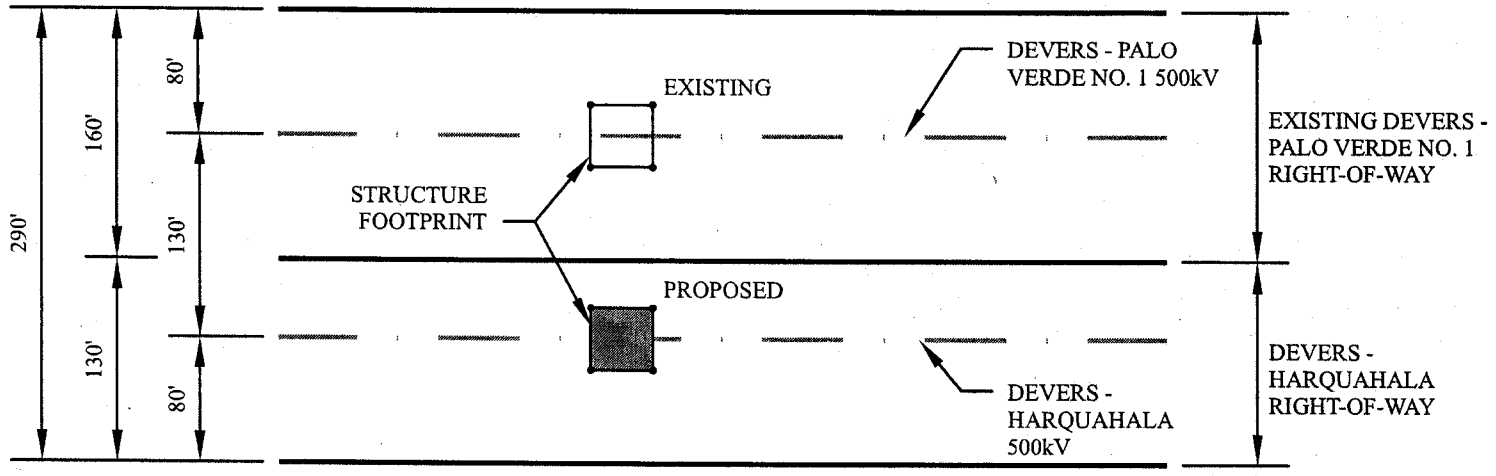
Construction of a new transmission line requires access to each tower site for construction crews, materials, and equipment. After project construction, these roads would be used by maintenance crews and repair vehicles for access to each tower for inspection and maintenance activities.

Wherever possible, existing streets and access roads would be used for construction of the Proposed Project. Where needed, existing access roads would be improved as required.

At the end of project construction, these roads would be left in a condition equal to or better than existed prior to the start of construction. Loose rock and slide material would be removed from existing roads and used to construct dikes, fill washouts, or flatten fill slopes. All washouts, ruts, and irregularities would be filled or obliterated.



TYPICAL RIGHT-OF-WAY ADJACENT TO DPV1 ON PRIVATE LAND, INDIAN RESERVATION, AND CALIFORNIA STATE LAND



TYPICAL RIGHT-OF-WAY ADJACENT TO DPV1 ON BLM AND ARIZONA STATE LAND

PREPARED BY Aspen Environmental Group

Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-16
Typical Devers-Harquahala 500 kV Transmission Line ROW

In determining the final location of new roads, large trees or other natural features would be avoided. The intersection of a new access road with an existing road would be constructed in accordance with the requirements of the agency having authority over the existing road.

Road gradients would be leveled so that any sustained grade does not exceed 12 percent. Grades of 14 percent would be permitted when such grades do not exceed 40 feet in length and are located more than 50 feet from any other excessive grade or any curve. Steeper grades may be permitted on spur roads. All curves would have a radius of curvature of not less than 50 feet, measured at the center line of the usable road surface. Where tubular steel poles would be used, the minimum radius of curvature of access roads would be 75 feet to allow for hauling pole structures to the job site. All dead-end spur roads over 500 feet long would include a Y-type or circle-type turnaround.

Although over 18 miles of new spur roads would be required for the project, only one new main access road is expected to be needed on the transmission line route. This new road would be constructed north of and adjacent to the part of the existing Harquahala-Hassayampa 500 kV transmission line between the Harquahala Generating Station Switchyard and the line's intersection with the existing DPV1 transmission line at MP E5.0.

Spur roads would be needed between existing access roads and new tower sites. Access and spur roads are generally 14-foot wide unimproved roads. The main access road follows the transmission ROW with spur roads branching off to each tower site. Spur roads would be an average of 130 feet long and would usually have turnabout areas near the tower sites. Up to 25 percent of the new tower sites would require spur roads approximately 200 feet long. While longer or wider spur roads may be needed in some locations due to local terrain, limited clearing or earthwork would be required in most locations. The existing access roads would be maintained so as to permit their being used by construction equipment. Some road modifications may be required to allow use of heavy equipment. All access and spur road improvements, whether on or off the ROW, would comply with applicable permits and approvals.

Copper Bottom Pass. Due to the sensitive nature of the environment in Copper Bottom Pass, project vehicles would access the pass only by the existing through road. No new towers are to be constructed in the pass. Vehicles would access the existing structures for conductor stringing using existing spur roads. Requirements to minimize disturbance to habitat would be incorporated into project specifications. It is expected that the guidelines would incorporate storm water pollution prevention plans (SWPPPs), best management practices (BMPs), environmental requirements from all supervising agencies, and internal SCE-adopted construction practices.

West of Devers. The WOD 230 kV transmission system would use existing access roads wherever possible. Installation of new structures at some locations would require the construction of spur roads between existing roads and new tower sites.

B.3.4 Substations, Series Capacitors, and Switchyards

The proposed 500 kV transmission line would terminate at existing facilities: in the west at the Devers Substation in California and in the east at the Harquahala Switchyard in Arizona. In addition, the line would connect with the Midpoint Substation (if Midpoint Substation is constructed) at MP E113.7, two new series capacitor banks, and two new shunt banks. The new series capacitor banks (see Figure B-17 on the enclosed CD) would be located adjacent to the existing DPV1 series capacitor banks located in Arizona (MP E52.9) and California (MP E163.7). One new shunt reactor bank would be located at

Devers Substation and the second would be located on a new site at the Harquahala Switchyard. One 500 kV SVC would be installed and terminate at the 500 kV switchrack at Devers Substation~~ and another 500 kV SCV would be installed and terminate at the 500 kV switchyard inside the Valley Substation~~.

In addition, other equipment needed for the 230 kV upgrade would be installed within the existing fenced areas at Devers, Vista, Lewis (in Orange County), and San Bernardino Substations, and at the San Onofre Nuclear Generating Station (SONGS) Switchyard in San Diego County. These upgrades would include the installation of conductor replacements, wave traps, disconnect switches, and line relays.

B.3.4.1 Devers Substation

The proposed modifications to the Devers Substation would be installed in the existing switchyard. Modifications include the installation of ~~a~~ new ~~133~~135-foot-high by 90-foot-wide dead-end ~~structure~~ structures, circuit breakers, and disconnect switches. ~~Disconnect switches~~Electrical equipment associated with the new 500 kV Devers-Harquahala transmission line would be installed ~~adjacent to and northwest of the existing DPV1 500 kV shunt reactors~~at the northwest part of the switchrack. With the Proposed Project, the terminating transmission tower or turning pole would be the tallest structure at the substation, ranging between 150 and 180 feet tall.

A ~~new transformer bank and a~~ 500 kV shunt line ~~reactor~~ bank and associated disconnect switches would be installed within Devers Substation. A 500 kV Static VAR Compensator (SVC) would be installed north of the 500 kV switchyard within the existing Devers Substation. The SVC would terminate ~~at~~ into the 500 kV switchrack. Two 150 MVAR shunt capacitors would be installed to the east of the 500 kV switchrack.

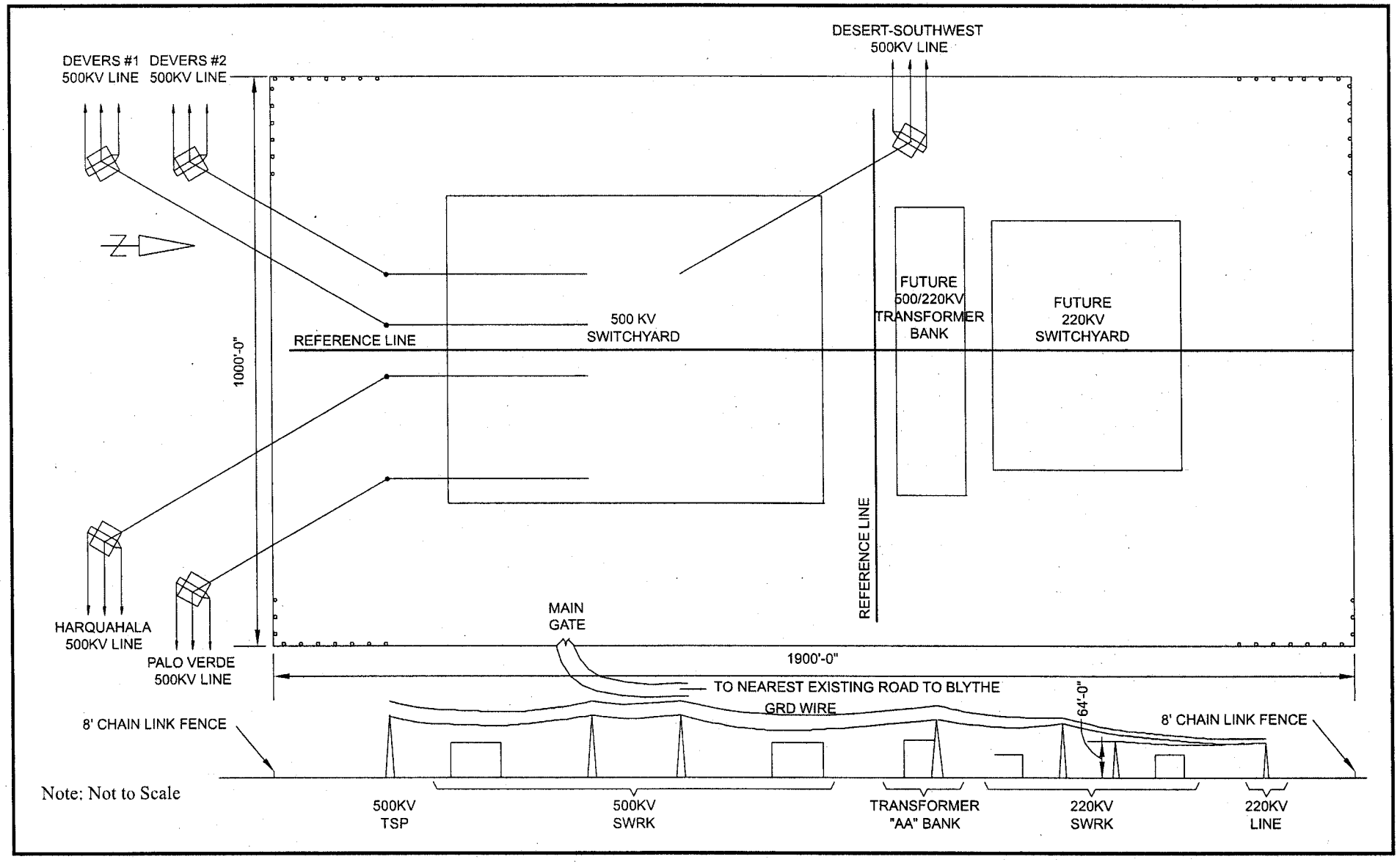
Within the Devers Substation, the Proposed Project would permanently disturb approximately 19.2 acres more than are currently disturbed. Approximately 2 acres would be required temporarily for laydown and construction uses.

Upgrades to the existing 220 kV switchrack are also required. Work on the 220 kV switchrack would include circuit breaker upgrades or replacements; disconnect replacements; and circuit breaker conductor upgrades.

In addition, SCE proposes to relocate a helipad that is currently located on SCE Devers Substation property (see Figure B-17a on the enclosed CD and at the end of Volume 3 of this EIR/EIS). SCE has stated that the relocation is necessary to make room for the addition of equipment for the DPV2 Project. The heliport relocation sites would include a maximum of 150 feet by 150 feet concrete pad, a 3-foot-high wire fence, and a 250-foot service road (12 feet wide) from Devers Substation to the site.

B.3.4.2 Midpoint Substation

The Midpoint Substation is being considered as a possible project component by SCE. Its location is shown in Figure B-2 (see enclosed CD). It would be located approximately 10 miles southwest of Blythe, California, adjacent to SCE's DPV1 ROW. The site is located on BLM land immediately west of IID's Blythe-Niland 161 kV transmission line and WAPA's Blythe-Knob 161 kV transmission line. A preliminary block diagram for the Midpoint Substation is presented in Figure B-18. Under the Proposed Project, the terminating transmission tower or turning pole would be the tallest structure at the substation, ranging between 150 and 180 feet tall. The tallest component in the switchrack, the dead-end, would be approximately 133 feet. The substation would be constructed within a rectangular area approximately 1,000 feet by 1,900 feet, resulting in approximately 44 acres permanently disturbed. The switching



PREPARED BY Aspen Environmental Group

Source: Proposed Devers-Palo Verde No. 2 Transmission Project, Proponent's Environmental Assessment, March 2005

Devers-Palo Verde No. 2 Transmission Line Project

Figure B-18
Midpoint Substation Block Map

facilities would be constructed within the Midpoint Substation property. The 500 kV switching station would include buses, circuit breakers, and disconnect switches. The switchyard would be equipped with 108-foot-high dead-end structures. Outdoor night lighting would be designed to illuminate the switch-rack when manually switched on.

A new telecommunications facility would be installed on the Midpoint Substation site to provide microwave and fiber optic communications needed for the protective relaying and SPS. Three new microwave paths would be installed, requiring a microwave tower onsite. Two fiber optic systems would be installed at the Midpoint Substation as well. The proposed fiber optic systems are between Midpoint–Buck Boulevard Substation and Midpoint-Devers-Harquahala.

A 45-foot by 70-foot mechanical-electrical equipment room would be installed on the Midpoint Substation site to house all controls and protective equipment and a telecommunications room.

B.3.4.3 Harquahala Switchyard

There are presently four 500 kV lines terminating in the Harquahala Switchyard, including the Harquahala-Hassayampa 500 kV line and lines to each of the generator transformers for the three units at Harquahala Generating Station.

A new 145-foot-high by 100-foot-wide line dead-end structure, circuit breakers, disconnect switches, and associated equipment such as relays and control cable would be installed in the existing switchyard in a double-breaker configuration, allowing continued operation in the event of a breaker failing. With the Proposed Project, the terminating transmission tower or turning pole would be the tallest structure at the substation, ranging between 150 and 180 feet tall. Equipment for System Control and Data Acquisition (SCADA) would be installed. Most of the equipment required for this function would be contained in a new telecommunications room.

Approximately 2 acres adjacent to the eastern side of the Harquahala property would be required temporarily for laydown and construction purposes.

~~B.3.4.4 Valley Substation~~

~~A 500 kV SVC would be installed and terminate at the 500 kV switchyard inside the existing Valley Substation property line. With the Proposed Project, the terminating transmission tower or turning pole would be the tallest structure at the substation, ranging between 150 and 180 feet tall. The western substation fence would be relocated to the west property line. The Proposed Project would permanently disturb approximately 16 acres within the substation. An area of approximately 2 acres within the substation property would be used for temporary laydown and construction.~~

B.3.4.4~~B.3.4.5~~ San Bernardino Substation

Equipment needed for the 230 kV upgrade would be installed within the existing fenced areas at San Bernardino Substation. With the Proposed Project, the 60-foot-high 220 kV circuit breakers' conductors would be the tallest component added at the site. The Proposed Project would permanently disturb approximately 5,000 square feet within the substation. An area of approximately 1 acre within the substation property would be used for temporary laydown and construction.

B.3.4.6~~B.3.4.7~~ Series Capacitor Banks

Two new 500 kV series capacitor banks would be installed for the Proposed Project. Each of the new series capacitor banks would be constructed adjacent to an existing DPV1 series capacitor bank, one in Arizona and one in California, at MP E52.9 and MP E163.7, respectively. Figure B-17 on the enclosed CD is a photograph of the existing series capacitor bank.

Each of the two series capacitor banks would consist of the following major components:

- Series capacitors
- Dead-end structures located on either side of the series capacitor banks, where the transmission line conductors enter the series capacitor sites
- Telecommunications equipment
- AC and DC power to operate facility equipment
- Manually switched outdoor night lighting to illuminate the series capacitors
- Grounding grid placed beneath the surface of the facility as a safety measure
- Mechanical-electrical equipment room.

The proposed California series capacitor site would be located approximately 64 miles east of the Devers Substation, on BLM land in the Chuckwalla Valley (as shown in Figure B-2 on the enclosed CD). The new site would be adjacent to the south side of the existing DPV1 series capacitor bank, between Towers M173-T2 and M173-T3. The site is approximately 0.4 miles south of I-10 and is accessed from the nearby Red Cloud Mine Road. The tallest structure at the site would be the dead-end, which would be 110 feet. The new series capacitor bank would occupy approximately 2 acres inside the fenced area. In addition, 1-acre fenced material laydown areas for storage and staging would be required for temporary use.

The proposed Arizona series capacitor site would be located approximately 55 miles west of the Harquahala Switchyard on the Ranegras Plain on BLM land (as shown in Figure B-1 on the enclosed CD). The new site would be adjacent to the south side of the existing DPV1 series capacitor bank, between Towers M61-T3 and M61-T4. The site is approximately 7 miles south of I-10 and is accessed from the nearby El Paso Natural Gas Pipeline road. As with the California series capacitor bank, the Arizona facility would occupy approximately 2 acres inside the fenced site and would temporarily use a 1-acre fenced area for material laydown, storage, and staging.

B.3.4.7~~B.3.4.8~~ 500 kV Shunt Reactor

A 500 kV shunt line reactor bank and associated disconnect switches would be installed for the Proposed Project at a location immediately adjacent to the north side of the Harquahala Switchyard, within the Harquahala Generating Station property. Outdoor lighting for the shunt reactor would be designed to illuminate the rectors and would be manually switched. The shunt reactor would be installed on approximately 2 acres of property to be acquired for this purpose. Laydown and construction would require temporary use of approximately 1 acre.

to illuminate the rectors and would be manually switched. The shunt reactor would be installed on approximately 2 acres of property to be acquired for this purpose. Laydown and construction would require temporary use of approximately 1 acre.

B.3.5 Special Protection Scheme

An SPS is proposed as a component of the project to protect the transmission system in the event of a simultaneous loss of DPV1 and the Proposed Project. This SPS would be designed to drop approximately 900 MW of generation in the PVNGS area and approximately 900 MW of SCE load.

Most of the relays needed to support the SPS would be installed within an existing relay room or mechanical-electrical equipment room at each substation. These may include Devers, Padua, Walnut, San Bernardino, Villa Pak, Viejo, Johanna, Ellis and Vista Substations in California, and the PVNGS, Hassayampa, and Harquahala Switchyards in Arizona. Other locations in Arizona may require new relays or relay upgrades and/or new circuit breakers or circuit breaker upgrades.

B.3.6 Telecommunications System

The proposed telecommunications system would consist of both existing and new facilities. The new facilities would be required to increase the reliability of the microwave system intertie between SCE and APS, as well as provide primary and backup telecommunications services for the new 500 kV transmission line. The system would include protective relaying, SPS, SCADA, system dispatching, data, and telephone services. Table B-5 indicates the equipment that would be installed at the new facilities as a part of the project.

Table B-5. Components of New Telecommunication Facilities

	New Facility Components					
Facility	**Building**	**Tower/ Antenna**	**Power Supply**	**Generator/ Fuel Tanks**	**Air Conditioning System**	**Communications System**
Harquahala Mountain	12-foot by 36-foot pre-fabricated building	110-foot self-supporting tubular steel tower	30 kilowatt solar panel direct current power system	Emergency generator with 2 500-gallon fuel tanks	2 air conditioning systems	3 microwave systems
Blythe Optical Repeater Site	12-foot by 36-foot pre-fabricated building		120/240-volt alternative current service and direct current power system	Emergency generator with 1 500-gallon fuel tank	2 air conditioning systems	Conduits to the OPGW termination and 1 SONET system
Midpoint Substation	12-foot by 36-foot pre-fabricated building	110-foot self-supporting tubular steel tower				3 microwave systems and 2 fiber optic systems
Harquahala Switchyard	12-foot by 36-foot prefabricated building	110-foot self-supporting tubular steel tower	120/240-volt alternative current service direct current power system		2 air conditioning systems	1 microwave system and 1 SONET system

Source: SCE, 2005a.

B.3.6.1 Harquahala Mountain

The primary telecommunications system for the proposed Devers-Harquahala 500 kV segment would involve constructing a new telecommunications facility on BLM land at Harquahala Mountain in Arizona (see Figure B-19 on the enclosed CD and at the end of Volume 3 of this EIR/EIS). The facility would be adjacent to an existing facility owned and operated by CAWCD.

The new Harquahala Mountain facility would be located on BLM land, 1 mile northwest of Salome in La Paz County, Arizona (as shown in Figure B-1 on the enclosed CD). There is an existing telecommunications facility owned, maintained, and operated by the CAWCD at this site. This facility was built in the early 1980s by the U.S. Bureau of Reclamation (USBR) and is surrounded by wilderness area. Electronics at the site are powered by solar energy, as there is no available commercial power. The site would be unmanned. An existing 10-mile dirt road leads to Harquahala Mountain. A temporary construction area adjacent to the new facility would be established for vehicle parking and material storage. This area would be fenced and gated. It is estimated that the temporary construction area would occupy approximately ~~1 acre~~ 0.125 acres and the permanent facility would occupy approximately ~~0.5~~0.125 acres.

The Harquahala Mountain Peak Solar Observatory, an Historic Property listed on the National Register of Historic Places (NRHP), is located approximately ~~100~~ 150 feet to the south of the proposed telecommunication site. Also located nearby is an existing Central Arizona Project (CAP) microwave facility and solar panels. SCE's proposed telecommunication facility would be approximately 100 feet west of the solar observatory and approximately 35 feet ~~south~~ west of the existing CAP facility. The area was proposed by SCE because it is fairly level and minimal grading would be required.

B.3.6.2 Blythe Optical Repeater Site

The backup telecommunications system for the proposed Devers-Harquahala 500 kV segment would involve installation of a new OPGW on the new 500 kV transmission line structures. An Optical Repeater facility would be constructed approximately 3 miles west of Blythe, within the ROW of the new 500 kV transmission line (as shown in Figure B-1 on the enclosed CD). The tallest component on the site would be approximately 15 feet tall. The site would be unmanned during operations.

A temporary construction area adjacent to the new facility would be established vehicle parking and material storage. This area would be fenced and gated. It is estimated that the temporary construction area would occupy approximately ~~1 acre~~0.125 acres and the permanent facility would occupy approximately ~~0.25~~ 0.125 acres.

B.3.6.3 Substations and Series Capacitor Banks

SONET and channel equipment would need to be installed within the existing Devers, Mirage, and Harquahala Substations and the California and Arizona Series Capacitor Banks to support the primary and backup protection circuits. In addition, 5-inch conduits would be installed from the telecommunications rooms of these facilities to the OPGW termination point on the adjacent new Devers-Harquahala 500 kV transmission tower. In the case of the Mirage Substation, a 5-inch conduit would be installed from the telecommunications room to the substation fence. From there, a new fiber optic cable would be installed between the substation and the new transmission tower. The Arizona Series Capacitor Bank would require installation of a new MDR-8000 microwave terminal to replace the analog terminal and replacement of the existing 8-foot grid microwave antenna with two 10-foot high performance microwave antennas. The existing 65-foot microwave tower would be raised and upgraded to 85 feet tall to support two new

10-foot, high-performance microwave antennas. At the Harquahala Substation, a new telecommunications facility, microwave equipment, and a microwave tower would be constructed within the switchyard.

For the Midpoint Substation, a new telecommunications facility would be constructed within the substation to provide microwave and fiber optic communications for protective relaying and SPS requirements. Conduits would be required between the telecommunications room and the 230 kV mechanical-electrical equipment room, 500 kV mechanical-electrical equipment room, OPGW termination point on the new 500 kV transmission tower, and OPGW termination point on the Buck Boulevard–Midpoint 230 kV transmission tower (this is an optional component of the Proposed Project that SCE may not construct).

B.3.6.4 Communication Sites

Upgrades to APS' existing microwave equipment and antennas would be required at the Black Peak and Smith Peak Communication Sites to provide additional bandwidth to support the primary protection circuits. The overall system capacity would be shared between SCE and APS through a contractual agreement.

The Black Peak and Smith Peak Communication Sites would replace the APS existing Alcatel MDR-6000 terminals with MDR-8000 terminals for the Black Peak–Smith Peak microwave path. These new terminals would occupy one-third of the space currently occupied by the MDR-6000 terminals. The existing 8' High Performance microwave antennas on the towers would be re-used with the new MDR-8000 terminal.

SCE's existing analog microwave system at Smith Peak would also be replaced with a new digital microwave system between the Smith Peak and Harquahala Mountain Communications Site (E1-37 through E1-40 presented in Comment Set E in Volume 3 of this EIR/EIS). The analog microwave terminal would be replaced with a MDR-8000 terminal. The existing 8' grid microwave antenna would be replaced with a new 8' standard antenna and would be installed at the same elevation on the existing tower.

In addition, the Chuckwalla ~~and Cunningham~~ Communications ~~Sites~~ Site and Blythe Service Center would require installation of new Alcatel MDR-8000 microwave terminals and two new 10-foot microwave antennas on the existing microwave towers pointing towards Midpoint Station (this is an optional component of the Proposed Project that SCE may not construct). Permanent disturbance within the sites would be approximately 200 square feet and temporary staging areas would be approximately 100 square feet inside the facilities.

B.3.6.5 West of Devers 230 kV Upgrade

Currently, the fiber optic cable carrying SONET System 47 is wrapped around the ground wire of the existing Devers-Vista No. 2 230 kV transmission towers. The proposed upgrade to the double-circuit 230 kV transmission line between Devers and Vista would require replacement of the existing fiber wrap cable with a new OPGW on the existing double-circuit towers. This would require installation of a temporary fiber cable between SCE's Timoteo Substation and San Bernardino Junction. New fiber optic splice cases at San Bernardino Junction would also be installed for splicing purposes.

In order to provide redundant protective relaying circuits for the Devers–San Bernardino 230 kV line, a new OPGW would be installed on the Devers–San Bernardino double-circuit towers between San Bernardino Substation and San Bernardino Junction. The primary protection circuits would be carried via existing microwave systems and the backup protection circuits would be carried via SONET System 47.

B.3.7 Construction Activities

The proposed operational date for the DPV2 transmission line project is June 2009. Work activities would commence upon approval of the Proposed Project by the CPUC and other permitting agencies. Construction on the Devers-Harquahala 500 kV line segment would commence March 2007 and take approximately 24 to 28 months to complete. Construction within the 230 kV segment west of Devers Substation would commence after June 2006 and be completed in June 2009. The time between completion of construction and the operation date would be used to inspect and test the project.

In populated areas, SCE would post notices on the ROW or at other sites where the public would be affected by construction activities. Notices would be posted approximately one month prior to commencing work. At parks, pathways, and ROW ingress and egress points, postings would be placed along the ROW and at work sites approximately two weeks prior to the closing of public access.

B.3.7.1 Labor and Equipment

Construction of the Proposed Project is planned to be performed by contract personnel with SCE responsible for project administration and inspection. The estimated number of persons and types of equipment required for each phase of construction on the Devers-Harquahala 500 kV segment of the project is shown in Table B-6. It is estimated that a total of 211 workers (full-time equivalent personnel) will be needed to construct the proposed 500 kV line. Personnel and equipment required for the WOD segment of the project is shown in Table B-6. It is estimated that a total of 177 workers would be required for the WOD upgrade.

At some stages of the project, multiple locations would be under construction simultaneously. This may involve independent construction teams.

Table B-6. 500 kV Transmission Line Labor Force and Equipment Requirements

Construction Element	Personnel	Equipment		Duration (months)
Management/Office	9	6 – office trailers 6 – portable generators	9 – pickup trucks	24
Inspection and Environmental	14	14 – pickup trucks		24
Support	9	6 – mechanic trucks 2 – lube service trucks	6 – tool trailers 2 – fire suppression trucks	24
Survey Tower Sites	3	2 – pickup trucks		8
Marshalling Yards	6	2 – pickup trucks 2 – 2 ton flatbed truck 3 – truck cranes 6 – tractor trucks w/trailers	1 – flatbed pickup truck 4 – forklifts 1 – portable generator	24
Road Work	12	2 – road graders 2 – dozers 2 – grad-all excavators	1 – water truck 2 – 10-yard dump trucks 6 – pickup trucks	24
Foundation Installation	23	5 – pickup trucks 2 – 2½ ton flatbed trucks 2 – backhoes 3 – drill rigs 3 – boom trucks	2 – off-road loaders 2 – tractor trucks w/trailers 1 – water trucks 2 – portable generators 4 – concrete trucks	24
Tower Assembly/Erection	75	9 – pickup trucks 9 – 2½ ton flatbed trucks 9 – truck cranes 9 – crew cab pickup trucks 6 – air compressors	1 – water truck 2 – portable generators 2 – 150 ton cranes 4 – large RT cranes	18
Conductor Operations	54	8 – pickups 8 – crew cab pickup trucks 2 – pole truck and trailers 6 – truck cranes 6 – bucket trucks 1 – digger 1 – backhoe 2 – conductor tensioners 2 – static tensioners	2 – sockline pullers 2 – conductor pullers 4 – sagging units (skidders) 12 – reel stand trailers 6 – tractor trucks w/trailers 2 – helicopters 4 – portable generators 1 – water trucks	18
Final Cleanup	6	1 – pickup 1 – flatbed pickup truck 1 – backhoe 1 – 2 ton flatbed truck 1 – boom truck 1 – road grader	1 – dozer 1 – grad-all excavator 1 – water truck 1 – portable generator 1 – 10-yard dump truck	
TOTAL	**211**			**24**

Source: SCE, 2005a.

Table B-7. 230 kV Transmission Line Labor Force and Equipment Requirements

Construction Element	Personnel	Equipment		Duration (months)
Management/Office	3	2 – office trailers 2 – portable generators	3 – pickup trucks	24
Inspection and Environmental	6	3 – pickup trucks		24
Support	5	3 – mechanic trucks 1 – lube service truck	4 – tool trailers 1 – fire suppression truck	24
Survey Tower Sites	3	2 – pickup trucks		6
Material Processing	6	1 – pickup truck 1 – flatbed pickup truck 1 – 2 ton flatbed truck 2 – forklifts	2 – large RT cranes 1 – portable generator 4 – tractor trucks with trailers	24
Road Crew	4	1 – road graders 1 – dozers 1 – grad-all excavator 1 – water truck	2 – 10-yard dump trucks 1 – tractor truck with trailer 2 – pickup trucks	16
Foundation Crews	23	5 – pickup trucks 2 – 2 ton flatbed trucks 2 – backhoes 3 – drill rigs 2 – boom trucks 2 – off-road loaders	2 – tractor trucks with trailers 1 – water truck 4 – concrete trucks 2 – portable generators	12
Tower Assembly/Erection	64	4 – pickup trucks 8 – 2 ton flatbed trucks 5 – crew cab pickup trucks 6 – air compressors 1 – water truck	2 – portable generators 1 – 150 ton crane 4 – truck tractors with trailers 4 – large RT cranes	9
Conductor Operations	54	8 – pickups 8 – crew cab pickup trucks 4 – truck cranes 8 – bucket trucks 1 – rewinder 1 – digger 2 – backhoes 2 – conductor tensioners 2 – static tensioners	2 – sockline pullers 2 – conductor pullers 4 – sagging units (skidders) 12 – reel stand trailers 6 – tractor trucks with trailers 2 – helicopters 4 – portable generators 1 – water truck	24
Final Cleanup	6	1 – pickup 1 – flatbed pickup truck 1 – backhoe 1 – 2 ton flatbed truck 1 – boom truck 1 – road grader	1 – dozer 1 – grad-all excavator 1 – water truck 1 – truck tractor with trailer 1 – 10-yard dump truck	6
TOTAL	**174**			**24**

Source: SCE, 2005a.

B.3.7.2 Siting and Construction Yards

Once the route has been approved, a detailed survey would be conducted, additional ROW acquired, and detailed engineering designs started. A control centerline would be established, based on field survey measurements. Control monuments, consisting of 2-inch-diameter iron pipes sealed with a stamped brass cap would be set at maximum intervals of approximately 2 miles. Visual reference points parallel and perpendicular to the control line would be established so that photogrammetric profiles of the area's topography could be compiled. Approximate tower locations would be spotted on the profiles according

to the engineering design criteria. Siting of new towers for the West of Devers 230 kV system would use existing survey monuments established for the existing lines.

Once approximate tower locations have been selected, exact positions would be field surveyed. Survey crews would also locate spur road centerlines and grades. Final determinations of road location curvature, cuts and fills, grades and drainage, and necessary erosion controls would be made in accordance with design standards and practices and/or landowner requirements

Construction of the 500 kV transmission line would begin with the establishment of approximately seven temporary construction yards located at strategic points along the route. Four of these construction yards, including the Desert Center yard, would be in California, while three would be in Arizona. Table B-8 lists the location and current condition of each yard; the location of these yards is shown on Figures B-1 and B-2 on the enclosed CD.

Table B-8. Construction Yards, Devers-Harquahala 500 kV Segment

Name	Location	Condition	Area
Palm Springs Yard	West side of Diablo Road at Devers Substation, CA	Area consists of two fenced areas and one unfenced area.	5.9 acres (270' x 935')
Indio Yard	East side of Dillon Road, 300' north of Fargo Canyon Road, 1,500' north of the Devers–Palo Verde 1 500 kV line, CA	Area is fenced and lighted.	3.2 acres (250' x 550')
Desert Center Yard	1,000' northwest of the intersection of Rice Road and Ragsdale Road, CA	Area is fenced and being used by current owner miscellaneous storage.	3.2 acres (250' x 550')
Blythe Yard	North side of Hobson Way, 1 mile west of Neighbors Boulevard, on the west side of Blythe Substation, CA	Area is fenced and currently contains miscellaneous pipe and steel.	3.2 acres (250' x 550')
Quartzsite Yard	1,000' north of the intersection of Quartzsite Road and Main Street, AZ	Area is being used for overflow recreational vehicle parking.	5 acres are estimated to be available.
Vicksburg Yard	South of a fuel station on the south side of Interstate 10, AZ.	Original fencing has been removed and property is abandoned.	5 acres are estimated to be available.
Tonopah Yard	Northwest of the intersection of West Indian School Road and North 411th Avenue, AZ.	Fencing has been removed. Some development has occurred on the original property used for Devers–Palo Verde 1 Project. The Harquahala-Hassayampa 500 kV transmission line project construction yard is nearby, and is currently used as a tree nursery.	

Source: SCE, 2005a.

Each yard would be used as a reporting location for workers, and for vehicle and equipment parking and material storage. The yards would have offices for supervisory and clerical personnel. Normal maintenance of construction equipment would be conducted at these yards. The maximum number of workers reporting to any one yard is not expected to exceed 144 at any one time. Each yard would be 3 to 10 acres in extent, depending on land availability and intended use.

Possible construction of the Midpoint Substation (an optional component in SCE's Proposed Project) would require a temporary laydown area of approximately 5 acres. The laydown area would be located at or near the existing roadway at the site.

Construction of the 230 kV system west of Devers Substation would be done in several stages. Since existing lines and structures must be removed, the construction sequence would be influenced by circuit outage availability. Construction yards would be set up at existing facilities such as Devers, Mira Loma, Vista, and San Bernardino Substations, as well as Etiwanda Generating Station. If it is determined that the land available at these SCE-owned properties is either unavailable due to competing projects or is insufficient, up to two additional yards may be required, each with approximately 3 to 10 acres. These would be located on previously disturbed parcels.

At peak construction, most of the vehicles listed in Table B-7 could occupy the yards WOD. Approximately 10 private commuting vehicles would also be parked at the yard. Crews would load materials onto work trucks and drive to the line position being worked. At the end of the day, they would return to the yard in their work vehicles and depart in their private vehicles.

Materials stored at the construction yards would include:

- Hardware
- Steel
- Insulators
- Signage
- Consumables such as fuel and joint compound
- SWPPP materials such as straw wattles, gravel, and silt fences
- Waste materials for recycling or disposal.

B.3.7.3 Clearing and Grading

With the exception of the approximately 5-mile segment east of the Harquahala Switchyard, no new main access roads are expected to be required for the Devers-Harquahala 500 kV segment. Where overland vehicle travel is not possible, upgrades to main access roads and extensions to existing spur roads would be needed to allow passage of construction vehicles. Such upgrades may require vegetation clearing and grading based on site conditions. There are approximately 260 miles of existing main access roads. Approximately 19.3 miles of new spur roads would be needed, disturbing approximately 32.8 acres. The spur roads would be a minimum of 14 feet wide.

For the existing 230 kV system upgrade west of Devers Substation, construction access is available within the existing ROW. New spur roads would be required for new structures that are not at or adjacent to existing towers. Between the San Bernardino Substation~~,~~ and San Bernardino Junction, ~~and Vista Substation,~~ access is available and no new tower construction is planned, therefore no new access roads would be required.

For the possible Midpoint Substation, a permanent 24-foot-wide, two-lane access road would be constructed between an existing paved road and the substation site, a distance of approximately 3 miles.

B.3.7.4 Foundation Installation

As described in Section B.3.1, the Devers-Harquahala 500 kV line would require the construction of 709 new lattice steel towers, 39 H-frame towers, and 23 tubular steel poles. Each structure would require augured cast-in-place concrete piles. The maximum augur depth below ground surface for the various types of towers are expected to be as follows:

- 500 kV four-legged single-circuit tower as shown in Figure B-8 — 35 feet
- 500 kV two-legged H-frame tower as shown in Figure B-10 — 45 feet
- 500 kV tubular steel poles as shown in Figure B-11 — 32 feet
- 230 kV four-legged double-circuit tower as shown in Figure B-14 — 36 feet.

Actual foundation depths would depend on the soil conditions and topography at each site and would be determined during final engineering. The majority of towers would have foundations depths substantially less than the maximum depths listed above.

During construction, existing concrete supply facilities would be used where feasible. If concrete supply facilities exist in certain areas, a temporary concrete batch plant would be set up. If necessary, approximately 2 acres of property would be sub-partitioned from the marshalling area of the Desert Center yard for a temporary concrete batch plant. Equipment would include a central mixer unit (drum type); three silos for injecting concrete additives, fly ash, and cement; a water tank; portable pumps; a pneumatic injector; and a loader for handling concrete additives not in the silos. Dust emissions would be controlled by watering the area and by sealing the silos and transferring the fine particulates pneumatically between the silos and the mixers.

Concrete would be hauled to tower sites in standard concrete trucks. For the Devers-Harquahala 500 kV segment, up to 16 concrete trucks, each with a capacity of approximately 8 to 11 yards, would be working simultaneously at peak construction. At any given lattice steel tower no more than eight concrete trucks would be working to support the installation of the needed four footings. A second lattice steel tower footing project could be under way at the same time, thus doubling the quantity of trucks working. One footing on a 500 kV lattice steel tower could require as much as 16 to 20 yards of concrete depending on the nature of the rock voids in the bore hole. With eight trucks supporting one site, each truck would be expected to make one round trip.

For the WOD segment of the project, peak construction could require up to eight concrete trucks working simultaneously, each with a capacity of approximately 8 to 11 yards of cement. At any given lattice steel tower, however, at most, four concrete trucks would be working to support the installation of four footings. Consequently, two sites or eight trucks would likely be working simultaneously. One footing on a 230 kV lattice steel tower could require as much as 13 to 15 yards of concrete depending on the nature of the rock voids in the bore hole. With four trucks supporting one site, each truck would be expected to make one round trip.

Prior to auguring for foundations in California, SCE would contact Underground Service Alert to identify any underground utilities in the construction zone. In Arizona, a similar organization, called Arizona Bluestake Incorporated, would be contacted for the same purpose.

The proposed 230 kV modifications for the WOD system would require the construction of foundations for approximately ~~173~~ 186 structures. Foundation installation for the 230 kV upgrade would be similar to that of the 500 kV segment as described above.

B.3.7.5 Structure Assembly and Erection

At the structure fabrication plant, structural members would be bundled and shipped by rail or truck to the construction yards, and then trucked to the individual sites. Tower section subassemblies would be built at the construction yards would be assembled at the job site with the aid of a crane.

Assembly and erection of the structures required would consist of three main activities:

- Assembly of the tower sections
- Erection of the tower sections
- Final cleanup.

Tower sections would be lifted into place with a crane and erected on their foundations. Installation of insulators and travelers and final checkout and cleanup would then conclude structure assembly and erection.

B.3.7.6 Stringing Activities

Prior to stringing activities temporary protective netting systems or wood pole guard structures would be erected at crossings for roads, streets, railroads, highways, or other transmission, distribution, or communication facilities, as required. On roads where traffic is light, guard structures may not be necessary; however, the use of barriers, flagmen, and/or temporary stopping of traffic would be required.

The stringing of conductor and overhead groundwire on new transmission lines typically commences once a number of structures had been erected and inspected. Stringing equipment locations would be temporarily setup between towers. These would be areas up to 150-foot by 300-foot in size adjacent to the access roads and spaced approximately every 5,000 to 15,000 feet along the line.

For new transmission lines, a helicopters would pull small and lightweight pilot lines through the stringing travelers. These lightweight lines would be used to subsequently pull larger steel cable. The conductor or groundwire would then be pulled from the established setup points by wire stringing equipment.

For existing lines and overhead groundwire in the WOD segment of the project, stringing would initially involve replacing insulators, installing travelers, then transferring the existing conductor to the installed travelers. The existing conductor or groundwire would be pulled from the towers and new conductor or groundwire would be pulled in. The conductor or groundwire would then be transferred into suspension hardware on the towers.

No construction of new towers or stringing of conductors would occur in Copper Bottom Pass; however, stringing for ~~conductors and~~ OPGW would be required. Ground disturbance would occur in the preparation of primary conductor pulling positions adjacent to M101-T2 and M98-T2, at either end of Copper Bottom Pass. These sites would be used to pull conductor between towers in the pass. If grading or excavation were required at the line pulling points for both western and eastern positions, each disturbed area would measure approximately 100 by 200 feet.

B.3.7.7 Telecommunications Facilities

Contractors and subcontractors construct new buildings and antenna towers for the telecommunications facilities. SCE's telecommunications construction crews would be used for telecommunications equipment installation.

Three trucks and six workers would be needed during peak construction periods. A medium duty crane would be required for the construction of the antenna tower. Construction of the new facilities and antennas would take approximately 12 to 16 weeks to complete at each site. Construction would consist generally of the following steps:

- Site preparation
- Erect temporary fencing area
- Set the foundations
- Install prefab building, fuel tanks, and emergency generator
- Erect the antenna tower (where necessary)
- Install telecommunications equipment and/or antennas
- Erect permanent fencing
- Site cleanup

The prefabricated building would be pre-assembled at the manufacturing plant and delivered to the job site. The building would be set on a concrete pad using a crane. A photovoltaic power system would also be installed at the Harquahala Mountain site.

B.3.7.8 Removal of Facilities and Waste Disposal

Two existing single-circuit transmission lines would be removed between Devers Substation and San Bernardino Junction. Guard structures would be erected for the conductor removal activities. In accordance with prearranged outages, facilities would be taken offline, conductor would be removed, and structures disassembled and hauled to staging yards for disposal. Guard structures would then be disassembled and removed. Removal would be coordinated with new line construction, structure rearrangement, and reconductor work.

Materials would be recycled where feasible. Approximately 1.5 million pounds of tower steel and hardware and approximately 4.1 million pounds of conductor would be recycled as part of the Proposed Project.

Approximately 33,660 feet of treated wood poles would be removed and disposed of as part of the Proposed Project. For wood pole disposal, SCE would use landfill facilities authorized to accept treated wood products: Waste Management, Inc. (McKittrick Landfill) and Clean Harbors Environmental Services (Buttonwillow Landfill). Typically, at a jobsite where wood pole waste would be generated, SCE would contract with McFarland Cascade for all aspects of disposal, including hauling and paperwork. In the future, SCE could use other landfill facilities that are authorized to accept treated wood waste in accordance with the California Health and Safety Code Section 25143.1.5.

Insulators and other non-recyclable materials would be hauled by a third party to local landfills. Concrete waste would be disposed of by the subcontractor hired by the principal contractor. Typically, rejected concrete is hauled back to the batch plant in the delivery truck. Concrete truck equipment would be washed out into shallow lined pits or bins. Once the material dries, it would be broken into small pieces and disposed of per local regulations by the contractor.

B.4 Operation and Maintenance

Following the completion of project construction, operation and maintenance of the new lines would commence. These activities would occur at about the same frequency and intensity as are currently done by SCE for the existing Devers–Palo Verde No. 1 transmission line. Inspection and maintenance activities would include the following:

- Routine line patrols by both aircraft and truck
- Routine, patrol identified, tower and wire maintenance
- Routine line washing
- Routine, patrol identified, earth and sand abatement from footings
- Routine ROW road maintenance

The frequency of inspection and maintenance would depend on various conditions including length of the line and weather effects.

Inspection and maintenance activities typically include senior patrolman, foreman, lead lineman, journeyman lineman, apprentices, groundmen, helicopter pilots, equipment operators, and laborers. If the magnitude of repairs identified by routine patrols is substantial, other specialized employees such as surveyors, engineers, clerical personnel, and technicians would be attached to maintenance crews as required to address any unique problem that may arise due to such variables as substantial storm damage or vandalism. Labor force requirements are summarized in Table B-9.

SCE operates two types of helicopters for patrols of the DPV lines: American Eurocopter AS-350D (B-2) (B-3) and Hughes 500. During a typical patrol, a helicopter would fly at or near the elevation of the point of support of the conductor. In populated areas, patrols would fly at higher elevations or away from the centerline of the transmission lines, in order to avoid flying close to houses or penned animals. In cases where flying near a home cannot be avoided, the patrolman would use gyro-binoculars so as to increase the inspection distance between the structures and the helicopter to the greatest extent possible. In rural areas, unless designated otherwise, proximity to the ground is not restricted with the exception of safety and environmental concerns.

Yearly patrols during operation of the Proposed Project would be combined with the yearly patrols for the existing line. A second separate yearly trip would not be necessary. The entire DPV transmission line corridor would be patrolled every year. The yearly patrol alternates each year between helicopter and truck. In one year, the patrol would be by helicopters and would take approximately one full day (8 hours) to accomplish. The next year, the patrol would be performed by truck and would take 3 weeks. The addition of another circuit to the corridor would increase the helicopter patrol time by approximately 4 additional hours each year for a total of 12 hours of helicopter patrol time. Patrol time by truck would be increased to 4 weeks of total patrol time per year. A yearly patrol is a minimum patrol requirement. Increases in pollution and population density in the vicinity of portions of this transmission line corridor have caused SCE to increase the patrol frequency of some portions of the DPV corridor. This would also be the case for the Proposed Project as well. Currently, there is no consistency between helicopter and truck patrol for these additional patrols, although patrols are handled by each approximately 50 percent of the time. In some cases crews prefer to use a helicopter and in other cases, the preference is to use a patrol truck. This decision would be made based on availability of resources and criticality of time.

For the Devers-Harquahala 500 kV line, it is expected that there would be a minor increase in operation and maintenance activity compared to the existing operation and maintenance activity along the existing corridor. The new DPV2 line would result in an estimated 50 percent increase in maintenance activity. As time passes and the new line ages, maintenance levels on the DPV2 line would approach the maintenance levels of the existing DPV1 line. Starting approximately 15 years after the operational date, maintenance on the new line would be expected to increase. Parity in the amount of maintenance required for both lines would occur approximately 30 years after the operational date of DPV2. Initial additional corridor maintenance would be due principally to weather and vandalism to the new line. As insulators and steel age on the new line, the frequency of lattice steel tower hardware maintenance activities such as bolt torquing will increase. No significant increase in patrols or grading would be required, however.

Table B-9. Operation and Maintenance Labor Force

Activity	Frequency	Duration	Personnel Required	Note
Devers-Harquahala 500 kV Transmission Line (DPV1 and DPV2)				
Routine Patrol, Aircraft	Every 2 years	12 hours	Pilot x 1 Senior Patrolman x 1 Lineman x 1	Lines are patrolled annually; patrol alternates yearly between helicopter and truck.
Routine Patrol, Truck	Every 2 years	4 weeks	Senior Patrolman x 1 Lineman x 2	Lines are patrolled annually; patrol alternates yearly between helicopter and truck.
Routine repairs identified by Senior Patrolman	Every year	20 days	Foreman x 3 Senior Lineman x 3 Lead Lineman x 3 Journeyman Lineman x 6 Apprentice x 6 Groundmen x 3 Equipment Operator x 3 Laborer x 3	Repair unique items identified by senior patrolman during annual patrols, varies year to year. As many as three 8-man crews plus operators.
Remove Windblown Sand from Tower Footings	Every 2 years	1.5 weeks	Foreman x 1 Equipment Operator x 1 Laborer x 1	Windblown sand and earth removed from LST steel by contract crew under direction of senior patrolman.
Routine Right-of-Way Grading	Every 3 years	2.25 months	Foreman x 1 Equipment Operator x 1 Laborer x 1	Grade all approved areas only.
Routine Washing (DPV1 only)	Every year	2 weeks	Senior Patrolman x 3 Journeyman Lineman x 3	Wash insulators in all areas as required. Wash insulators every year as indicated in Blythe farm area and Devers open mine pit area, with frequency increasing as air quality continues to deteriorate in desert areas.
West of Devers 230 kV Transmission System				
Routine Patrol, Aircraft	Seldom	8 hours	Pilot x 1 Senior Patrolman x 1 Lineman x 1	Lines are patrolled annually; patrol alternates yearly between helicopter and truck.
Routine Patrol, Truck	Every year	1 week	Senior Patrolman x 1 Lineman x 1	Lines are patrolled annually; patrol alternates yearly between helicopter and truck.
Routine repairs identified by Senior Patrolman	Every year	2 days	Foreman x 1 Lead Lineman x 1 Journeyman Lineman x 2 Apprentice x 2 Groundmen x 1 Equipment Operator x 1 Laborer x 1	Repair unique items identified by senior patrolman during annual patrols, varies year to year. One 8-man crew plus operators.
Routine Right-of-Way Grading	Every 3 years	2 months	Foreman x 1 Equipment Operator x 1 Laborer x 1	Grade all approved areas only.
Routine Washing	Every year	3 weeks	Foreman x 1 Lineman x 5	Wash insulators as required.

Source: SCE, 2005a.

For the WOD upgrade, it is expected there would be a small decrease in operation and maintenance activity because there would be a reduced number of structures to patrol or maintain. Due to the replacement of 40 miles of old lattice steel towers on the Devers–San Bernardino #1 line, replacement of approximately 40 combined miles of old wooden pole H-frame construction on the combined Devers–

San Bernardino #2 and Devers-Vista #1 lines, and reconductoring of a combined 40 miles of existing double-circuit transmission line corridor, routine repairs identified by senior patrolman on the final new lines should decrease from 3 days annually to 2 days annually. The configuration of two separate double-circuit lattice steel towers under the Proposed Project would provide an easier patrol corridor and maintain itself with less age related failures than the current configuration. Further, maintenance is expected to decrease an additional 3 weeks per year due to insulator washing no longer being required on the new lines as they would be built with polymer insulators which do not require washing, unlike older ceramic or glass insulators. Maintenance of the Proposed Project would consist of periodic patrols by ground and air to locate any damage that might adversely affect the integrity and reliability of the line. Other non-emergency maintenance would involve the occasional replacement of insulators damaged by lightning or gunfire, the replacement of tower steel members due to gunfire or wind, and the repair of access and spur roads due to erosion or landslides. Crews would wash insulators, as necessary, using a specialized truck for the 230 kV lines WOD. In the future, if levels of air pollution increase, the 500 kV lines east of Devers Substation would require washing as well. Crews would also remove windblown sand and dirt from footings in areas where it has a tendency to accumulate.

B.5 Applicant Proposed Measures

The following tables list the Applicant Proposed Measures (APMs) for the different issue areas analyzed in this document. These measures come from the following sources:

- Measures that SCE included in its PEA in the Description of the Proposed Project in Chapter 3.0 which would be implemented on federal, State, and private lands
- APMs that SCE included in Chapter 6.0 of the PEA, Significant and Potentially Significant Impacts and Mitigation of the Proposed Project, which would be implemented on federal, State, and private lands
- Measures described by SCE in response to data requests by the CPUC which would be implemented on federal, State, and private lands
- Mitigation measures required by the BLM in the BLM Right of Way Grant CA-17905/AZ-23805 dated August 11, 1989, contained in Appendix B of the PEA (these BLM mitigation measures apply to federal lands crossed by the Devers-Harquahala portion of the project and do not apply to State and private land crossed by the Devers–Harquahala portion of the line).

SCE committed to implementing these measures in order to reduce the direct and indirect impacts that would result from Proposed Project activities. The tables for each issue area are listed below:

- Table B-10 – Biological Resources APMs
- Table B-11 – Cultural Resources APMs
- Table B-12 – Paleontological Resources APMs
- Table B-13 – Air Quality APMs
- Table B-14 – Water Resources APMs
- Table B-15 – Geology and Soils APMs
- Table B-16 – Visual Resources APMs
- Table B-17 – Land Use APMs
- Table B-18 – Noise APMs

Table B-10. Applicant Proposed Measures – Biology

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM B-1 Vegetation	Avoid direct disturbance of highly sensitive features (as identified in E. Linwood Smith's (1985) Impact Assessment/Mitigation Planning Chart; see Appendix E) with spanning and careful local adjustment in tower footing placement. (BLM B-5.1 Vegetation)[4] [Note: The reference to Appendix E is unknown. There is no Appendix E as part of the BLM right-of-way grant (provided from PEA Appendix A). However, the Smith report itself is found in FSEIS (1988) as Appendix B, Study of Desert Bighorn Sheep.]	✓	
APM B-2 Vegetation	Avoid the introduction of noxious weeds and/or other invasive species through standard noxious weed measures. This will benefit most of the species covered by the [Coachella Valley Multiple Species Habitat Conservation] plan. (SCE)	✓	
APM B-3 Vegetation	Vehicular travel must be on established roads to the maximum extent practicable. Any off-road vehicle use should be strongly discouraged. This will benefit many of the species covered by the [Coachella Valley Multiple Species Habitat Conservation] plan. (SCE)	✓	
APM B-4 Vegetation/ Wildlife	Avoid sand compaction at all sites in the Coachella Valley. This will benefit such species as the giant sand treader cricket, Coachella Valley Jerusalem cricket, and Coachella Valley milkvetch. (SCE)	✓	
APM B-5 Vegetation/ Wildlife	Copper Bottom Pass: • Maintenance of low speed limit on right of way ROW to protect desert animals and reduce dust • Continuous application of water to ROW roads to reduce dust • Requirement that stopped vehicles stop engines if stationary for a determined period of time • Requirement that operators of vehicles, if stopped for longer than a determined period of time, inspect under their vehicles to ensure that no animals have taken shelter from the sun; this requirement has been implemented before by requiring that vehicles with stopped engines have their keys placed under the vehicle thus forcing the operator to inspect • Flagging of all disturbed areas if needed to clarify drive-able or walk-able areas • Tight control of the Copper Bottom Pass area to ensure that only planned construction traffic is allowed in the area and that minimal trips are planned • Restricted use of the area to periods outside of any animal breeding seasons • Tight control on electrical workers for approved hours of access • Ensure that all workers accessing this area have completed environmental awareness training for biological and cultural sensitivities; all trained workers would be equipped with stickers for their hardhats to provide for easy-to-spot inspection • Removal of all construction debris from the area at the conclusion of the work	✓	
APM B-6 Vegetation	Avoid vehicular travel in washes to protect triple-ridged milkvetch. (SCE)	✓	
APM B-7 Vegetation/ Wildlife	No activities whatever should occur in wetland areas. (SCE)	✓	
APM B-8 Vegetation	Provide additional detailed surveys and tower-specific adjustments as needed prior to construction for major sensitive feature sites (e.g., concentrations of sensitive plants, individual palm trees, woody dune or wash communities) which cannot be easily avoided by spanning. (See Appendix B of the Devers–Palo Verde No. 2 EIR [1987] and Appendix E of the SEIS [1988].) The methodologies and results of these surveys must be submitted to and approved in writing by the BLM Authorized Officer. (BLM B-5.2 Vegetation)	✓	

Table B-10. Applicant Proposed Measures – Biology

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM B-9 Vegetation	Initiate transplant efforts for *Ferocactus* and *Coryphantha* as soon as probable losses can be determined. Any plans for transplanting must be developed in consultation with a BLM botanist and approved in writing by the BLM Authorized Officer. (BLM B-5.4 Vegetation)	✓	
APM B-10 Vegetation	The right-of-way Holder[5] will have the Arizona State Department of Agriculture and Horticulture identify native plants that would otherwise be destroyed by construction and sell them to the Holder. (BLM B-5.5 Vegetation)	✓	
APM B-11 Vegetation	The Authorized Officer may require vegetation in certain areas to be cleared by hand tools. Scalping of top soil and removal of low growing vegetation will not be allowed unless authorized by the Authorized Officer. (BLM B-5.6 Vegetation)	✓	
APM B-12 Vegetation	Where possible, towers or access roads will be located so as to avoid sensitive plants or plant communities. Where this is not feasible, affected individual plants will be transplanted. Towers will also be placed so that lines will span critical wildlife habitat. (BLM B-5.7 Vegetation)	✓	
APM B-13 Vegetation	Tower sites will be selected to allow maximum spacing of sensitive features. (BLM B-5.8 Vegetation)	✓	
APM B-14 Vegetation	Minimize the area needed for equipment operation and material storage and assembly. (BLM B-5.3 Vegetation)	✓	
APM B-15 Wildlife	In the vicinity of the Colorado River, existing tower spacings and conductor heights will be matched to the greatest extent practical. This would reduce the potential for bird collisions with the power line. (BLM B-5.1 Wildlife)	✓	
APM B-16 Wildlife	Surveys – When access along the utility corridor already exists, pre-construction surveys for transmission lines should provide 100 percent coverage for any areas to be disturbed and within a 100-foot buffer around the areas of disturbance. When access along the utility corridor does not already exist, pre-construction surveys for transmission lines should follow standard protocol for linear projects. (SCE)	✓	✓
APM B-17 Wildlife	Access – To the maximum extent possible, access for transmission line construction and maintenance should occur from public roads and designated routes. (SCE)	✓	✓
APM B-18 Wildlife	Disturbed areas – To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites should be sited in a manner that avoids desert tortoise burrows. (SCE)	✓	✓
APM B-19 Wildlife	Restoration – Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored. (SCE)	✓	✓
APM B-20 Wildlife	Ravens – All transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS's Division of ~~Law Enforcement~~Migratory Birds to take common ravens or their nests. (SCE)	✓	✓
APM B-21 Wildlife	No clearing of or other disturbance to riparian habitats. If unavoidable, riparian habitats must be replaced or restored. This action will benefit several riparian bird species including summer tanager, yellow warbler, yellow breasted chat, least Bell's vireo, and southwestern willow flycatcher. (SCE)	✓	
APM B-22 Wildlife	Avoid impact to mesquite-dominated habitats to protect crissal thrasher. (SCE)	✓	
APM B-23 Wildlife	Minimize impact to or removal of creosote bush to benefit LeConte's thrasher. (SCE)	✓	
APM B-24 Wildlife	Avoid any alterations to the vegetation structure of Washington fan palm oases to benefit southern yellow bat. (SCE)	✓	

Table B-10. Applicant Proposed Measures – Biology

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM B-25 Wildlife	Avoid any alterations of mesquite hummock habitat to benefit Coachella Valley round-tailed ground squirrel. (SCE)	✓	
APM B-26 Wildlife	Wash communities along the entire route and sand dune communities in the Coachella Valley (see Map 10-AZ in the Draft SEIS and Figure 4.5-1 in the CPUC Draft EIR, 1987) will be spanned to the extent possible. (BLM B-5.2 Wildlife)	✓	
APM B-27 Wildlife	Prior to construction activities, the Holder shall have a qualified tortoise biologist present a class or briefing to construction workers. Subjects addressed shall include tortoise sensitivity to human disturbance, daily and seasonal activity patterns, and proper handling for removal from roadways. (BLM B-5.4 Wildlife)	✓	
APM B-28 Wildlife	The Holder shall hire a qualified tortoise biologist to conduct daily inspections of roads and work areas within tortoise habitat during the tortoise season of activity (February 15 to June 15, July 15 to October 15). Tortoises found to be in jeopardy will be removed to a nearby site. Tortoises may be held for short periods, if judged necessary, to allow construction crews to pass through an area. The Holder will provide proper facilities for such temporary holding. (BLM B-5.6 Wildlife)	✓	
APM B-29 Wildlife	The Holder shall restrict the speed on all roads within tortoise habitat to a maximum of 25 miles per hour. The Holder is responsible for ensuring compliance with this limit by its employees. (BLM B-5.6 Wildlife)	✓	
APM B-30 Wildlife	Within tortoise habitat in California, spur roads shall not be bladed except where necessary to allow access for construction vehicles. Required vehicles shall enter on one pathway which is flagged and developed only by the passage of vehicles crushing vegetation. The spur shall be flagged by a qualified tortoise biologist prior to use. The spur shall avoid tortoise burrows and large perennial plants, yet be as short as possible within these requirements. Due to the presence of silty soils in Arizona, blading may occur. (BLM B-5.7 Wildlife)	✓	
APM B-31 Wildlife	Any desert tortoise observed on access roads or work areas will be moved immediately ~~100 yards~~ away from the roadway into safe areas. (BLM B-5.8 Wildlife)	✓	
APM B-32 Wildlife	In areas considered to comprise suitable tortoise habitat, or other areas where tortoise are observed, all access roads and tower construction sites will be surveyed by a qualified biologist to delineate burrows or individuals for protection. Burrows near construction sites will be clearly delineated on the ground. Road, footing, and work area alignments should be modified to the extent possible to avoid adversely affecting any tortoise burrows encountered during these surveys. Where tortoise burrows will be unavoidably destroyed, they should be excavated carefully using hand tools, under the supervision of a field biologist with demonstrated prior experience with this species. See Map 11-AZ in Appendix F in the Draft EIS (1988) and Figure 4.5-2 in the Devers–Palo Verde No. 2 EIR (1987). Also see Appendix E for link and milepost descriptions and mitigation measures. (BLM B-5.9 Wildlife)	✓	
APM B-33 Wildlife	If possible, no new roads, tower sitings, or spur roads will be built in blow sand areas. However, if new spur roads are required through wind-blown sand habitat, the road will be returned to natural conditions and effectively closed (gated or bermed) following construction. Pre-construction surveys will identify wind-blown sand dune habitats. (BLM B-5.10 Wildlife)	✓	

Table B-10. Applicant Proposed Measures – Biology

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM B-34 Wildlife	Where the project crosses through the Coachella Valley Preserve, the Holder will cooperate with the Preserve in closing (gating) existing access roads. (a) A qualified biologist will also be present with work crews to survey and clear work areas daily for Coachella Valley fringe-toed lizard (CVFTL), flat-tailed horned lizard (FTHL), and other sensitive species in the Preserve and sand dune communities from Link 14 (Milepost 7.6) to Link 16 (Milepost 5.0) to identify if ay additional areas of occupied CVFTL and FTHL habitat are present along the route or at construction staging areas. (b) This survey will be conducted during appropriate seasons (March 15 to May 15) and conditions for species identification. For any areas of suitable habitat, this measure will apply. In the Coachella Valley, compacted soils should be scarified and seeded with a mix of native plant seeds, including bugseed (*Dicoria canescens*), to promote revegetation of plant species valuable to the lizard. Construction activity and surface disturbance will be prohibited during the period from January 1 to March 31 for the protection of the bighorn sheep lambing areas. These areas along the proposed route include Link 2 (Milepost 29.0 to 34.0) and Link 6 (Milepost 0.0 to 6.0). (BLM B-5.11 Wildlife)	✓	
APM B-35 Wildlife	Avoid upland areas where desert tortoises might occur and/or have a biologist present during construction activities that involve earth moving in order to move any tortoises (in burrows or cover-sites, or on the surface) that would likely be impacted. (BLM B-5.17 Wildlife)	✓	
APM B-36 Wildlife	Avoid construction activities that would tend to create wind barriers that might result in sand stabilization in order to minimize impacts to populations of the Coachella Valley fringe-toed lizard. (BLM B-5.18 Wildlife)	✓	
APM B-37 Wildlife	Mitigation for the coastal California gnatcatcher should include protocol-driven pre-construction surveys. If gnatcatchers are found to be present, suitable habitat should be avoided, including relocating towers and access. If habitat cannot be avoided, SCE should either restore damaged habitat, as at the Weapons Support Facility, Fallbrook Detachment, San Diego County (Soil Ecology and Research Group, 2004), or participate in land set-aside programs such as the Natural Community Conservation Planning program (NCCP). Another potential mitigation action would be that of assisting in the provision of funding for monitoring programs that may be undertaken through the Western Riverside County Multiple Species Habitat Conservation Plan. (SCE)		✓
APM B-38 Wildlife	For least Bell's vireo, suitable habitat would be completely avoided by relocating tower sites and/or associated access roads. There would be approximately 0.8 acres of suitable habitat potentially affected by the proposed west of Devers 230 kV upgrade; this small area should be entirely avoided. If avoidance is not possible and the habitat is damaged or lost, SCE should participate in habitat banking programs or provide funding through the Western Riverside County Multiple Species Habitat Conservation Plan for plan-related monitoring of this species. (SCE)		✓
APM B-39 Wildlife	Stephens' kangaroo rat habitat would be avoided, where possible. (SCE)		✓

Source: SCE, 2005.

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Table B-11. Applicant Proposed Measures – Cultural Resources

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM C-1	Prior to construction and all other surface disturbing activities, the Holder[5] shall have conducted and submitted for approval by the Authorized Officer an inventory of cultural resources within the project's APE. The nature and extent of this inventory shall be determined by the Authorized Officer in consultation with the appropriate State Historic Preservation Officer (SHPO) and shall be based upon project engineering specifications. (BLM B-9.1)[4]	✓	
APM C-2	As part of the inventory, the Holder shall conduct field surveys of sufficient nature and extent to identify cultural resources that would be affected by tower pad construction, access road installation, and transmission line construction and operation. At a minimum, field surveys shall be conducted along newly proposed access roads, new construction yards, and any other projected impact areas outside of the previously surveyed corridor. Site-specific field surveys also shall be undertaken at all projected areas of impact within the previously surveyed corridor that coincide with previously recorded cultural resource locations. The selected right-of-way shall be staked prior to the cultural resource field surveys. (BLM B-9.2)	✓	
APM C-3	As part of the inventory report, the Holder shall evaluate the significance of all affected cultural resources and provide recommendations with regard to their eligibility for the NRHP. Determinations of NRHP eligibility will be made by the Authorized Officer in consultation with the appropriate SHPO. (BLM B-9.3)	✓	
APM C-4	Upon approval of the inventory report by the Authorized Officer, the Holder shall prepare and submit for approval a cultural resource treatment plan for NRHP-eligible cultural resources to mitigate identified impacts. Avoidance, recordation, and data recovery will be used as mitigation alternatives. (BLM B-9.4)	✓	
APM C-5	The Authorized Officer may require the relocation of the line, ancillary facilities, or temporary facilities or work areas, if any, where relocation would avoid or reduce damage to cultural resource values. (BLM B-9.5)	✓	
APM C-6	If avoidance of specific cultural resources is not feasible, treatment shall be carried out as determined by the Authorized Officer in consultation with the appropriate SHPO. (BLM B-9.6)	✓	
APM C-7	When necessary to relocate the proposed line, ancillary facilities, temporary facilities, or work areas as a result of inventory, onsite avoidance decisions, or the Holder's approved request for relocation, the Holder shall inventory the proposed new locations for cultural resources and provide inventory results to the Authorized Officer prior to construction. Any mitigation deemed necessary by the Authorized Officer shall be completed prior to undertaking any surface disturbing activities. (BLM B-9.7)	✓	
APM C-8	All cultural resource work undertaken by the Holder on public lands shall be carried out by qualified professionals designated on a currently valid Cultural Resource Use Permit for the appropriate state. (BLM B-9.8)	✓	
APM C-9	Notices to proceed will be issued following completion, and approval by the Authorized Officer, of any fieldwork determined necessary through the inventory, evaluation, and consultation process described above. (BLM B-9.9)	✓	
APM C-10	Vehicles and equipment shall be confined and operated only within areas specified by the Authorized Officer. (BLM B-9.10)	✓	
APM C-11	Unauthorized collection of artifacts or other cultural materials on or off the right-of-way by the Holder, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws. Unauthorized collection may constitute grounds for the issuance of a stop work order. (BLM B-9.11)	✓	

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Table B-12. Applicant Proposed Measures – Paleontological Resources

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM P-1	Impacts to significant paleontological resources will be mitigated by conducting a pre-construction survey in areas of high or undetermined paleontological sensitivity to identify and collect surface specimens that could be affected by project construction. Paleontological monitoring of earth-disturbing construction activities and salvage of significant specimens will occur in project areas of high sensitivity. (SCE)		✓

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Table B-13. Applicant Proposed Measures – Air Quality

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM A-1	Heavy duty off-road diesel engines would be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations. (SCE)[4]	✓	✓
APM A-2	Water or chemical dust suppressants would be applied to unstabilized disturbed areas and/or unpaved roadways in sufficient quantity and frequency to maintain a stabilized surface. (SCE)	✓	✓
APM A-3	Water or water-based chemical additives would be used in such quantities to control dust on areas with extensive traffic including unpaved access roads; water, organic polymers, lignin compounds, or conifer resin compounds would be used depending on availability, cost, and soil type. (SCE)	✓	✓
APM A-4	Surfaces permanently disturbed by construction activities would be covered or treated with a dust suppressant after completion of activities at each site of disturbance. (SCE)	✓	✓
APM A-5	Vehicle speeds on unpaved roadways would be restricted to 15 miles per hour. (SCE)	✓	✓
APM A-6	Vehicles hauling dirt would be covered with tarps or by other means. (SCE)	✓	✓
APM A-7	Site construction workers would be staged offsite at or near paved intersections and workers would be shuttled in crew vehicles to construction sites. As part of the construction contract, SCE would require bidders to submit a construction transportation plan describing how workers would travel to the job site. (SCE)	✓	✓
APM A-8	Emissions credits would be purchased to offset any emissions levels which are over the emissions thresholds. (SCE)	✓	✓

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Table B-14. Applicant Proposed Measures – Water Resources

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM W-1	During the first year following construction, potential soil erosion sites will be inspected by the Holder[5] after each major rainstorm as access permits. For the purpose of this measure, a major rainstorm is defined as any singular storm where the total precipitation exceeds the arithmetic mean for similar events in the area and results in flooding. Examples include cloudbursts (high quantity – short duration) or storms where saturated soils produce runoff (high quantity – long duration). (BLM B-4.1)[4]	✓	
APM W-2	Construction equipment will be kept out of flowing stream channels except when absolutely necessary to construct crossings. (BLM B-4.2)	✓	
APM W-3	Erosion control and hazardous material plans will be incorporated into the construction bidding specifications to ensure compliance. (BLM B-4.3)	✓	
APM W-4	Appropriate design of tower footing foundations, such as raised foundations and/or enclosing flood control dikes, will be used to prevent scour and/or inundation by a 100-year flood. (BLM B-4.4)	✓	
APM W-5	Towers will be located to the extent feasible to avoid active drainage channels, especially downstream of steep hillslope areas, to minimize the potential for damage by flash flooding and mud and debris flows. (BLM B-4.5)	✓	
APM W-6	Diversion dikes or other structural enhancements will be required to divert runoff around a tower structure if (a) the location in an active channel cannot be avoided; and (b) where there is a very significant flood scour/deposition threat, unless specifically exempted by the BLM Authorized Officer. (BLM B-4.6)	✓	
APM W-7	Runoff from roadways will be collected and diverted from steep, disturbed, or otherwise unstable slopes. (BLM B-4.7)	✓	
APM W-8	Ditches and drainage concourses will be designed to handle the concentrated runoff, will be located to avoid disturbed areas, and will have energy dissipations at discharge points. (BLM B-4.8)	✓	
APM W-9	Cut and fill slopes will be minimized by a combination of benching and following natural topography where possible. (BLM B-4.9)	✓	
APM W-10	Construction equipment would be kept out of flowing stream channels except when absolutely necessary to construct crossings. (SCE)		✓
APM W-11	Erosion control and hazardous material plans would be incorporated into the construction bidding specifications to ensure compliance. (SCE)		✓
APM W-12	Appropriate design of tower footing foundations, such as raised foundations and/or enclosing flood control dikes, would be used to prevent scour and/or inundation by a 100-year flood. (SCE)		✓
APM W-13	Towers would be located to avoid active drainage channels, especially downstream of steep hillslope areas, to minimize the potential for damage by flash flooding and mud and debris flows. (SCE)		✓
APM W-14	Diversion dikes would be required to divert runoff around a tower structure if (a) the location in an active channel cannot be avoided, and (b) where there is a very significant flood scour/deposition threat. (SCE)		✓
APM W-15	Runoff from roadways would be collected and diverted from steep, disturbed, or otherwise unstable slopes. (SCE)		✓
APM W-16	Ditches and drainage concourses would be designed to handle the concentrated runoff, would be located to avoid disturbed areas, and would have energy dissipations at discharge points. (SCE)		✓
APM W-17	Cut and fill slopes would be minimized by a combination of benching and following natural topography where possible. (SCE)		✓

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Table B-15. Applicant Proposed Measures – Geology and Soils

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM G-1	The line will be located to minimize the disruption of any active mining operations. (BLM B-2.1)[4]	✓	
APM G-2	Individual ~~T~~transmission towers will not be sited on nor straddle the mapped traces of any known fault that has been designated active or potentially active. In areas where known faults are present, the Holder[5] will visually check the tower site area before clearing, and will check the tower footing holes for any trace of a previously unmapped fault. If manifestations of a fault are found, construction will immediately stop at that site and the Holder will consult with the Holder's Geologist and the BLM Authorized Officer. The Holder's Geologist and the BLM Authorized Officer will determine if it is a fault trace and if so, will ascertain if it is active, potentially active, or inactive. (BLM B-2.2)	✓	
APM G-3	Towers will be located so that the line will span the surface traces of active and potentially active faults such that a relative lateral surface displacement would shorten the span between towers, and thus avoid potential line breaks. Where this is not feasible, the Holder will incorporate slack spans to bridge the fault(s) such that the projected lateral surface displacement, as forecast by the Holder's Geologist and accepted by the BLM Authorized Officer, will not structurally affect the associated towers. (BLM B-2.3)	✓	
APM G-4	~~Appropriate tower design will be used to mitigate the potential for very strong seismic groundshaking.~~ In general, an appropriate tower design which accounts for lateral wind loads and conductor loads ~~during line stringing~~ exceeds any credible seismic loading (groundshaking). (BLM B-2.4)	✓	
APM G-5	Towers will be located to avoid areas of highly sensitive dune sand areas. Where these areas cannot be avoided, towers will be located to minimize disturbance to the deposits at a site approved by the BLM Authorized Officer. (BLM B-2.5. Note: Text here omits references to specific figures and maps in the original (1987-88) DEIR and DEIS.)	✓	
APM G-6	Wherever ~~possible~~ feasible to minimize the potential for slope instability, towers will be located to avoid gullies or active drainages, and over-steepened slopes. (BLM B-2.6)	✓	
APM G-7	SCE will provide a list of sites where helicopter construction is recommended. The Authorized Officer may require, on a site-specific basis, helicopter assisted construction in sensitive areas. Sensitive areas are those that exhibit both (1) high erosion potential and/or slope instability; and (2) a lack of existing ~~access~~ stub roads within a reasonable distance of the tower site ~~(generally no more than ¼ mile)~~, or existing access that is not suitable for upgrading to accommodate conventional tower construction or line stringing equipment, and where it is determined that, after field review, the issues of erosion and/or slope instability cannot be successfully mitigated through implementation of accepted engineering practices. (BLM B-2.7)	✓	
APM G-8	Mitigation of potentially significant impacts to the western end of the proposed transmission line due to (1) potential surface fault rupture along the Banning, Mission Creek, and Mecca Hills faults, and (2) potential for severe seismic shaking can be achieved by standard design methods listed below: a. Individual ~~T~~towers will be sited so as not to straddle active fault traces. b. The alignment will be designed to cross an active fault such that future rupture on the fault would not cause excessive stress on the line or the towers. c. Standard foundation and structural design measures will be utilized to minimize the impact from severe seismic shaking. (BLM B-2.8)	✓	
APM G-9	Appropriate design of tower foundations will be used to reduce the potential for settlement and compaction. (BLM B-2.9)	✓	

Table B-15. Applicant Proposed Measures – Geology and Soils

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM G-10	New access roads and soil disturbance will be avoided or minimized in all areas designated as having high erosion hazards or potential slope instability. If the Authorized Officer, after consultation and review of alternatives (including helicopter or helicopter assisted construction), deems the proposed new access road feasible, design plans must be submitted for approval, in writing, prior to construction. (BLM B-3.1. Note: Text here omits references to specific figures and maps in the original (1987-88) DEIR and DEIS.)	✓	
APM G-11	New access roads, which are required, will be designed to minimize ground disturbance from grading. They will follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage dips, side ditches, slope drains, and velocity reducers. Where temporary crossings are constructed, the crossings will be restored and repaired as soon as possible after completion of the discrete action associated with construction of the line in the area. (BLM B-3.2)	✓	
APM G-12	Side casting of soil during grading will be minimized. Excess soil and excavated soil will be properly stabilized or, ~~if necessary, end-hauled to an approved disposal site~~ dispersed around tower construction sites or on stub or access roads. (BLM B-3.3)	✓	
APM G-13	During grading operations, care would be exercised to minimize side casting. No earth would be removed below final elevations, and no cuts would be made deeper than necessary for clearing and road construction. (SCE)	✓	✓
APM G-14	Upon completion of construction, any drainage deficiencies would be corrected to prevent future erosion. Trees and brush would be cleared only when necessary to provide electrical clearance, line reliability, or suitable access for maintenance and construction. (SCE)	✓	✓
APM G-15	Counterpoise may need to be installed if the local soil conditions indicate that the soil has a resistance above 30 ohms. This is accomplished by attaching a 0.375-inch cable to the tower steel. The cable is installed 1 foot underground and extends approximately 100 feet within the ROW from two or more footings.	✓	✓
APM G-16	The line would be located to minimize the disruption of any active mining operations. (SCE)		✓
APM G-17	Appropriate tower design would be used to mitigate the potential for impacts from very strong seismic groundshaking. In general, an appropriate tower design which accounts for lateral wind loads and conductor loads during line stringing exceeds any credible seismic loading (groundshaking). (SCE)		✓
APM G-18	Whenever possible to minimize the potential for slop instability, towers would be located to avoid gullies or active drainages, and over-steepened slopes. (SCE)		✓
APM G-19	New access roads, where required, would be designed to minimize ground disturbance from grading. They would follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage dips, side ditches, slope drains, and velocity reducers. Where temporary crossings are constructed, the crossings would be restored and repaired as soon as possible after completion of the discrete action associated with construction of the line. Side casting of soil during grading would be minimized. Excess soil would be properly stabilized, or if necessary, hauled to an approved disposal site. (SCE)		✓

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Table B-16. Applicant Proposed Measures – Visual Resources

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM V-1	Non-specular conductors will be used [to reduce glare and visual contrast]. (BLM B-6.1)[4] [bracketed text added by SCE]	✓	✓
APM V-2	For the proposed alignment, tower spacing will correspond to the spacing of the existing transmission line structures. Additionally, new tower heights will be adjusted such that the top elevations of each set of towers (new and existing) are horizontal with each other. This will coordinate perceptions of towers and conductors as one element. Site-specific conditions will determine when such mitigation is feasible. Other exceptions to these two measures are where towers will be sited to avoid sensitive features and/or to allow conductors to clearly span features. (BLM B-6.2) [PEA adds: "SCE will comply with the above mitigation measure to the extent possible. However, the ISO has specified that the capacity of the line be 2700 amps under normal conditions and 3600 amps under emergency conditions. This capacity rating is an increase from the 1988 DPV2 capacity rating. This capacity rating necessitates that the heights of some of the proposed Devers-Harquahala towers be slightly taller than [adjacent towers], and in some locations tower spacing may not correspond to the adjacent DPV1 structures, to provide adequate ground clearance." (PEA, p. 6-31)	✓	
APM V-3	At all highway and recreation routes-of-travel crossings, including the Colorado River, towers will be placed at the maximum feasible distance, and when feasible, [except in locations where matching existing tower spacing is deemed appropriate]. (BLM B-6.3) [From "and where feasible," the BLM text reads "...at right angles, from the crossing." SCE has replaced this phrase in the bracketed text.]	✓	
APM V-4	Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils. (BLM B-6.4)	✓	
APM V-5	Standard tower spacing would be modified to correspond with spacing of existing transmission line towers where feasible and within limits of standard tower design to reduce visual contrast. (BLM B-6.8a)	✓	
APM V-6	Towers would be placed so as to avoid features and/or to allow conductors to clearly span the feature (within limits of standard tower design) to minimize the amount of sensitive feature disturbed and/or reduce visual contrast (e.g., avoiding skyline situations through placement of tower to one side of a ridge or adjusting tower location to avoid highly visible locations and utilize screening of nearby landforms). (BLM B-6.8b)	✓	
APM V-7	The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction. (SCE)		✓
APM V-8	Non-specular conductors would be used to reduce glare and resulting visual contrast. (SCE)		✓
APM V-9	Towers would be located adjacent to existing structures where feasible. Exceptions are at locations where the tower heights and/or spans would be modified based on terrain features allowing for adequate conductor clearance to ground and other facilities within the right-of-way. (SCE)		✓
APM V-10	At all highway and recreation routes-of-travel crossings, including the I-10 crossing, towers would be placed at the maximum feasible distance, except in locations where matching existing tower spacing is deemed appropriate, and when feasible, at 90 degree angles from the crossing. (SCE)		✓

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Table B-17. Applicant Proposed Measures – Land Use

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM L-1	Impacts in crossing of the KOFA NWR (Link 2) would be minimized through utilization of existing utility access (gas and transmission) roads during the construction and operational phases of the project. All vehicular traffic would be limited to approved access or spur roads. (SCE)[4]	✓	
APM L-2	Although the Holder[5] may restore and maintain existing access roads, they cannot be either widened or upgraded without approval of the Authorized Officer. (BLM B-1.1)	✓	
APM L-3	New access road construction will be kept to a minimum. (BLM B-1.2)	✓	
APM L-4	Where feasible, the following additional mitigation measures would be implemented: • Matching of tower spans • Aligning towers adjacent to or parallel to agricultural field boundaries • Using tubular steel pole structures in agricultural fields instead of lattice steel towers to reduce the footprint of the structure • Specific tower placement to avoid span-sensitive features. (SCE)	✓	
APM L-5	Along Link 10 in the Palo Verde Valley, H-frame structures, similar to the existing DPV1 structures, would be installed in this segment to reduce the amount of farmland permanently removed from production and minimize impacts to farm operations. Where feasible, additional mitigation measures would include matching tower spans, and aligning towers adjacent or parallel to field boundaries. (SCE)	✓	
APM L-6	In the agricultural area of the Palo Verde Valley, towers would be located to allow for canal dredging by the Palo Verde Irrigation District. This also could include canal modifications. (SCE)	✓	
APM L-7	Link 10 crosses an (unoccupied) single-family dwelling unit at Milepost 5.3. Two additional single-family dwelling units and one mobile home would be impacted due to the alignment of Link 10 at Milepost 6.2. Mitigation measures would include purchase of the parcel and relocation or, if practical, adjusting the transmission line alignment and placing towers to avoid the affected dwelling units. (SCE)	✓	
APM L-8	Link 14 crosses an open pit gravel operation. Potential impacts would be mitigated during construction by coordinating with the owner/operator to avoid critical mining periods and high volume earth-moving days. Operational mitigation would include spanning the mine. (SCE)	✓	
APM L-9	Link 100 crosses the Pacific Crest National Trail, causing a potential temporary impact during construction. Temporary impacts also may occur where Link 102 crosses Noble Creek Regional Park and the Oak Valley Golf Course. Mitigation for construction includes avoiding high use periods and holidays. Mitigation for operation would require construction using structures placed parallel to existing structures to span and avoid displacement of recreational facilities. (SCE)		✓

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2 Refers to the Devers-Harquahala 500 kV transmission line.
3 Refers to the West of Devers 230 kV transmission line upgrade.
4 Reference in parentheses denotes the origin of the APM. "(SCE)" is a Proponent's mitigation measure. "(BLM)" is a Proponent's measure derived from a requirement in the BLM Right-of-Way Grant 1989. Numbers such as B-4.1 refer to the specific BLM measure in the 1989 Grant.
5 Holder is BLM's reference to the ROW Grant holder. Holder is SCE, the project proponent.

Table B-18. Applicant Proposed Measures – Noise

Measure Number and Description[1]		Applicable To: 500 kV Transmission Line[2]	Applicable To: 230 kV Upgrade[3]
APM N-1	The proposed construction would comply with local noise ordinances. There may be a need to work outside of the aforementioned local ordinances in order to take advantage of low electrical draw periods during the nighttime hours. SCE would comply with variance procedures requested by local authorities if required. (SCE)[4]	✓	✓

Source: SCE, 2005.

1 APM refers to Applicant Proposed Measures. If there is a measure in the 1989 BLM ROW Grant that is not identified in the PEA as an APM, this FLM Grant measure is listed in a shaded row at the end of the table and is labeled BLM followed by its reference in the ROW Grant.

2 Refers to the Devers-Harquahala 500 kV transmission line.

3 Refers to the West of Devers 230 kV transmission line upgrade.

4 Reference in parentheses denotes the origin of the APM. "(SCE)" is a Proponent's mitigation measure. "(BLM)" is a Proponent's measure derived from a requirement in the BLM Right-of-Way Grant 1989. Numbers such as B-4.1 refer to the specific BLM measure in the 1989 Grant.

C. Alternatives

This section summarizes the information presented in Appendix 1 to this EIR/EIS, Alternatives Screening Report, which contains detailed documentation and maps of all alternatives suggested for EIR/EIS consideration. This section is organized as follows: Section C.1 is an overview of the alternatives screening process; Section C.2 describes the methodology used for alternatives evaluation; Section C.3 presents a summary of which alternatives have been selected for full EIR/EIS analysis and which have been eliminated based on CEQA criteria; Section C.4 describes the alternatives that have been retained for full EIR/EIS analysis within each individual issue area in Section D; and Section C.5 presents descriptions of each alternative that was eliminated from EIR/EIS analysis and explains why each was eliminated. Section C.6 describes the No Project Alternative.

C.1 Alternatives Development and Screening Process

One of the most important aspects of the environmental review process is the identification and assessment of reasonable alternatives that have the potential for avoiding or minimizing the impacts of a Proposed Project. In addition to mandating consideration of the No Project Alternative, CEQA Guidelines (Section 15126(d)) emphasize the selection of a reasonable range of technically feasible alternatives and adequate assessment of these alternatives to allow for a comparative analysis for consideration by decision-makers. CEQA Guidelines state that the discussion of alternatives shall focus on alternatives capable of eliminating or reducing significant adverse environmental effects of a Proposed Project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. However, CEQA Guidelines declare that an EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote or speculative.

The Proposed Project is described in detail in Section B of this EIR. Appendix 1 describes the alternatives screening analysis that has been conducted for the Proposed Project and provides a record of the screening criteria and results that were reached regarding alternatives carried forward for full EIR/EIS analysis and alternatives eliminated. Appendix 1 documents: (1) the range of alternatives that was suggested and evaluated; (2) the approach and methods used to screen the feasibility of these alternatives according to guidelines established under CEQA; and (3) the results of the alternatives screening. For alternatives that were eliminated from EIR consideration, Appendix 1 explains in detail the rationale for elimination. "Non-wires alternatives"[1] are addressed as well.

Numerous alternatives to the Proposed Project were suggested during the scoping period (October 25 to November 28, 2005 and December 7, 2005 to January 20, 2006) by the general public, and federal, State and local agencies after SCE filed its Application for a CPCN. Other alternatives were developed by EIR/EIS preparers or presented by SCE in its PEA.

In total, the alternatives screening process has culminated in the identification and preliminary screening of 35 potential alternatives. These alternatives range from minor routing adjustments to SCE's Proposed Project location, to entirely different transmission line routes, to alternative energy technologies, as well as non-wires alternatives.

[1] "Non-wires alternatives" include methods of meeting project objectives that do not require major transmission lines (e.g., baseload generation, distributed generation, renewable energy supplies, conservation and demand-side management, etc.).

C.2 Alternatives Screening Methodology

The evaluation of the alternatives used a screening process that consisted of three steps:

Step 1: Clearly define each alternative to allow comparative evaluation

Step 2: Evaluate each alternative in comparison with the Proposed Project, using CEQA/NEPA criteria (defined below)

Step 3: Based on the results of Step 2, determine the suitability of the each alternative for full analysis in the EIR/EIS. If the alternative is unsuitable, eliminate it from further consideration.

C.2.1 CEQA and NEPA Requirements for Alternatives

After completion of the steps defined above, the advantages and disadvantages of the alternatives are carefully weighed with respect to CEQA and NEPA criteria for consideration of alternatives. Both CEQA and NEPA provide guidance on selecting a reasonable range of alternatives for evaluation in an EIR and EIS, and the requirements are similar. This alternatives screening and evaluation process satisfies both State and federal requirements. The CEQA and NEPA requirements for selection of alternatives are described below.

C.2.1.1 CEQA

An important aspect of EIR preparation is the identification and assessment of reasonable alternatives that have the potential for avoiding or minimizing the impacts of a Proposed Project. In addition to mandating consideration of the No Project Alternative, the State CEQA Guidelines (Section 15126.6(e)) emphasize the selection of a reasonable range of feasible alternatives and adequate assessment of these alternatives to allow for a comparative analysis for consideration by decision-makers. The State CEQA Guidelines (Section 15126.6(a)) state that:

> *An EIR shall describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation.*

In order to comply with CEQA's requirements, each alternative that has been suggested or developed for this project has been evaluated in three ways:

- Does the alternative accomplish all or most of the basic project objectives?
- Is the alternative feasible (from economic, environmental, legal, social, technological standpoints)?
- Does the alternative avoid or substantially lessen any significant effects of the Proposed Project (including consideration of whether the alternative itself could create significant effects potentially greater than those of the Proposed Project)?

Each of these bullets is described in more detail in the following sections.

C.2.1.2 Consistency with Project Objectives

The State CEQA Guidelines require the consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives" (Section 16126.6(b)). Therefore, it is not required that each alternative meet all of SCE's objectives. In its Proponent's Environmental Assessment (PEA), SCE has identified the following four objectives for the Proposed Project:

- **Increase California's Transmission Import Capability.** According to SCE, DPV2 will increase California's transmission import capability by 1,200 MW providing greater access to sources of low-cost energy currently operating in the Southwest. The Southwest region currently has over 6,000 MW of surplus generation, some of which may be imported into California. The Southwest Transmission Expansion Planning (STEP) working group independently concluded a similar magnitude of generation is available for import into California. Increased access to energy in the Southwest is forecasted to lower total energy costs and substantially benefit California consumers. SCE's economic analysis concluded that DPV2 provides $1.1 billion of benefits to California consumers over the life of the project, and has a benefit-to-cost ratio of 1.7:1.
- **Enhance the Competitive Energy Market**. SCE states that it believes it is in California's interest to encourage investment in new generation infrastructure through the construction of needed high-voltage transmission lines. This is consistent with the *Energy Action Plan II*, which was adopted in September 2005 by the CPUC and the California Energy Commission for California (CPUC & CEC, 2005). Transmission infrastructure is necessary for a competitive market, and is vital to integrating new generation additions (CPUC, 2004). SCE states that DPV2 is expected to enhance competition amongst energy suppliers by increasing access to the California energy market, providing siting incentives for future energy suppliers, and providing additional import capability. Facilitating a competitive energy market in the Southwest may also create employment opportunities, which are beneficial to the economy and industries in Arizona and California.
- **Support the Energy Market in the Southwest**. The Western Electricity Coordinating Council (WECC) transmission system is an interstate regional system (including Northwestern Mexico and Western Canadian provinces) that links power generation resources with customer loads in a complex electrical network. DPV2 will expand this network and increase the ability for California and the Southwest to pool resources for ancillary services, and provide emergency support in the event of generating unit outages or natural disasters.
- **Provide Increased Reliability, Insurance Value, and Operating Flexibility.** DPV2 would improve the reliability of the regional transmission system, providing insurance against major outages such as the loss of a major generating facility or of another high-voltage transmission line.

The CAISO conducted an independent review of DPV2 and also found the DPV2 project to be a necessary and cost-effective addition to the CAISO controlled grid.[2] The CAISO Board approved the DPV2 project on February 24, 2005 and directed SCE to proceed with the permitting and construction of the transmission project, preferably to the completed by the summer of 2009. However, because the project is designed to provide economic benefits and it is not primarily a reliability enhancement project, SCE did not present a specific project objective related to the date of project operation.

[2] http://www.caiso.com/docs/09003a6080/34/e4/09003a608034e440.pdf.

C.2.1.3 Feasibility

The State CEQA Guidelines (Section 15364) define feasibility as:

> ***. . . capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.***

The alternatives screening analysis is largely governed by what CEQA terms the "rule of reason," meaning that the analysis should remain focused, not on every possible eventuality, but rather on the alternatives necessary to permit a reasoned choice. Furthermore, of the alternatives identified, the EIR is expected to fully analyze those alternatives that are feasible, while still meeting most of the project objectives.

According to the State CEQA Guidelines (Section 15126.6(f)(1)), among the factors that may be taken into account when addressing the feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or other regulatory limitations, jurisdictional boundaries, and proponent's control over alternative sites in determining the range of alternatives to be evaluated in the EIR. For the screening analysis, the feasibility of potential alternatives was assessed taking the following factors into consideration:

- **Economic Feasibility**. Is the alternative so costly that implementation would be prohibitive? The State CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives or would be more costly" (Guidelines Section 16126.6(b)). The Court of Appeals added in *Goleta Valley v. Board of Supervisors* (2nd Dist. 1988) 197 Cal.App.3d, p. 1181 (see also *Kings County Farm Bureau v. City of Hanford* (5th Dist. 1990) 221 Cal.App.3d 692, 736 [270 Cal. Rptr. 650]): "[t]he fact that an alternative may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible. What is required is evidence that the additional costs or lost profitability are *sufficiently severe* as to render it *impractical* to proceed with project."

- **Environmental Feasibility.** Would implementation of the alternative cause substantially greater environmental damage than the Proposed Project, thereby making the alternative clearly inferior from an environmental standpoint? This issue is primarily addressed in terms of the alternative's potential to eliminate significant effects of the Proposed Project, as discussed in Section 2.2.1.3 below.

- **Legal Feasibility**. Does the alternative have the potential to avoid lands that have legal protection that may prohibit or substantially limit the feasibility of permitting a high voltage transmission line?

- **Regulatory Feasibility**. Do regulatory restrictions substantially limit the likelihood of successful permitting of a high-voltage transmission line? Is the alternative consistent with regulatory standards for transmission system design, operation, and maintenance?

  Lands that are afforded legal protections that would prohibit the construction of the project, or require an act of Congress for permitting, are considered less feasible locations for the project. These land use designations include wilderness areas, wilderness study areas, restricted military bases, airports and Indian reservations. Information on potential legal constraints of each alternative has been compiled from laws, regulations, and local jurisdictions, as well as a review of federal, State, and local agency land management plans and policies.

- **Social Feasibility.** Would the alternative cause significant damage to the socioeconomic structure of the community and be inconsistent with important community values and needs? Similar to the environmental

feasibility addressed above, this subject is primarily considered in consideration of significant environmental effects.

- **Technical Feasibility.** Is the alternative feasible from a technological perspective, considering available technology? Are there any construction, operation, or maintenance constraints that cannot be overcome?

C.2.1.4 Potential to Eliminate Significant Environmental Effects

A key CEQA requirement for an alternative is that it must have the potential to "avoid or substantially lessen any of the significant effects of the project" (State CEQA Guidelines Section 16126.6(a)). If an alternative is identified that clearly does not have the potential to provide an overall environmental advantage as compared to the Proposed Project, it is usually eliminated from further consideration. At the screening stage, it is not possible to evaluate all of the impacts of the alternatives in comparison to the Proposed Project with absolute certainty, nor is it possible to quantify impacts. However, it is possible to identify elements of an alternative that are likely to be the sources of impact and to relate them, to the extent possible, to general conditions in the subject area.

Table Ap.1-1 in Appendix 1 presents a summary of the potential significant effects of the Proposed Project. This impact summary was prepared prior to completion of the EIR/EIS analysis, so it may not be complete in comparison to the detailed analysis now presented in Section D of this EIR/EIS. However, the impacts in the table are representative of those resulting from preliminary EIR/EIS preparation and were therefore used to determine whether an alternative met this CEQA requirement.

C.2.2 NEPA

According to the Council on Environmental Quality's (CEQ) NEPA Regulations (40 C.F.R. 1502.14), an EIS must present the environmental impacts of the proposed action and alternatives in comparative form, defining the issues and providing a clear basis for choice by decision-makers and the public. The alternatives section shall:

a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

c) Include reasonable alternatives not within the jurisdiction of the lead agency.

d) Include the alternative of no action.

e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

The CEQ has stated that "[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense rather than simply desirable from the standpoint of the applicant" (CEQ, 1983).

In addition to the CEQ NEPA regulations, CEQ has issued a variety of general guidance memoranda and reports that concern the implementation of NEPA. One of the most frequently cited resources for NEPA practice is CEQ's *Forty Most Asked Questions Concerning CEQ's NEPA Regulations* (Forty Questions). Although a reviewing federal court does not always give the Forty Questions the same deference as it does the CEQ NEPA Regulations, in some situations the Forty Questions have been persuasive to the judiciary. For example in one decision, a federal court relied heavily on one of the Forty Questions in interpreting the treatment of alternatives under NEPA [*American Rivers et al. v. Federal Energy Regulatory Commission*, 187 F.3d 1007 (9th Cir. 1999)] (Bass et al., 2001).

In general, alternatives are discussed in Forty Questions Nos. 1 through 7. Question No. 5b asks if the analysis of the "proposed action" in an EIS is to be treated differently than the analysis of alternatives. The response states:

> *The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the "proposed action." Section 1502.14 is titled "Alternatives, including the proposed action" to reflect such comparable treatment. Section 1502.14(b) specifically requires "substantial treatment" in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives.*

NEPA (40 C.F.R. 1502.14(c)) also requires the consideration of the No Action Alternative as a basis for comparison even if it would not satisfy the proposed action's purpose and need. The definition of the No Action Alternative depends on the nature of the project and in the case of the proposed DPV2 project the No Action Alternative describes what would occur without the federal agency's (BLM) approval.

C.2.2.1 Consistency with Purpose and Need

CEQ NEPA Regulations (40 C.F.R. 1502.13) require a statement "briefly specifying the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." In addition to the project objectives defined in Section C.2.1.2 above, SCE's PEA presents the following statement regarding the purpose and need for the DPV2 project:

> *Californians have learned from painful experience during the 2000-2001 electricity crisis that the market for electricity in California is susceptible to volatile commodity prices, the exercise of market power, and the risk of supply shortages. Development of new transmission facilities to gain greater access to generation may help California avoid or limit similar experiences. Additionally, development of new transmission facilities to areas where generation has been more easily sited and constructed may spur development of new competitive generation to provide further insurance against future electricity crises.*

C.2.2.2 Feasibility

The environmental consequences of the alternatives, including the proposed action, are to be discussed in the EIR/EIS in accordance with CEQ NEPA Regulations (40 C.F.R. 1502.16). The discussion shall include "Possible conflicts between the proposed action and the objectives of federal, regional, State, and local land use plans, policies and controls for the area concerned." Other feasibility factors to be considered may include cost, logistics, technology, and social, environmental, and legal factors (Bass et al., 2001). The feasibility factors are substantially the same as described for CEQA in Section C.2.1.3, above.

C.2.3 Summary of CEQA and NEPA Screening Methodology

Unlike CEQA's requirements, NEPA does not require screening of alternatives based on their potential to avoid or lessen significant environmental effects. However, to ensure that the alternatives considered in the EIR/EIS would meet the requirements of both CEQA and NEPA, the stricter requirements of CEQA have been applied as the screening methodology. As such, a reasonable range of alternatives has been considered and evaluated as to whether or not the alternatives meet (1) most of the project objectives/purpose and need, (2) are considered feasible, and (3) would avoid or substantially lessen any significant effects of the Proposed Project.

C.2.4 Other Considerations for Alternatives

The final project decision by the CPUC will be guided by the Public Utilities Code in addition to the requirements of CEQA. The Public Utilities Code in Section 1002 states that:

> *Section 1002. (a) The commission, as a basis for granting any certificate pursuant to Section 1001 shall give consideration to the following factors:*
>
> *(1) Community values.*
>
> *(2) Recreational and park areas.*
>
> *(3) Historical and aesthetic values.*
>
> *(4) Influence on environment, except that in the case of any line, plant, or system or extension thereof located in another state which will be subject to environmental impact review pursuant to the National Environmental Policy Act of 1969 (Chapter 55 (commencing with Section 4321) of Title 42 of the United States Code) or similar state laws in the other state, the commission shall not consider influence on the environment unless any emissions or discharges therefrom would have a significant influence on the environment of this state.*

The CPUC will consider the "community values" as expressed in the CPUC's proceeding on the DPV2 project and in comments on the Draft EIR/EIS. The CPUC anticipates that the final decision will represent a reasonable balancing of the communities' interests, the need to protect environmental resources in the area, and the need for the project.

C.3 Summary of Screening Results

Alternatives identified by the Applicant, agencies, EIR/EIS preparers, and the public are listed below according to the determination made for analysis. Alternatives considered included alternative route alignments and other transmission alternatives, alternatives that could replace the Proposed Project as a whole, non-wire alternatives, and the No Project Alternative. If so desired, in its decision, the CPUC could elect to combine or match certain alternatives and project components. The potential to create different permutations of alternatives in reality creates many more overall alternatives.

C.3.1 Alternatives Fully Analyzed in the EIR/EIS

The alternatives listed below have been chosen for detailed analysis in this EIR/EIS through the alternative screening process. These alternatives are briefly described in Section C.4 and in greater detail in Section 4 of Appendix 1. The preliminary conclusions generated during the screening process are pre-

sented briefly below and each of these alternatives is evaluated within each environmental issue area of Part D of this EIR. The alternatives are illustrated on Figures C-1a and C-1b (see enclosed CD); an individual map of each alternative is presented in Section 4 of Appendix 1 of this EIR/EIS.

Devers-Harquahala Route Alternatives

- SCE Harquahala-West Alternative
- SCE Palo Verde Alternative
- Harquahala Junction Switchyard Alternative
- Alligator Rock Alternatives:
  - Alligator Rock–North of Desert Center Alternative
  - Alligator Rock–Blythe Energy Transmission Route Alternative
  - Alligator Rock–South of I-10 Frontage Alternative

West of Devers Alternatives

- Devers-Valley No. 2 Alternative

Other Project Alternatives

- Desert Southwest Transmission Project Alternative

C.3.2 Alternatives Eliminated from Full Consideration in the EIR/EIS

This EIR/EIS presents two categories of alternatives eliminated from detailed EIR/EIS consideration. Certain alternatives were eliminated because they clearly did not meet project objectives or were infeasible; these alternatives are listed below and described briefly in Section 3.2.1 of Appendix 1 of this EIR/EIS. Other alternatives required more detailed consideration in order to determine whether they should be eliminated; these are listed below as well and are described in Section C.5 and in greater detail in Section 4 of Appendix 1 of this EIR/EIS.

The following 11 alternatives were eliminated after a preliminary alternatives screening process (see Section 3.2.1 of Appendix 1):

- EOR 9000+ Project
- Granite Construction Company
- New 230 kV Line West of Devers
- Southwest Power Link 500 kV No. 2 Transmission Line
- Path 49 Upgrade Project
- New Imperial Valley–Devers 500 kV Transmission Line
- Double-Circuit 500 kV Line (Devers-Harquahala)
- New Devers–Mira Loma 500 kV Transmission Line
- Combination of New Imperial Valley–Devers 500 kV Line and Path 49 Upgrade Project
- Modify DPV1 Compensation
- Alligator Rock–South of DPV2 Corridor Alternative

The alternatives listed below were also eliminated from consideration in the EIR/EIS; they are described and the reasons for their elimination are presented in Section C.5 below and more detailed descriptions are in Section 4 of Appendix 1. Figures C-2a and C-2b (see enclosed CD) depict the alternatives eliminated from consideration. Individual maps of most alternatives are presented in Section 4 of Appendix 1 of this EIR/EIS.

Devers-Harquahala Route Alternatives

- SCE North of Kofa NWR–South of I-10 Alternative
- SCE North of Kofa NWR–North of I-10 Alternative
- North of Kofa NWR Alternative
- SCE North of Blythe Alternative
- SCE South of Blythe Alternative
- Paradise Valley Alternative
- Substation Alternatives
  - Mesa Verde Substation Alternative
  - Wiley Well Substation Alternative

West of Devers Alternatives

- North of Existing Morongo Corridor Alternative
- Composite Conductor Alternative

Other Project Alternatives

- Convert DPV1 from AC to HVDC Transmission Line
- Underground Alternative

Non-Transmission Alternatives

- New Conventional Generation
- Renewable Generation Resources
- Conservation and Demand-Side Management
- Distributed Generation

C.4 Alternatives Evaluated in this EIR/EIS

C.4.1 Introduction

As discussed in Section C.2, alternatives were assessed for their feasibility, their ability to reasonably achieve the project objectives, and their potential for reducing the significant environmental impacts of the Proposed Project. Based on these screening criteria, the following alternatives were selected for detailed analysis within this EIR/EIS.

C.4.2 Transmission Line Route Alternatives: Devers-Harquahala

C.4.2.1 SCE Harquahala-West Alternative

Description

As described in SCE's 2005 PEA, the "Harquahala-West Subalternate Route" would begin at the Harquahala Generating Station Switchyard. Rather than departing the Harquahala Switchyard to the east paralleling the existing Harquahala-Hassayampa 500 kV towers, the Harquahala-West Alternative would depart the Harquahala Generating Station Switchyard to the west and follow section lines due west for approximately 12 miles through private and State lands to the El Paso Natural Gas Pipeline utility corridor. This portion of the route parallels Courthouse Road approximately one mile to the north along section lines to the pipeline corridor. At the pipeline corridor, the transmission line would proceed

northwesterly along the pipeline corridor for approximately 9 miles to the intersection with the DPV1 transmission line, immediately north of the El Paso Wendon Pump Station. The length of the Harquahala-West Alternative between the Harquahala Switchyard and the junction with the DPV1 line and the proposed route is 21 miles. This alternative is illustrated in Figure Ap.1-1, as well as Figure C-1 (see enclosed CD for both figures).

Currently, Arizona Public Service Company (APS) is planning for the Palo Verde Hub to TS-5 500 kV transmission line that may parallel DPV1 between the PVNGS interconnection area and the Central Arizona Project (CAP) Canal. SCE originally developed the Harquahala-West Alternative because of a concern that the Palo Verde Hub to TS-5 line may be constructed in a manner that would preclude SCE from entering Harquahala Generating Station switchyard from the east. In this case, the Harquahala-West Alternative, which would enter Harquahala Generating Station switchyard from the west, may become SCE's preferred route. The Certificate of Environmental Compatibility for the APS PV Hub to TS-5 Project was approved by the Arizona Corporation Commission on August 17, 2005 (Case 128).

Even though the final construction plan has not been determined, SCE has stated that the approval of the APS project should not affect the DPV2 project since the two projects are independent of one another unless it reaches the joint party agreement with New Harquahala Generating Company (HGC) and APS. If a joint agreement were to occur then the Harquahala Junction Switchyard could serve as the eastern termination point for the Proposed Project. Terminating the proposed DPV2 project at the proposed Harquahala Junction Switchyard would require SCE to acquire from HGC that portion of the Harquahala-Hassayampa transmission line between the proposed Harquahala Junction Switchyard and Hassayampa Switchyard to complete DPV2 (this is currently proposed as part of SCE's project), and the existing Harquahala-Hassayampa transmission line would also need to be shared by APS to complete the TS-5 Project.

The portion of the Harquahala-West Alternative that follows the pipeline corridor would be located in a designated BLM Utility Corridor. New right-of-way would need to be acquired across private, State, and BLM land. The Harquahala-West Alternative would be constructed using tubular steel pole structures from the Harquahala Generating Station to the Centennial Wash to reduce the affected ground area across farmland. Steel lattice towers (like those used for DPV1) would be used for the portion of the route across desert land west of Centennial Wash to the intersection with DPV1 at the Wendon Pump Station.

Spur roads would be built from the existing access road along the pipeline for construction of towers, and a new access road would be required along the section lines between the Harquahala Switchyard and the pipeline road. A minimum of 160-foot-wide right-of-way would need to be acquired on BLM land, and a minimum 200-foot-wide right-of-way would need to be acquired on State and private land. Also, construction of a new access road for a portion of the alternative would be required, causing about 5.28 acres more ground disturbance than the proposed Devers-Harquahala route.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Harquahala-West Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. After analysis of the land acquisition process following permitting and confirmation that the route would not be affected by the TS-5 project, the Harquahala-West Alternative was found to be feasible. No technical, regulatory, or legal feasibility concerns exist.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Alternative Length**. The Harquahala-West Alternative would be 14 miles shorter than the proposed route (a total distance of 216 miles versus 230 miles for the 500 kV segment of the Proposed Project), and would require about 48 fewer 500 kV towers than the proposed route, thereby eliminating the temporary and permanent impacts associated with construction of those additional towers.
- **Biological Resources**. This alternative would be almost 5 miles farther south of Burnt Mountain, which contains suitable habitat for the federally listed[3] cactus ferruginous pygmy-owl.
- **Recreation**. The alternative would avoid the Proposed Project's visual and recreational impacts to the Big Horn Mountains Wilderness Area (WA) north of I-10.
- **Agricultural Resources**. The Harquahala-West Alternative would also avoid approximately 1 mile of impacts to agricultural resources along Thomas Road resulting from the Proposed Project.
- **Visual Resources and Transportation**. The alternative would eliminate visual and transportation impacts associated with Proposed Project's two crossings of I-10.

C.4.2.2 SCE Palo Verde Alternative

Description

The proposed DPV2 route for the Devers-Harquahala 500 kV transmission line is generally parallel to SCE's existing 500 kV DPV1 transmission line. However, the DPV2 route differs from DPV1 in that the Proposed Project would not terminate at the Palo Verde Nuclear Generating Station (PVNGS). DPV2 as currently proposed involves building a new 500 kV transmission line from Devers to the Harquahala Generating Station switchyard, and then acquiring the existing Harquahala-Hassayampa 500 kV transmission line. Under the Palo Verde Alternative, the DPV2 line would terminate at the PVNGS Switchyard.

As presented in the 2005 PEA, the Palo Verde Alternative would require construction of a new 500 kV transmission line parallel to the DPV1 transmission line for an additional approximately 14.7 miles to the PVNGS switchyard. This alternative would avoid the need to construct the proposed 5-mile segment from the Harquahala Generating Station Switchyard to the Harquahala Junction. A diagram of the proposed and alternative route construction configurations is shown on Figure C-1a (see enclosed CD), as well as Figure Ap.1-1 (see enclosed CD). Rather than leave the existing DPV1 transmission corridor and follow the existing Harquahala-Hassayampa 500 kV transmission line west to the Harquahala Switchyard, this alternative route would cross from the western side of the DPV1 transmission line to the east, and continue south, parallel to the existing DPV1 and Harquahala-Hassayampa 500 kV lines. The alternative would cross predominantly BLM land to the southeast past Saddle Mountain, and would follow the DPV1 transmission line to the PVNGS Switchyard.

The Certificate of Environmental Compatibility for the Arizona Public Service (APS) PV Hub to TS-5 Project was approved by the Arizona Corporation Commission on August 17, 2005 (Case 128). However, the approval of the APS project does not affect the DPV2 project. If the Palo Verde Alternative were constructed before the southern portion of the PV Hub to TS-5 Project was constructed, it

[3] The Federal Endangered Species Act of 1973, as amended, requires all federal agencies to consider "listed" species in their planning efforts and to take positive actions to further the conservation of these species.

would take the "first position" east of the existing DPV1 line, or vice versa. In either case, both lines would be constructed within a 1,000-foot-wide corridor located east of the existing DPV1 line if that portion of the DPV2 line were to be needed.

For the Palo Verde Alternative, SCE would lease bandwidth from APS and Salt River Project (SRP) between Black Peak Communication Site and PVNGS to support the primary protection circuits.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Palo Verde Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. After analysis of the land acquisition process following permitting and confirmation that the route would not being affected by the TS-5 project, the Palo Verde Alternative was found to be feasible. No technical, regulatory, or legal feasibility concerns exist.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources**. Because one mile of agricultural land would be avoided with this alternative, potential impacts to burrowing owls located in the agricultural lands would be reduced.
- **Agricultural Resources**. The Palo Verde Alternative would avoid approximately one mile of agricultural land that would be crossed by the Proposed Project where construction and operation could interfere with agricultural operations.

C.4.2.3 Harquahala Junction Switchyard Alternative

Description

Overview: This alternative would eliminate the need for construction of the last five miles of the Proposed Project (east of the Harquahala Switchyard). In this alternative, a switchyard would be constructed five miles east of the Harquahala Generating Station to allow the new DPV2 transmission line to interconnect with existing lines at that location, eliminating the need to connect at a substation. The switchyard could also allow interconnection of the Arizona Public Service (APS) TS-5 Project at that point, and because the TS-5 Project has already been approved by the Arizona Corporation Commission, it is possible that APS would construct the switchyard before the DPV2 Project is built.

This alternative would require construction of a new switching station east of the Harquahala Generating Station, at the point where the existing Harquahala-Hassayampa and DPV1 transmission lines diverge (a location called "Harquahala Junction"). This alternative would avoid the need to construct the 5-mile segment of the Proposed Project from Harquahala Junction to the Harquahala Generating Station Switchyard. Under this alternative, the Harquahala Junction Switchyard would be built on a site of between 6 and 40 acres in the southwest quarter of Section 25, Township 2 North, Range 8 West, near the intersection of 451st Avenue and the Thomas Road alignment in unincorporated Maricopa County, Arizona. The land is undisturbed desert open space and this alternative is illustrated in Figure Ap.1-1 and Ap.1-1a (see enclosed CD), as well as Figure C-1a (see enclosed CD).

If the Harquahala Junction Switchyard were constructed, it would serve as the eastern termination point for the Proposed Project. Terminating the proposed DPV2 project at the proposed Harquahala Junction Switchyard would require SCE to acquire from New Harquahala Generating Company (HGC) that por-

tion of the Harquahala-Hassayampa transmission line between the proposed Harquahala Junction Switchyard and Hassayampa Switchyard to complete DPV2 (this is currently proposed as part of SCE's project), and the existing Harquahala-Hassayampa transmission line would also need to be shared by APS to complete the TS-5 Project.

In the event the parties reach an agreement and the Harquahala Junction Switchyard Alternative is pursued, the three parties would share the existing Harquahala Junction–Hassayampa transmission line and possibly share the Harquahala Junction Switchyard. This would provide SCE with access to the Hassayampa area, which would obviate the need for the SCE Palo Verde Alternative. The Harquahala Junction Switchyard might also need to be shared by SCE, APS, and HGC.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. Under this alternative, SCE would need to enter into an agreement with HGC and APS in order to acquire the portion of the existing Harquahala-Hassayampa transmission line between the proposed Harquahala Junction Switchyard and Hassayampa Switchyard in order to complete DPV2 and achieve the DPV2 project objectives. If a successful agreement can be established, the Harquahala Junction Switchyard Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The Harquahala Junction Switchyard Alternative would be both technically and legally feasible. The ACC's approval of the PV Hub to TS-5 Project, including an option for APS to build the Harquahala Junction Switchyard indicates that if APS chooses not to build the switching station, that this alternative would be feasible from a regulatory perspective. If APS decides not to build the Harquahala Junction Switchyard as a part of that project, SCE could pursue construction of the switchyard by seeking a similar approval by the ACC. Otherwise, if APS builds the switchyard itself then this alternative could not feasibly be build by SCE.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Ground Disturbance**. Eliminating or deferring the need for almost 20 total miles of new 500 kV transmission line segments would reduce the impacts of short-term construction and ground disturbance as well as impacts to permanent habitat and vegetation removal and the conversion of farmland.
- **Biological Resources**. This alternative would eliminate impacts to the agricultural lands that would be crossed between Harquahala Junction and Harquahala Substation with the proposed route. These agricultural lands could also be habitat for biological resources, such as the burrowing owl. Impacts to the federally protected cactus ferruginous pygmy-owls and/or its habitat, which is also historically known to occur in the area east of Harquahala Substation to PVNGS, would be reduced due to the elimination or deferral of almost 20 miles of new 500 kV transmission lines.

C.4.2.4 Alligator Rock Alternatives

There are three potential reroutes around the Alligator Rock area that may reduce impacts to cultural resources; they are described in the following sections. A fourth route is addressed in Section 3.2.1.11 of Appendix 1 of this EIR/EIS and was eliminated after preliminary screening. The Alligator Rock alternatives are illustrated in Figure Ap.1-5 (see enclosed CD), as well as Figure C-1 (see enclosed CD).

C.4.2.4.1 Alligator Rock–North of Desert Center Alternative

Description

Approximately 5 miles east of Desert Center (between MPs 149 and 150), the Alligator Rock–North of Desert Center Alternative route would diverge from the Proposed Project route and would head northwest for approximately 1.5 miles before crossing I-10 to the north and continuing for 1.1 miles to an unnamed east-west dirt road along the section line. The route would then turn to the west and would parallel the roadway for approximately 1.4 miles before turning again to the northwest for 0.6 miles. The route would then turn west along another east-west section line, staying just within BLM land (north of private land at Desert Center) for another 0.6 miles before heading southwest for 1.5 miles to Ragsdale Road. The route would parallel Ragsdale Road and I-10 to the north for 3.6 miles before crossing back to the south of Ragsdale Road and I-10 to rejoining the proposed route 1.5 miles later. The 11.8-mile route would be ~~entirely~~ primarily on BLM land and on private land for 3 miles near its western end. The Proposed Project for this segment would be 10.6 miles long.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Alligator Rock–North of Desert Center Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be located mostly on BLM land but would not require amendments to Resource Management Plans. This alternative is regulatorily, technically, and legally feasible.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources**. This alternative would be preferred over the Proposed Project because the habitat is somewhat more degraded and because of the higher level of human disturbance. The density/ distribution of desert tortoise along this route is likely to be less than the other Alligator Rock Alternatives and the Proposed Project.
- **Cultural Resources**. This alternative would avoid a central portion of Alligator Rock ACEC, the 7,726-acre area of archaeological significance that would be affected by the Proposed Project. A survey of this route was completed by the EIR/EIS team, and a total of 16 sites (isolated artifacts are not eligible for the NRHP) were identified along this alternative route. Unlike the high value sites along the Proposed Project through the ACEC, most of these sites are so small that they could easily be avoided during construction.

C.4.2.4.2 Alligator Rock–Blythe Energy Transmission Route Alternative

Description

This route would diverge from the Proposed Project route and avoid much of the Alligator Rock ACEC by following its northern edge near I-10. This alternative would follow the proposed Blythe Energy Project Transmission Line Project (BEPTL) by diverging from DPV1 to the north bringing this new alignment close to Aztec Avenue, an existing El Paso Natural Gas Pipeline/access road, which would be used for construction access. Because the proposed new alignment would be close to the pipeline access road, each of the spur roads to the tower sites would be from this existing access road.

The alternative would diverge approximately 3.5 miles east of Desert Center at the point where the DPV1/DPV2 line turns west-southeast (MP 151). The route would continue northwest towards I-10 paralleling Aztec Avenue for approximately 2.25 miles before turning west and paralleling the southern side of I-10 as well as Aztec Avenue for 1.0 mile. At this point the route would turn back toward the Proposed Project to the southwest and would parallel an access road along the eastern side of Alligator Rock for approximately 1.35 miles to where it would rejoin the proposed DPV2 project at MP 155. The alternative route would be approximately 4.6 miles long and the Proposed Project would be approximately 3.95 miles long in the same segment.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Alligator Rock–Blythe Energy Transmission Route Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be located mostly on BLM land but would not require amendments to Resource Management Plans. This alternative is regulatorily, technically, and legally feasible.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources**. This alternative is located closer to I-10, in habitat that is more disturbed than the areas located in the route of the Proposed Project. Since this alternative traverses more disturbed habitat, there may be a reduced likelihood that special status plant and wildlife species occur, such as the desert tortoise.
- **Cultural Resources**. This alternative would avoid a central portion of Alligator Rock ACEC (7,726-acre area of archaeological significance). This route would avoid the North Chuckwalla Mountains Petroglyph ("rock art") NRHP District, which is within the Alligator Rock ACEC, and North Chuckwalla Mountain Quarry District. As well, it would avoid impacts to two very significant prehistoric trails and three prehistoric rock ring sites. It is likely that there are other trail segments in this corridor, as well as lithic scatters, possibly rock rings, and likely remains from Patton's Desert Training Center activities. Like the Proposed Project, there are existing access roads and utility corridors. Most of the significant features within the archaeological sites in the ACEC could probably be avoided during construction, through careful routing of stub roads and tower placement.

C.4.2.4.3 Alligator Rock–South of I-10 Frontage Alternative

Description

This alternative route is the same as the route proposed for the Desert Southwest Transmission Project (see Section C.4.4). The South of I-10 Frontage Alternative would diverge from the Proposed Project approximately 3.5 miles east of Desert Center and would follow the Alligator Rock–Blythe Energy Transmission Route Alternative route for 3.25 miles to the point at which the BEPTL Alternative turns southwest, just east of Alligator Rock. After passing between the northern end of Alligator Rock and the I-10 itself, this alternative would continue in a westerly direction, immediately south of I-10 and Aztec Avenue for 6.5 miles. It would rejoin the Proposed Project route between MP 160 and 161. The Alligator Rock–South of I-10 Frontage Alternative would be 9.77 miles long and the proposed route would be 9.2 miles long in the equivalent segment.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Alligator Rock–South of I-10 Frontage Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be technically, legally, and regulatorily feasible. Analysis performed for the Desert Southwest Transmission Project (DSWTP) Final EIS has stated that there would be adequate space in the ROW for the construction of a 500 kV line adjacent to the El Paso Natural Gas Pipeline between Alligator Rock and I-10 (BLM & IID, 2005). However, if DSWTP were built prior to DPV2, then there could be space constraints; it is unlikely that there is adequate space for two 500 kV lines to be installed in addition to the existing natural gas pipeline in the narrow area between the north end of Alligator Rock and I-10.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources**. The habitat along the south side of Interstate 10 is more disturbed than the habitat that lies further south (within the ACEC) because of traffic mortality and flood control devices installed and maintained by Caltrans. The amount of human disturbance is generally highest near the freeway and lessens as one proceeds south toward the hills. The Greystone/Alice Karl and Associates report (2005) also showed that there was less tortoise sign present along this alternative route than the Proposed Project, and approximately the same amount as the Blythe Energy Project route. Since this alternative is closer to I-10, it would most likely be located in an area with less potential for desert tortoise impacts.
- **Cultural Resources**. This alternative would avoid a central portion of Alligator Rock ACEC (7,726-acre area of archaeological significance). A total of 15 sites have been identified within this alternative route corridor; however, most are NRHP-ineligible, or are so small that avoidance is easily feasible. Project impacts could possibly occur at the following five sites: P33-13648 (the series of rock cairns and lithic scatters, discussed above); CA-RIV-1815 (rock rings with lithic scatters); CA-RIV-1816 (rock ring with lithic scatter); CA-RIV-1173 (Desert Steve's memorial); and CA-RIV-1383 (the North Chuckwalla National Register Petroglyph District). Tower placement could result in avoidance to impacts at the first four sites. While some impacts within the National Register District may be unavoidable, the Proposed Project would also pass though this area with more severe effects. Therefore, the Proposed Project segment is more sensitive, with two National Register Districts and several other potentially NRHP-eligible sites, whereas the South of I-10 Alternative crosses one National Register District and a few other potentially NRHP-eligible sites.

C.4.3 Transmission Line Route Alternatives: West of Devers

C.4.3.1 Devers-Valley No. 2 Alternative

Description

The Devers-Valley No. 2 Alternative (D-V Alternative) would be a new 41.6-mile 500 kV line following the existing SCE Devers-Valley No. 1 500 kV transmission line corridor (see Figure Ap.1-8 on the enclosed CD, as well as Figure C-1, also on the enclosed CD). The route would traverse a small portion of the San Bernardino National Forest (SBNF) and the Santa Rosa and San Jacinto Mountains National Monument (National Monument). It would cross the Pacific Crest National Scenic Trail (PCT). In addition to a Special Use Easement and depending on determinations made by the USDA

Forest Service, use of this alternative route may require amendments to the SBNF Land Management Plan, the National Monument Proposed Management Plan, and an existing MOU between BLM, Forest Service, and the Pacific Crest Trail Association (PCTA). While a portion of the corridor ~~is within~~traverses a designated wilderness area, the SCE transmission corridor was specifically excluded from wilderness by Congress (see detail in Section 4.3.1 in Appendix 1).

As shown in Figure Ap.1-9 (see enclosed CD), construction of this alternative would require the expansion of the Devers Substation to the northeast, into an area already owned by SCE and currently disturbed, but not graveled.

Route Description

Devers Substation to Highway 111. The alternative would depart the Devers Substation and head west along the Devers-Valley (D-V) No. 1 500 kV transmission line corridor, with each new alternative tower being located about 130 feet south of the existing D-V towers, where feasible. In relatively flat areas, SCE states that it will attempt to locate the new Devers-Valley towers adjacent to existing structures. However, this not always feasible due to topography, line crossings, varying span lengths due to angle points, and increased tower heights due to higher line ratings. In hilly or mountainous terrain, tower locations are generally dictated by terrain features and tower-for-tower spotting is not feasible.

For the first 2.7 miles out of the Devers Substation, the existing D-V line, the D-V No. 2 Alternative, and the WOD components of DPV2 would share the same corridor. Upon reaching the community of Whitewater (approximately 0.2 miles west of Marion Road), the alternative would turn southwest and cross Interstate 10. The alternative route would continue southwest along the D-V corridor, passing through undeveloped areas within the jurisdiction of the City of Palm Springs for approximately 1.4 miles.

National Monument and National Forest Lands. At the Highway 111 crossing, the corridor enters the Santa Rosa and San Jacinto Mountains National Monument. The route would traverse 1.3 miles (six towers) on the valley floor, then travel southwest up the San Jacinto Mountains and through the rugged terrain of the National Monument to exit the SBNF and Wilderness area at Tower DV-49.

Cabazon Area. After dropping down from the mountains and leaving National Forest/National Monument lands, the route would continue northwest for 0.9 miles, passing through the unincorporated residential area known as Cabazon Estates. The D-V Alternative would parallel Esperanza Avenue to the south and would proceed into the San Gorgonio River at the western end of Esperanza Avenue, traveling approximately 1.7 miles. Along Esperanza Avenue and just west of Tower DV-58 (in T3S R2E, Section 20), there would be two options (occurring in a short, 1,300-foot long segment):

- Option 1 would be to continue parallel to the existing D-V No. 1 transmission line, with the new D-V No. 2 tower installed approximately 130 feet south of the existing Tower DV-59.
- Option 2, which is most likely according to SCE, would require that the existing D-V tower (Tower DV-59, located at the southern end of Orange Street) and the alternative tower would move approximately 500 feet to the north.[4] In order to implement this option, SCE ~~would likely have to~~has purchased the properties north of the NW ¼ of NE ¼ of Section 20.

[4] When the D-V No. 1 line was constructed in 1986, this parcel was not owned by the Morongo Indian Tribe. According to SCE, the tribe acquired the parcel in an exchange handled by the BLM in the year 2000, based on Senate Bill S.1840 (Bureau of Indian Affairs Document PL 106-568) which transferred a 40-acre parcel of

Areas South of Banning and Beaumont. Traveling west an additional two miles, the route would turn northwest and would pass between two parcels owned by the Morongo Indian Tribe. For approximately 1.1 miles, the alternative would traverse the City of Banning, north of and parallel to Porter Street within Smith Creek. Continuing west-southwest for another 0.7 miles through the City of Banning, the route would turn west and would traverse one mile of open space and scattered rural residential land, approximately 230 feet south of the parcel's northern boundary.

Potrero ACEC to Gilman Springs Road. The route would continue west for one mile adjacent to and traversing Smith Creek, at which point it would traverse the northern boundary of the Potrero ACEC. The D-V Alternative would be within the ACEC for approximately 1.7 miles.

The alternative would cross Highland Springs Avenue (which is the boundary between the Cities of Banning and Beaumont) going west and approximately 0.7 miles west-southwest of Highway 79, the route would turn west and may traverse the northwest corner of the Lamb Canyon Agricultural Preserve.[5] Traveling west for approximately 2.6 miles, the route would cross Laborde Canyon and the adjacent open space areas.

Gilman Springs Road to Valley Substation. The D-V Alternative would exit Laborde Canyon as it would cross Gilman Springs Road, and would continue west for another 2.5 miles across agricultural land. Continuing west across the Ramona Expressway and Princess Ann Road, the route would travel outside of the northwest boundary of the City of San Jacinto and would cross the Colorado River Aqueduct.

The alternative would continue west across the Lakeview Mountains for approximately four miles, crossing Chastity Road, Mt. Rudolf Road, Puslar View Road, Contour Avenue, Juniper Flats Road, and Valley Road. Access roads already exist in this area. Approaching the unincorporated community of Romoland, the route would travel another 1.8 miles past scattered residences located adjacent to the ROW along Briggs Road, Malone Lane, Mountain Avenue, and Mapes Road. The alternative would cross Menifee Road and would turn south, traveling for approximately 0.8 miles until it would terminate at Valley Substation. The final 10 towers would be of "Tetra Tower" design to visually match the existing Devers-Valley No. 1 500 kV transmission line towers.

Construction activities would be similar to those of the proposed Devers-Harquahala 500 kV segment, as described in Section B.3.7 (Construction Activities) of the Project Description in this EIR/EIS and described in Section 4.3.1 of Appendix 1 of this EIR/EIS.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The D-V Alternative would meet all of the stated objectives of the Proposed Project.

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land (the NW ¼ of NE ¼ of Section 20) into trust held by the United States Department of Interior, Bureau of Indian Affairs. This original easement for the D-V No. 1 line through this parcel was granted by BLM. The BLM grant was for a 200-foot wide perpetual right-of-way for the construction, operation, and maintenance of the Devers-Valley No. 1 500 kV line. Under Option 1, SCE would be required to conduct negotiations with the Morongo Tribe to acquire additional rights for construction of the D-V Alternative through this parcel.

5 The existing Devers-Valley No. 1 transmission line towers are not located within the Lamb Canyon Agricultural Preserve. However, the ROW easement crosses into the agricultural preserve.

Feasibility. The D-V No. 2 Alternative would be constructed almost exclusively within an existing 330-foot transmission corridor where an existing 500 kV line has been constructed (although as noted in Appendix 1, Table 1-4a, there are six parcels in which additional ROW would be required), and as such would be technically feasible. However, the D-V Alternative would require a Special Use authorization from the USDA Forest Service for the portion of the alternative located on National Forest System lands. In order to consider issuance of the authorization (easement) to allow construction of the transmission line, the Forest Service must comply with NEPA, the requirements of which would be met through the preparation of this EIR/EIS. After the completion of the Final EIR/EIS, the Forest Service would issue a Record of Decision (ROD) that documents the Forest Service decision on whether to approve authorizing a Special Use Easement as proposed, approve an alternative to the proposed action, or deny SCE's application and the rationale for that decision. If appropriate, the ROD would also address whether Forest Plan amendments would be necessary before a Special Use Easement can be issued to SCE for this alternative.

However, amendments to the following plans may be necessary for approval of this new transmission line: San Bernardino National Forest Land Management Plan; Santa Rosa and San Jacinto Mountains National Monument Proposed Management Plan and Final EIS; and Memorandum of Understanding (MOU) between BLM, Forest Service, and the Pacific Crest Trail Association (PCTA). The USDA Forest Service would need to determine whether the D-V Alternative would be consistent with management direction in the governing Forest Plan. For example, conflicts with the defined scenic integrity objectives that apply to the D-V Alternative route would require a Forest Plan amendment. It is likely that installation of a fully aboveground facility such as the alternative transmission line and associated facilities would not be consistent with Forest Plan direction for desired landscape characters or scenic integrity objectives. If an amendment is required by the Forest Service, the Forest Service would determine the changes that would be necessary to the desired landscape character of the Santa Rosa and San Jacinto Mountains National Monument geographical unit of the San Bernardino National Forest, as established in the Forest Plan.

The requirements for plan amendments would not make this alternative infeasible. Overall, this alternative would be technically, legally and regulatorily feasible. However, it must be noted that construction could be delayed due to the requirement for extensive permitting and coordination with relevant federal land management agencies. Construction of the alternative, while challenging and requiring helicopter construction due to the steep terrain, would be technically feasible.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Land Use**. This alternative would cross substantially less land with adjacent residential land uses (avoiding the residential areas in Banning, Beaumont, Calimesa, and San Timoteo Canyon). In addition, no schools are located within 200 feet of the alternative ROW (there are 6 schools affected by the proposed WOD upgrades).
- **Cultural Resources.** The D-V No. 2 Alternative would avoid crossing the more highly developed area of the Morongo Reservation north of I-10, reducing impacts to tribal values and associated cultural resources.
- **Noise**. This alternative would affect few nearby residences and effects on all of the noise-sensitive receptors along the West of Devers corridor would be avoided under the D-V No. 2 Alternative.
- **Air Quality.** Due to the reduced amount of construction, and particularly the elimination of the demolition of existing structures that would occur with the West of Devers upgrades, the D-V

No. 2 alternative would cause a significant reduction in the South Coast Air Basin (SCAB) emissions, and to a lesser extent the Salton Sea Air Basin (SSAB) emissions. This alternative would reduce emissions to the point where the South Coast Air Quality Management District (SCAQMD) regional volatile organic compounds (VOC) threshold is no longer exceeded. Additionally, this alternative, in place of the proposed West of Devers, would reduce the annual NOx emission to below the General Conformity *de minimis* threshold.

C.4.4 Other Project Alternatives

C.4.4.1 Desert Southwest Transmission Project Alternative

Description

Overview: This alternative would replace an approximately 118-mile long segment of the DPV2 Project between the Midpoint Substation (southwest of Blythe) and Devers Substation. Note that because this alternative is also proposed as a separate project and the BLM has issued a Record of Decision for it (September 15, 2006), the Desert Southwest Transmission Project is also considered as a cumulative project in EIR/EIS Section F.

The Desert Southwest Transmission Line Project (DSWTP) Final EIS/EIR, published by the Imperial Irrigation District (IID) and BLM in October 2005, analyzes a proposed new 118-mile 500 kV line between Blythe and SCE's Devers Substation. The line would originate at a new 25-acre Keim Substation/Switching Station on the south side of Hobsonway east of the center of Blythe near the Blythe Energy Project (BEP) power plant. In addition, the DSWTP would include a new Midpoint Substation/Switching Station, located at the eastern intersection of the proposed line with the existing DPV1 line.[6] The new line from the new Keim Substation/Switching Station to the new Midpoint Substation/Switching station would be constructed as a double-circuit line or two parallel lines.[7] Also, in the future, a new substation could be built near Indio west of Dillon Road, adjacent to the existing transmission line facilities, to connect the proposed transmission line to IID's existing Coachella Substation.

The Final EIS/EIR for DSWTP has been completed and the BLM Record of Decision was published on September 15, 2006, so permitting could be completed earlier than equivalent DPV2 segment. Much of this alternative route would be in the same corridor as SCE's DPV1 transmission line, the proposed DPV2 line, and the proposed Blythe Energy Project Transmission Line Modifications (BEPTL). This alternative is illustrated in Figure Ap.1-11 (see enclosed CD), as well as in Figure C-1 (see enclosed CD). Because the proponents of the California DSWTP are proposing to construct a 500 kV transmission line from Blythe to Devers adjacent to the proposed DPV2 Devers-Harquahala 500 kV transmission line for the majority of the alignment, SCE is exploring a joint project proposal with DSWTP,

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6 A proposed new substation in the Blythe area is referred to as "Midpoint" by both DSWTP (see Section 4.4.1 above) and SCE in their respective applications; however, the actual locations of their respective Midpoint Substations differ, as is shown in Figure Ap.1-10 (DSWTP's Midpoint Substation would be approximately 5 miles northwest of SCE's proposed Midpoint Substation location). In a comment on the Draft EIR/EIS, the DSW proponents asked that the CPUC and BLM consider designation of this substation location as an acceptable location for SCE to interconnect with the DSW transmission line from the Blythe power plants. As stated in Section E.2.1.3 (Proposed Project vs. Desert Southwest Transmission Project Alternative), the two substation sites are considered to be comparable and equally environmentally superior/preferable.

7 Figure B-8 in the Project Description illustrates the design and dimensions of a double-circuit 500 kV line; two parallel lines would require a ROW of at least 300 feet.

where only one instead of two 500 kV transmission lines would be constructed since the parties would share a single 500 kV transmission line in the proposed DPV2 ROW. The joint project would include the construction of a 500 kV substation (see Substation Alternatives in Section C.5.2.7). Even if the projects were joined, the Harquahala-Midpoint 500 kV segment and the WOD upgrades would still be necessary as part of the DPV2 project.

The DSWTP transmission line would originate at the new Keim Substation/Switching Station and would traverse southwest along existing transmission line ROWs in western Blythe for approximately 1.8 miles. At this point it would turn west and proceed approximately 7 miles to the point where it would meet the corridor of SCE's existing 500 kV DPV1 and proposed DPV2 ROWs. A proposed new 25- to 50-acre Midpoint Substation/Switching Station would be developed at this location, which would provide a connection point for DSWTP, DPV1, DPV2, and the 230 kV BEPTL. The proposed line would be built as a double-circuit or two parallel 500 kV lines between Keim and Midpoint Substations.

From Midpoint, the line would parallel DPV1 until approximately 3 miles southeast of Desert Center. At this point, the line would shift to the north to minimize impacts to the Alligator Rock ACEC near I-10 (following the same alignment as the Alligator Rock–South of I-10 Frontage Alternative; see Section C.4.2.4.3). After passing the north end of Alligator Rock, the line would again shift back to the south to return to its parallel alignment adjacent to the existing DPV1 transmission line and DPV2 ROW. If the projects were to be joined, then the DSWTP alignment would follow the proposed DPV2 route through Alligator Rock ACEC.

The proposed DSWTP transmission line would cross to the north side of I-10, approximately 2.5 miles east of the Cactus City rest area, and continue west adjacent to the existing DPV1 transmission line and DPV2 ROW to the termination point at Devers Substation.

Analysis of the DSWTP is presented in the Final EIS/EIR for that project. The impacts from construction of the 500 kV transmission line would be similar to those of the Proposed Project. For the purposes of this alternatives analysis, the DSWTP differs from the Proposed Project in the following respects:

- DSWTP includes the construction of three new substation/switching stations (Keim, Midpoint, and on Dillon Road) that would not be required with the DPV2 Proposed Project (although DPV2 includes an option to construct the Midpoint Substation).
- DSWTP requires construction of one double-circuit 500 kV line or two parallel 500 kV transmission lines for 8.8 miles from Keim Substation to Midpoint Substation.
- DSWTP would diverge from the DPV1 corridor to the north (closer to I-10) in the vicinity of Alligator Rock for approximately 9.5 miles.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The DSWTP Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The DSWTP Alternative is the subject of a separate EIR/EIS that has been certified by the Imperial Irrigation District. That document found the project not to have any legal, technical, or regulatory feasibility concerns.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources**. The habitat along the south side of I-10 near Alligator Rock is more disturbed than the habitat that lies farther south, because of mortality from automobiles and traffic and from flood control devices by Caltrans. Since DSWTP would diverge from the DPV2 corridor and would be closer to I-10, it would most likely be located in an area with less potential for desert tortoise impacts around Alligator Rock.
- **Cultural Resources**. This DSWTP alternative would avoid a central portion of Alligator Rock ACEC (7,726-acre area of archaeological significance) by diverging north from the proposed DPV2 corridor and closer to I-10 where it is more disturbed. The proposed route would be more sensitive, with two National Register Districts and several other potentially NRHP-eligible sites, whereas the DSWTP alternative would cross one National Register District and only a few other potentially NRHP-eligible sites in this area.

C.5 Alternatives Eliminated from Full EIR/EIS Evaluation

C.5.1 Introduction

As discussed in Section C.1, alternatives were assessed for their ability to reasonably achieve the project objectives and reduce the significant environmental impacts of the Proposed Project. Also, their technical, legal, and regulatory feasibility was evaluated. Based on these screening criteria, the alternatives eliminated from EIR/EIS consideration are listed above in Section C.3.2. The rationale for elimination of each alternative is summarized below and presented in detail in Section 4 of Appendix 1 of this EIR/EIS.

C.5.2 Transmission Line Route Alternatives: Devers-Harquahala

C.5.2.1 SCE North of Kofa NWR–South of I-10 Alternative

Description

This alternative route in Arizona was evaluated in the BLM's EIS (1978) for the DPV1 transmission line. The route was also selected for further evaluation for the 1985 DPV2 project by both SCE and BLM at the time of the previous studies in response to potential concerns regarding impacts to the Kofa NWR and protection of the desert bighorn sheep. SCE also included a similar alternative in the 2005 PEA as Subalternate 1 (North of Kofa NWR, South of I-10 Subalternate Route).

The EIR/EIS did not specifically consider an alternative that would parallel I-10 within the highway right-of-way, because the Arizona Department of Transportation (ADOT) would have to issue an encroachment permit for this use. Any alternative that would occupy an ADOT Highway ROW would be subject to the "Arizona Encroachments in Highway Rights of Way" (Rule No. R-17-3-702) as well as additional provisions required to obtain ADOT approval for a lease of a longitudinal corridor. However, according to the ADOT Guide For Accommodating Utilities On Highway Rights-Of-Way (1998),[8]

[8] Arizona Department of Transportation, Utility and Railroad Engineering Section. 1998. Online at http://www.azdot.gov/Highways/utilities/pdf/guide_a.pdf. June 12.

"New longitudinal electric lines will *not* be permitted to be installed within the control of access[9] lines in any location other than within ADOT established utility corridors except in special cases." ADOT defines "special cases" very narrowly. Only an underground lease would be considered within the "control of access" area, and this has been done only in one case (in an urban area). An overhead line would not be allowed (McNary, 2006). See Section 4.4.3 in Appendix 1 and Section C.5.4.2 for a discussion about the environmental and feasibility issues associated with an alternative in which the DPV2 line would be installed underground.

The North of Kofa NWR–South of I-10 Alternative would diverge from the proposed DPV2 route approximately 42.5 miles from its origin at Harquahala Switchyard. The route would head northwest approximately 1.5 miles before turning west-northwest towards I-10, and crossing north of Kofa NWR and the New Water Mountains. Approximately 16 miles from where the route diverged, it would parallel I-10 for 7 miles before turning west away from the interstate for another 4 miles. The route would jog to the northwest for 1.5 miles, then west where it would again parallel I-10 for 1 mile, then would jog back to the southwest. As defined by SCE, the route would head southwest for approximately 14.5 miles, crossing through La Posa Recreation Site and Long-Term Visitor Area, eventually rejoining the proposed DPV2 route 0.5 miles north of Yuma Proving Ground and 8 miles west of Kofa NWR.

The North of Kofa NWR–South of I-10 Alternative would be 3.4 miles longer than the proposed route and would cross 0.75 miles of private land, 3 miles of Arizona State land, and 78.7 miles of BLM land (SCE, 2005a, Table 3-3). This alternative is illustrated in Figure Ap.1-2 (see enclosed CD), as well as in Figure C-2a (see enclosed CD).

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Kofa–South of I-10 Alternative would meet all of the stated objectives of the Proposed Project. However, it would likely take more time to complete permitting requirements, so it would not likely be completed by the end of 2009.

Feasibility. Because the alternative would be on BLM lands outside of an established BLM utility corridor, its approval would require BLM approval for creation of a new utility corridor. Because the Resource Management Plan does not specifically prohibit transmission lines in this area, a new ROW grant would be required, but a Plan amendment would not be necessary. This requirement would not make the alternative infeasible, but adds to the regulatory complexity of the alternative. This alternative would be technically, legally, and regulatorily feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Additional Length and Ground Disturbance.** This route would be approximately 3.4 miles longer than the proposed route, which will affect the length and intensity of short-term construction impacts and ground disturbance, increasing impacts in air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. In addition, the Proposed Project would be able to utilize existing access roads for

[9] "Control of Access" refers to locations where owners or occupants of abutting lands and other persons have no legal right of access

access to new transmission towers (though new spur roads would be required). According to SCE, the North of Kofa NWR–South of I-10 Alternative; however, would require an additional 48.3 miles of access and spur roads which would result in permanent ground disturbance and corresponding loss of habitat (the SCE North of Kofa NWR – South of I-10 Alternative would affect 87.8 acres of additional disturbance as is shown in Tables Ap.1-3a and Ap.1-3b in Appendix 1).

- **New Transmission Corridor.** This alternative would establish a new transmission line corridor . In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors.
- **Biological Resources – Wildlife.** Although the alternative would avoid crossing the Kofa NWR, it could have greater adverse impacts than the Proposed Project as the route would create a new disturbed corridor through undisturbed BLM Category 2 Desert Tortoise habitat, which could increase impacts, and require more mitigation than building adjacent to an existing line. The Proposed Project in Kofa NWR, while on valuable desert tortoise habitat, does not have a comparative habitat designation since it would not be on BLM-administered land. In addition, there would be a greater potential to impact bighorn sheep with a new corridor along this alternative route.
- **Recreation.** The North of Kofa NWR–South of I-10 Alternative would cross through the heavily used La Posa Recreation Site and Long-Term Visitor Area and adjacent to the La Posa Designated Camping Area. Mineral and gem shows and swap meets during the winter draw tens of thousands of visitors to these recreation areas every year. Construction activities would disrupt recreation in these areas and a new utility corridor through these areas would reduce their recreational value.
- **Visual Resources**. As the transmission line would diverge from the existing DPV1 ROW, it would create new visual impacts with the creation of a new utility corridor. The route would reduce scenic views of the Plomosa Mountains and New Waters Mountains from I-10. Additionally, where the route would cross Highway 95 and the La Posa Plains, the alternative would impact views from residences and recreationists using the La Posa Recreation Site and Long-Term Visitor Area.

C.5.2.2 SCE North of Kofa NWR–North of I-10 Alternative

Description

This alternative was included in SCE's 2005 PEA as Subalternate 4 (North of Kofa, North of I-10 Subalternate), which was considered and eliminated in SCE's PEA. This alternative is similar to the North of Kofa NWR–South of I-10 Alternative (see Section C.5.2.1), except it would cross I-10 twice and Arizona U.S. Highway 60 once to follow the Celeron/All American Pipeline corridor north of I-10. Approval of this alternative would require an amendment to the BLM's Lower Gila South RMP. This alternative is illustrated in Figure Ap.1-2 (see enclosed CD), as well as in Figure C-2a (see enclosed CD).

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Kofa NWR–North of I-10 Alternative would meet all of the stated objectives of the Proposed Project. However, it would likely take more time to complete permitting requirements, so it would not likely be completed by the end of 2009.

Feasibility. Approval of this alternative would require an amendment to the Lower Gila South RMP. The Lower Gila South RMP prohibits overhead lines north of I-10 between townships 16W and 18W

(BLM, 1985). This restriction on overhead lines establishes an 18-mile wide strip running north of I-10 to the northern boundary of the RMP, approximately 17 miles north of I-10. The Lower Gila South RMP prohibits overhead lines in this area due to sensitive lambing grounds for bighorn sheep and sensitive visual resources. The requirement for a plan amendment may not make the alternative infeasible, but it would add a series of regulatory requirements: (a) NEPA clearance of the plan amendment would be required; (b) public noticing would be required by filing in the Federal Register; (c) an extension of the Draft EIR/EIS public review period from 60 to 90 days; and (d) a 60-day Governor's Consistency Review following the publishing of the Final EIR/EIS. The Final EIR/EIS would also have to identify in its title that the EIR/EIS also evaluates a proposed Plan Amendment. It is not known at this time whether BLM would approve the required plan amendment; therefore, regulatory feasibility is not certain. While this alternative would be technically and legally feasible, its regulatory feasibility is in doubt.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Additional Length and Ground Disturbance.** This route would be approximately 5.1 miles longer than the proposed route, which would affect the length and intensity of short-term construction impacts and ground disturbance, including impacts in air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. Therefore the alternative would also have greater permanent ground disturbance and corresponding loss of habitat. (the SCE North of Kofa NWR – North of I-10 Alternative would affect 96.8 acres of additional disturbance as is shown in Tables Ap.1-3a and Ap.1-3b in Appendix 1)
- **New Transmission Corridor.** This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs. As discussed above under Feasibility, plan amendments would be necessary in order for the BLM to grant approval of this alternative ROW due to its location through townships 16W to 18W north of I-10.
- **Biological Resources – Wildlife.** Although the alternative would avoid crossing the Kofa NWR, it would have a greater adverse impact to bighorn sheep than the Proposed Project. The alternative's route between townships 16W and 18W would result in impacts to bighorn sheep lambing grounds identified in the BLM's Lower Gila South RMP, an area deemed unsuitable for overhead transmission lines. Additionally, the route would pass through BLM Category 2 Desert Tortoise habitat, which could increase impacts and mitigation for tortoises.
- **Recreation.** The North of Kofa NWR–North of I-10 Alternative would cross through the La Posa Designated Camping Area in two locations as well as crossing the La Posa Recreation Site and Long-Term Visitor Area. This alternative would cross 3.5 more miles of recreation area than the North of Kofa NWR–South of I-10 Alternative, with construction potentially disrupting recreation

associated with the winter mineral and gem shows and swap meets and reducing the overall recreational value of these areas.

- **Visual Resources**. As the transmission line would diverge from the existing DPV1 ROW, the alternative would create new visual impacts with the creation of a new utility corridor and would impact views both to the north and south of I-10 in different areas, at the two I-10 crossings east and west of the Plomosa Mountains, and the crossing of Highway 60 southwest of Brenda. Similar to the North of Kofa NWR–South of I-10 Alternative, the route would reduce scenic views of the Plomosa Mountains and New Waters Mountains from I-10. Additionally, where the route would cross Highway 95 and the La Posa Plains, the alternative would impact views from residences and recreationists using the La Posa Recreation Site and Long-Term Visitor Area.

C.5.2.3 North of Kofa NWR Alternative

Description

In order to reduce the impacts of the SCE-identified subalternate routes and still avoid the Kofa NWR, the EIR/EIS team developed an alternative that would be shorter and further south than the SCE alternatives. This 37-mile alternative would diverge from the proposed route at the series capacitor just east of the Kofa NWR. It would replace a proposed route segment that is approximately 27 miles long. The alternative route would turn to the north and would parallel the boundary of Kofa NWR for 2.5 miles to its northeast corner. At that point the route would turn to the west and would continue to parallel Kofa NWR boundary for 4.5 miles to the eastern boundary of the New Water Mountains WA where the route would turn to the northwest for approximately 7.0 miles until the route is north of the New Water Mountains and approximately 1.8 miles south of I-10. The route would travel northwest and then south-southwest rejoining the Proposed Project approximately 1.25 miles west of the boundary of Kofa NWR and south of Quartzsite. This alternative is illustrated in Figure Ap.1-2 (see enclosed CD), as well as in Figure C-2a (see enclosed CD).

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Kofa Alternative would meet all of the stated objectives of the Proposed Project. However, it would likely take more time to complete permitting requirements, so it would not likely be completed by the end of 2009.

Feasibility. While the route would be outside of the BLM utility corridor (within one mile of I-10), BLM states that no plan amendment would be required since construction of a transmission line is not prohibited by the Lower Gila South Resource Management Plan in this area. Thus, overall this alternative would be technically, legally, and regulatorily feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Additional Length and Ground Disturbance.** This route would be approximately 10 miles longer than the proposed route, which will affect the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. In

addition, the Proposed Project would be able to utilize existing access for access to new transmission towers. The North of Kofa NWR Alternative, however, would require additional access and spur roads which would result in permanent ground disturbance and corresponding loss of habitat. (the SCE North of Kofa NWR Alternative would affect 127.6 acres of additional disturbance as is shown in Tables Ap.1-3a and Ap.1-3b in Appendix 1)

- **New Transmission Corridor.** This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs.
- **Biological Resources.** The EIR/EIS team completed a biological survey of the entire length of the North of Kofa Alternative on December 5-7, 2005. The following biological factors were considered and evaluated during the survey, including:
  - Suitable habitat or presence of nine federally listed species protected under the Endangered Species Act (i.e., threatened, endangered, or candidate for La Paz County)
  - Suitable habitat or presence of State listed wildlife species (i.e., Wildlife of Special Concern in Arizona [WSCA])
  - Plants protected under the Arizona Department of Agriculture's (ADA) Arizona Native Plant Law
  - Suitable habitat or presence of sensitive status species listed by the BLM that occur in the Yuma field office area
  - Birds protected under the Migratory Bird Treaty Act
  - ADA and BLM listed noxious weed species.

  The results of the survey in regards to the above-mentioned biological regulations and concerns included the following resources:

  - Suitable habitat for the Sonoran Desert tortoise (BLM sensitive and State WSCA) was identified along almost the entire route.
  - Suitable habitat and suitable migratory habitat for the desert bighorn sheep was identified along the route within the Plomosa Mountains, and adjacent to the route north of the New Water Mountains and New Water Mountains Wilderness Area.
  - Loggerhead shrikes, a BLM sensitive status bird, were observed near the southwest and southeast ends of the route.
  - No special status bat species were observed; however, a few mineshafts were observed near the central portion of the route on BLM and private land.
  - Several species of plants protected under the ADA Arizona Native Plant Law were observed along the route. Protection categories did not include any Highly Safeguarded plants.

  Overall, this alternative would require disturbance of a 37-mile corridor that is relatively undisturbed at this time. A new access road would need to be constructed, following portions of existing unpaved or 4-wheel drive roads. In addition, disturbance would occur in areas with no existing access roads, such as mountain foothills. Bighorn sheep inhabit the mountainous areas of western Arizona and

migrate through the foothills when moving from one area to another. When comparing this alternative route to the proposed route through the Kofa NWR, the same types of biological resources would be affected; however, the degree of effect would increase significantly when assessing impacts to the bighorn sheep due to the creation of a new corridor through undisturbed wilderness. The North of Kofa Alternative would pass through Game Management Unit (GMU) 44B South, which includes the Plomosa and New Water Mountains and has had a downward trend from 2002 to 2003. The alternative route would affect an area not currently crossed by a utility corridor, and would require disturbance of much more land than the proposed route.

- **Cultural Resources**. The following four archaeological sites were identified and recorded during the records search on December 12, 2005 and survey performed by the EIR/EIS team on December 13–19 2005, including:
  - A historical-period can scatter with a filled-in mine shaft, located where Plomosa Wash crosses the project area. Some modern debris is present along with a trailer and modern wells that appear to still at times be in use;
  - A historical-period site approximately 0.5 miles north of Site #1, where Scaddan Wash intersects the project area. It consists of three terrace rock features and a light can scatter; where top terrace feature meets desert pavement, there is a rock foundation of uncertain function approximately 4 feet on a side;
  - Two rock rings, likely Native American in origin, south of the pot break (discussed under Site #5 below); and
  - A group of five mine shafts that are likely modern, although a historical-period tobacco tin was present nearby; the shafts are located south of the historical-period site at Plomosa Wash (Site #1).

  Two other possible sites were recorded, that could either be designated sites or isolated occurrences; in either case, recording has exhausted their research potential. These possible sites include:
  - A prehistoric pot break consisting of approximately 100 sherds; and
  - A chipping station, with approximately 25 artifacts (secondary and tertiary flakes) of green quartzite, all from same cobble, in an area approximately 5 meters in diameter.

  These two possible sites are most likely isolated occurrences and as such they would not be considered significant and no further investigations are necessary. Approximately 20 other isolated occurrences were recorded, primarily cairns or mining test pits, as well as a few cans, flakes, and one core. As these do not qualify as sites, they cannot be considered significant and no further investigations are necessary.
- **Visual Resources**. As the transmission line would diverge from the existing DPV1 ROW, the alternative would have potentially significant visual impacts resulting from the creation of a new utility corridor. The route would affect scenic views of the Plomosa Mountains and New Waters Mountains from I-10, as well as the potential future Dripping Springs ACEC.

C.5.2.4 SCE North of Blythe Alternative

Description

This alternative was included in SCE's 2005 PEA as Subalternate 2 (North of Blythe through Colorado Indian Reservation), which was considered and eliminated in PEA Section 3.1.2.1. The North of Blythe Alternative would cross agricultural land and would pass through a portion of the Colorado River

Indian Tribe (CRIT) Reservation. It would be 3.3 miles longer than the proposed route. This alternative is illustrated in Figure Ap.1-3 (see enclosed CD), as well as in Figures C-2a and C-2b (see enclosed CD).

Based on information provided on Subalternate 2 in SCE 1988 Amended PEA, the North of Blythe Alternative would depart the proposed DPV2 route approximately 1.5 miles west of Eagletail Mountains and 3 miles south of Salome Emergency Airfield. The route would then meet and parallel I-10 in a northwesterly direction below Bear Hills eventually crossing I-10 and then crossing Arizona U.S. 60 approximately 4 miles northwest of the I-10 crossing. The route would traverse the Plomosa Mountains and the Dome Rock Mountains before passing through the CRIT Reservation and heading towards the Colorado River. After crossing the river and traversing west to a point 4 miles north of Blythe Airport, the route would turn in a southwesterly direction for approximately 7 miles, where it would cross I-10 and rejoin the proposed route one mile south of I-10.

Potential Alternative Variation. Because this alternative, as designed by SCE and illustrated in Figure Ap.1-3 (see enclosed CD), would rejoin the Proposed Project west of Blythe, use of the Midpoint Substation designated by SCE would not be possible. The North of Blythe Alternative could be used with either the Mesa Verde or Wiley Well Alternative Substation sites, but as noted in Section C.5.2.7 below these two alternatives (suggested by SCE) have been eliminated from consideration in this EIR/EIS due to their greater impacts than the Midpoint Substation. Therefore, in order to ensure that this alternative was feasible, a substation location would have to be identified.

As suggested by the City of Blythe during scoping, this alternative could also be designed to pass adjacent to the existing power plant (BEP I) and approved (but not constructed) power plant (BEP II), within the City of Blythe. With this route modification, the alternative would follow the 6.7-mile corridor mostly adjacent to an existing Imperial Irrigation District (IID) 161 kV transmission line from Buck Boulevard Substation to Midpoint Substation where it would join the existing DPV1 and proposed DPV2 corridor. The 6.7-mile route has also been proposed for the Blythe Energy Project 230 kV Transmission Line Modifications (CEC, 2006).

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Blythe Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The Lower Gila RMP restricts overhead power lines north of I-10 between townships 16W and 18W and establishes an approximately 18-mile wide strip running north of I-10 (essentially to the northern boundary of the RMP approximately 17 miles north of I-10) through which overhead power lines cannot be built. The requirement for a plan amendment may not make the alternative infeasible, but it would add a series of regulatory requirements: (a) NEPA clearance of the plan amendment would be required; (b) public noticing would be required by filing in the Federal Register; (c) an extension of the Draft EIR/EIS public review period from 60 to 90 days; and (d) a 60-day Governor's Consistency Review following the publishing of the Final EIR/EIS. The Final EIR/EIS would also have to identify in its title that the EIR/EIS also evaluates a proposed Plan Amendment. It is not known at this time whether BLM would approve the required plan amendment; therefore, regulatory feasibility is not certain.

Overall this alternative would be technically feasible, but its legal feasibility would depend upon required approval of the CRIT. According to SCE, the CRIT Tribal Council denied SCE a right-of-way for the DPV1 line in 1977, indicating that it would adversely impact the tribe. At the time of SCE's 1988 amended PEA, SCE stated that the CRIT indicated that a right-of-way would not be approved for the proposed

DPV2 project. Regulatory feasibility is in question due to the required amendment of the BLM Resource Management Plan.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Alternative Length and Ground Disturbance**. The North of Blythe Alternative would be 3.3 miles longer than the proposed route, which would increase the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. Overall, SCE states that 138 acres of permanent ground disturbance would occur with this alternative from where it would leave the DPV1 route to where it would rejoin the DPV1 ROW, compared to 11.7 acres for the equivalent portion of the proposed route (SCE, 2005a).
- **New Transmission Corridor**. This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs. An amendment to the RMP would be required in order for the BLM to grant approval of this alternative ROW (see discussion under Feasibility above). Finally, this new ROW may set precedent for future development of utilities in this corridor (future land use impacts).
- **Biological Resources**. This alternative would pass through Arizona Game and Fish Department (AGFD) Game Management Units 44B (includes Plomosa Mountains) and 43A (includes Dome Rock Mountains), found to be bighorn sheep habitat with good and increasing populations since the mid-1990s, which was last surveyed for population in 2003. This alternative would create potentially significant impacts to high-quality bighorn sheep habitat, including a major movement corridor between Ibex Peak/Haystack Peak and Lazarus Tanks mountain block and nearby lambing areas in the north Plomosa Mountains. Because the North Plomosa lambing area is active, this alternative poses greater impacts to bighorn sheep than the Proposed Project, even though the proposed route passes through the Kofa NWR (Henry, 2005).

  This alternative would increase disturbance and removal of vegetation by 126 acres. This could significantly increase the chance that special status species would be affected by the increase in disturbed area. Also, this increase in disturbed area could increase the chance of noxious weed introduction and also remove more native desert vegetation. The alternative would have greater impacts to vegetation in desert washes, especially between the McCoy and Big Maria Mountains and many smaller washes that braid through the bajadas adjacent to the mountains.

  The North of Blythe Alternative has the potential for significant impacts on the desert tortoise. This route would be in BLM Category 2 and 3 Desert Tortoise habitats, as would the Proposed Project. This species likely occurs in the areas north of I-10, particularly near the base of the McCoy and Big Maria Mountains. The impacts to desert tortoise may be greater with this alternative than the Proposed Project because the route would traverse more native habitat than the Proposed Project.

Without focused survey information, however, a definitive conclusion on the actual impacts to tortoises cannot be made.

Without focused surveys for burrowing owl, other special status plant and wildlife species, and listed plants, it is difficult to determine the impacts of this alternative on these species. This alternative appears to cross a larger acreage of native habitat than does the proposed route, however, so there may be a greater likelihood that there will be impacts to these species than with the Proposed Project.

- **Agricultural Resources**. This alternative would cross agricultural land on the CRIT Reservation and would create potentially significant impacts to Prime Farmland in Parker Valley. The North of Blythe Alternative would cross approximately 1.25 miles of agricultural land north of the City of Blythe, a portion of which is categorized as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). The North of Blythe Alternative would also run adjacent to and cross lands currently under Williamson Act contract. The route would run parallel to Williamson Act Prime contract lands in Section 33, Township 05 South, Range 23 East and would cross a small portion of a Williamson Act Prime contract in Section 19, Township 05 South, Range 24 East. Conversion of Farmland and Williamson Act contract lands due to the construction of transmission towers would be considered significant and potentially unmitigable impacts. This would be less, however, than the Proposed Project, which would cross 9.8 miles of agricultural lands, much of which would be categorized as Farmland and Williamson Act contract lands, and impacts to which would also be considered significant and potentially unmitigable. The North of Blythe Alternative would traverse only a quarter of the amount of Williamson Act contract lands compared to that crossed by the Proposed Project. While the types of impacts caused by the North of Blythe Alternative would be the same as those caused by the Proposed Project, the extent of impacts would be less than a quarter of the Proposed Project's impacts over the same portion of the route.

- **Visual Resources**. The presence of the new line could create significant impacts in a new corridor in the northern portion of the Plomosa and Dome Rock mountains, in the Colorado River riparian area, and through agricultural land in the Palo Verde Valley. Impact to scenic values for views from I-10 with strong contrasts south of Bear Hill and west of Blythe Airport; State Route (SR) 95 in the La Posa Plains; U.S. 60 west of Brenda, Poston Road, and Midland Road; and U.S. 95 north of Blythe. Significant impact to residential views near Brenda and along the Colorado River (2005 PEA references 1988 PEA, p. 10-78 – 10-84).

  This alternative would create new significant visual impacts as the transmission line converges on, parallels, and then crosses to the north side of I-10 and then crosses U.S. 60 southwest of Brenda. It would also result in substantial visual impacts to residents on the west side of Brenda. This alternative would also cause visual impacts (a) to the La Posa Designated Camping Area at the Plomosa Campground (viewing south), (b) on views from Arizona 95 at the crossing, and (c) to back-country recreationists accessing the Boyer Gap area. Further west, the North of Blythe Alternative would also cause significant visual impacts at the crossings of the Colorado River and U.S. 95. Visual impacts may also occur on views from the Midland Long-Term Visitor Area north of Blythe. Significant visual impacts would occur as the North of Blythe Alternative route crosses the southern end of the McCoy Mountains and then I-10, approximately 4 miles west of Mesa Verde.

  While the North of Blythe Alternative would avoid the visual impacts on Kofa NWR and the adverse visual impacts on the La Paz Arroyo–Copper Bottom Pass area, this alternative would result in significant visual impacts at the crossings of U.S. 95 and the Colorado River that would be greater than the Proposed Project given the lack of similar infrastructure features in the vicinity of the northern crossings.

- **Cultural Resources**. There would be greater impacts to cultural resources with this alternative, especially across the CRIT reservation. Consultation with tribal officials would be necessary and tribal approval of the route would be required.

  The Proposed Project segment that would be replaced by this alternative includes 6 potentially NRHP-eligible archaeological sites: 2 prehistoric trails; 2 prehistoric temporary camps; 1 prehistoric cobble quarry with ceramic sherds; and 1 prehistoric and historic trail. The North of Blythe Alternative crosses substantially more cultural resources along its alignment. At McCoy Wash, the line proceeds east along the northern edge of Palo Verde Mesa, and parallels an existing transmission line along the southern flanks of the Big Maria Mountains where it crosses the Palo Verde Valley to the Colorado River and the Colorado River Indian Tribes (CRIT) Reservation. Beyond the political implications of crossing tribal lands, there would be very significant impacts to archaeological sites and sites of religious value to the CRIT. Most of the route parallels or coincides with previous corridor surveys, so that sites types and densities can be estimated fairly accurately. From the west to the east, until reaching the Big Maria Mountains, the route has low archaeological sensitivity (small discrete sherd or lithic scatters on sheet wash alluvial surfaces or between sand dunes). Towards the Colorado River and the Mule Mountains though, the corridor reaches the well-known Colorado River Geoglyphs. This is an area of extensive and complex ceremonial ground figures, trails, cleared circles, cairns, chipping stations, and habitation sites. Four of the geoglyph sites occur directly within this alternative, including a large spectacular and unique anthropomorphic geoglyph interpreted to be a dancing shaman holding a snake or lightning rod. This geoglyph and its associated chipping stations, cleared circles, sherd scatters, cairns, and other remains, along with many other geoglyphs along the river have been approved for NRHP as a Thematic District. Given the sacred nature of the sites along the northern alternative and the need to cross the CRIT Reservation, this alternative has much higher cultural resources sensitivity than the preferred route.

- **Socioeconomics and Public Utilities**. The North of Blythe Alternative route would be approximately 3.3 miles longer than the Proposed Project. The additional distance would require additional water for dust suppression activities, but this additional requirement would not create significant impacts. The North of Blythe Alternative would be located away from the El Paso Natural Gas Pipeline that traverses Kofa NWR, but would follow a portion of the Celeron/All American Pipeline. Although there is always potential for a collocation accident to disrupt utilities, it is unlikely that construction of either route would disrupt the adjacent pipeline.

- **Roadway Crossings**. The transportation impacts of this potential alternative would be greater than the proposed route segment because it would require 2 additional crossings of Interstate 10 (I-10), one additional crossing of Arizona State Highway 60 (SR-60), and one crossing of California State Highway 95 (SR-95).

C.5.2.5 SCE South of Blythe Alternative

Description

The South of Blythe Alternative would begin 2 miles south of the city of Blythe and would cross the Palo Verde Valley in California, about 10 miles south of the DPV1 route, crossing through a portion of Imperial County (see Figure Ap.1-4, as well as Figures C-2a and C-2b, all on enclosed CD). This alternative was included in SCE's 2005 PEA as Subalternate 3 (South of Palo Verde Valley through Imperial County Subalternate).

The alternative route would depart from the proposed DPV2 route 0.5 miles east of the Colorado River and would head southwest for approximately 14 miles. In this segment the route would parallel the Colorado River. One mile north of the Cibola National Wildlife Refuge, the route would turn west, cross the Colorado River into Imperial County, California (about 10 to 12 miles south of the existing DPV1 crossing), and would traverse farmland in the southern Palo Verde Valley. The route would continue west 1.5 miles from the Colorado River and would then turn in a northwesterly direction for approximately 15 miles towards the proposed route, crossing into Riverside County and then through the Mule Mountains. This alternative would rejoin the Proposed Project approximately 1.5 miles south of I-10 and 15 miles west of Blythe (note that this alternative would rejoin the DPV1 route west of the location of the Midpoint and Mesa Verde Substation sites [see Section C.5.2.7 below]).

The South of Blythe Alternative would be 11.5 miles longer than the proposed route. The alternative would cross 4 miles of farmland, which would be less than the 10 miles of farmland on the proposed route.

Rationale for Elimination

Project Objectives, Purpose, and Need. The South of Blythe Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The South of Blythe Alternative would be technically and legally feasible. Amendments to applicable BLM management plans would not be required because the route would not go through a planning area that prohibits transmission lines, even though the South of Blythe Alternative route would be outside of an established BLM utility corridor. Applicable plans are the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan (Arizona) and in California the Northern and Eastern Colorado (NECO) and the California Desert Conservation Area (CDCA) Plans. Therefore, BLM has the authority to permit South of Blythe Alternative route with NEPA clearance, for which this EIR/EIS would be sufficient. Overall this alternative would be technically, legally, and regulatorily feasible.

Because of the location at which this alternative would rejoin the Proposed Project (approximately 1.5 miles south of I-10 and 15 miles west of Blythe), the South of Blythe Alternative could only be used with the Wiley Well Alternative Substation site. This alternative substation site has been eliminated from consideration as described in Section C.5.2.7.2 below. Therefore, identification of an appropriate substation for connection to the DSWTP would be required if this alternative were carried forward for analysis. Because the South of Blythe Alternative has been eliminated due to environmental reasons (see below), further investigation into an alternative substation site was not pursued.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Alternative Length and Ground Disturbance**. The South of Blythe Alternative would be 11.5 miles longer than proposed route, which would increase the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. The route would also cross several sizeable desert washes in the area of the Mule Mountains between the agricultural areas south of the Palo Verde Valley

and the western junction with the Proposed Project. In addition there are many smaller washes that braid through the bajadas adjacent to the mountains, which could be disrupted by construction.

- **New Transmission Corridor**. This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs. Amendment would be needed in order for the BLM to grant approval of this alternative ROW (see discussion under Feasibility above).

- **Biological Resources**. Near the Colorado River crossing, this route would also be only 1.5 miles from the Cibola Wildlife Refuge where there is an abundance of waterfowl, proposed critical habitat for the southwestern willow flycatcher (SWWFL), and suitable habitat for the Yuma clapper rail (YCR). This route would parallel the Colorado River for approximately 16 miles, which could lead to more impacts to the abundant waterfowl or federally listed species (YCR and SWWFL). More bird collisions with the conductors at the river crossing would be likely to occur due to this route's proximity to the Colorado River (i.e., waterfowl habitat).

  Although focused surveys have not been completed for this alternative, there would also be potentially greater desert tortoise impacts, because the alternative may traverse a greater amount of native habitats. The desert tortoise likely would occur in the native habitat areas (probably in low numbers) located west of the agricultural areas of Blythe to the western junction with the route of the Proposed Project. Without focused surveys for burrowing owl, other special status plant and wildlife species, and listed plants, it is difficult to determine what the impacts of this alternative will be on these species. But, this alternative appears to cross a larger acreage of native habitat than does the proposed route, so there may be more likelihood that there will be impacts to these species than with the Proposed Project.

- **Recreation**. The South of Blythe Alternative would be located south of the proposed route, and would create a new transmission line corridor across the southwestern edge of the Mule Mountains ACEC, which is a sensitive natural area that would be avoided by the Proposed Project. The route would also be parallel to the Colorado River along a great length of the river, where recreational use of the river is common (see discussion under Visual Resources, below).

  In addition, hikers, ORV, and recreational users along the Bradshaw Trail (located in southeastern Riverside County and Imperial County near the Mule Mountains) would be potentially impacted by this alternative. The Bradshaw Trail, Riverside County's first road, was blazed by William Bradshaw in the gold rush of 1862 as an overland stage route beginning at San Bernardino and ending at La Paz, Arizona (now Ehrenberg, Arizona). Today, the east-west trail is a 65-mile graded road that traverses mostly BLM land parallel to I-10 to the south and begins approximately 3 miles north of the community of North Shore near the Salton Sea State Recreation Area (near Dos Palmas, California). The eastern end of the trail is 2 miles southwest of the community of Ripley near the Colorado River. The trail crosses about 18 miles southwest of Blythe, California.

- **Visual Resources**. As the transmission line diverges south from the Proposed Project route at the Colorado River, this alternative would create new significant visual impacts. Views from the East Levee Road, which is parallel to the route and adjacent to the Colorado River, would be adversely

affected, as would some views from the Colorado River (depending on tower placement). Adverse visual impacts would also occur at the BLM Oxbow Recreation Site and Imperial County Palo Verde Park (all near the Colorado River crossing). This alternative may also cause additional visual impacts on residences near the Colorado River crossing and on views from the Colorado River at the crossing.

- **Cultural Resources**. While the area in and around the South of Blythe Alternative has not been subjected to detailed archaeological surveys, the area's sensitivity for cultural resources can be projected from adjacent areas. The southern Palo Verde Valley agricultural lands have little potential for significant resources because of alluviation of sites and extensive agricultural disturbance. However, the alignment would cross about 12 miles of heavily dissected terraces parallel to the Colorado River floodplain. Surveys on the California side, in similar flat mesa settings, have revealed many sites ranging in age from 8,000 years to the late prehistoric period. Site types include cleared circles, rock rings and alignments, chipping stations, quarries, ceremonial geoglyphs, and trails with associated pot drops and artifact scatters. Similar types of sites, in high density, would be predicted for the Arizona side, including crossing through the Ripley Intaglio[10] and two other major intaglio groups.

C.5.2.6 Paradise Valley Alternative

Description

GLC Enterprises, LLC (Glorious Land Company or "GLC") submitted a protest letter on May 13, 2005 and a scoping letter on November 14, 2005 regarding SCE's application to the CPUC to construct the Devers–Palo Verde No. 2 Project. The letters contend that if the new 500 kV transmission line is constructed as proposed that it would have significant impacts on GLC's proposal to develop 6,400 acres of property where they plan to develop a new mixed-use community. The proposed new community would be located in Shavers Valley, approximately 13 miles east of the City of Indio in unincorporated Riverside County. The project area is approximately bordered to the west by the Cactus City rest area, to the north by Joshua Tree National Park, and to the south by the Mecca Hills Wilderness Area. The eastern border of the plan area is approximately 5 miles west of Cottonwood Springs Road/Box Canyon Road (GLC, 2005). GLC has also requested a land exchange with BLM to make the project area more rectangular in shape (Sams, 2004) and to allow for water pipeline access.

The protest suggests that the transmission line should be constructed immediately to the south and west of the current proposed alignment and the proposed area of development to avoid impacting GLC's project (see Figure Ap.1-6, as well as Figure C-2b, both on enclosed CD). The scoping letter suggests that both the DSWTP and DPV2 be located in the same new power corridor. However, DSWTP is entirely separate and independent of the Proposed Project; an EIR/EIS for that project has been completed so issues related to it are not addressed here.

Rationale for Elimination

Project Objectives, Purpose, and Need. The Paradise Valley Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. *SCE's Grant of Easement.* SCE has a Permanent and Exclusive ROW on the property (SCE, 2005c), which allows SCE to construct and enlarge its current use of the corridor. The existing DPV1

[10] An intaglio is a large ground drawing created by removing the pebbles that make up desert pavement. These rock alignments, which are sacred to many Native Americans, are usually in the outline of animals or human-like figures and are mostly found on mesas along the Colorado River.

and DPV2 right of way corridor through the Chiriaco Summit (Paradise Valley Development) area consists of Fee, Grant of Easement (the easements were mostly negotiated; however, some rights were acquired thru condemnation), and nonexclusive right of way grant from BLM for the purpose of construction, operation, maintenance, and termination of 500 kV Electrical Transmission Lines, access roads, and appurtenances. The DPV1 and DPV2 ROW rights were obtained simultaneously under the same documents (for private property). However, some easement rights may need to be upgraded. Typically the easement rights obtained thru condemnation are restricted to only what was originally needed to install and operate the transmission line, along with specific access rights, usually nothing covering future installations of any kind (SCE Data Response #2, dated October 5, 2005). As a result of the land use and open space in the surrounding area and SCE's Grant of Easement, a reroute around or within the property would not be necessary.

Regulatory Feasibility – BLM Land Exchange. Constructing the Proposed Project within a corridor separate from the designated utility corridor (e.g., the DPV1 corridor) would create a land use inconsistency because the route would be inconsistent with the BLM RMP. A plan amendment would be needed in order for the BLM to grant approval of this alternative ROW.

GLC has approached BLM with a proposed land exchange in which BLM would acquire approximately 1,100 acres of public lands located within their project in exchange for four parcels of private lands east of the project. The selected public lands are within sections 4 and 12, Township 6 South, Range 10 East, which are adjacent to land held by the GLC.

BLM has informed GLC that these selected public land parcels are within the Chuckwalla Desert Wildlife Management Area, designated for recovery of the Federally threatened desert tortoise under the 2002 Northern and Eastern Colorado Desert Coordinated Management Plan (NECO), and are managed as critical desert tortoise habitat. In addition, these lands are within a utility corridor, designated by the California Desert Conservation Area Plan of 1980, as amended (1999). These utility corridors are managed for existing and future utility development. The BLM has determined that these two issues greatly decrease the probability of completing the proposed land exchange. Given these initial issues, the BLM has not developed a land exchange feasibility report on this proposal, the first step in a lengthy process to analyze a proposed land exchange.

Legal Feasibility. A map (referred to in the letter as Exhibit D and included Figure Ap.1-6 on the enclosed CD) attached to the scoping letter suggested moving both the DPV1 and DPV2 500 kV lines along a southern alignment. This proposal is inconsistent with CEQA and applicable constitutional standards. The reasoning concerning the legal infeasibility of this option is as follows.

The objectives of the Proposed Project could be fully met without any change to the existing DPV1 500 kV line. None of the impacts of the Proposed Project results from the existence, location or operation of the existing 500 kV line, which is properly part of the environmental baseline. See CEQA Guidelines Section 15125(a) ("the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published . . . will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant."). The impacts of the Proposed Project do not include the effects of activities already occurring or facilities already in existence, such as the DPV1 line. See *Riverwatch v. County of San Diego,* 76 Cal. App. 4th 1428, 1451-1453 (1999) (even prior illegal activities were part of the environmental baseline); *accord*, *Fat v. County of Sacramento*, 97 Cal. App. 4th 1270 (2002). Accordingly, moving the DPV1 500 kV line in a new alignment in conjunction with DPV2 under the Paradise Valley Alternative is not permissible under CEQA.

In explaining the "rule of reason" by which alternatives are selected for evaluation, CEQA Guidelines Section 15126.6(f) states, "The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." The "project," as defined by options that can meet project objectives, includes only the installation of a new 500 kV DPV2 line. The effects of the project are limited to the impacts associated with the installation of this 500 kV line. Appropriate alternatives must be limited to those that could avoid or lessen the effects of the 500 kV transmission line. CEQA does not permit the lead agency to try to "fix" or improve the existing environmental setting unrelated to the project — here the DPV1 500 kV line — using a proposed change to the environment as a hook.

As a related point, CEQA specifies that in order for a mitigation measure (and by inference, an alternative) to be feasible, it must meet relevant constitutional standards. See CEQA Guidelines Section 15124.4(a)(4). Such standards include a requirement that there be an essential connection or relationship between an alternative and a legitimate lead agency interest dealing with the Proposed Project (*Nollan v. California Coastal Commission*, 483 U.S. 825 (1987)), and that the alternative be "roughly proportional" in nature and scope to the impacts of the Proposed Project (*Dolan v. City of Tigard,* 512 U.S. 374 (1994)). Again, since the impacts of the Proposed Project stem solely from construction of a new DPV2 500 kV line, and not from the existing DPV1 500 kV line, relocation of the existing DPV1 500 kV line to a wholly new alignment or removal of the 500 kV line cannot reasonably be considered in the CEQA document.

Although requiring SCE to move the existing DPV1 line would not be allowable under CEQA, SCE could voluntarily propose a change in the placement of DPV1 along with the proposed DPV2 lines. However, in order to do this, SCE would need to obtain similar permits to that of the Proposed Project. This change has not been requested by SCE and so it is not considered and/or analyzed in this EIR/EIS.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Ground Disturbance in Undisturbed Open Space**. The Paradise Valley Alternative would create a new transmission corridor though undisturbed open space, which would increase the intensity of short-term construction impacts and ground disturbance due to the construction of new access and spur roads. This construction would create increased impacts in air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and to impact vegetation and wildlife is also increased with greater ground disturbance, especially through previously undisturbed areas.
- **New Transmission Corridor**. This alternative would establish a new transmission line corridor for DPV2 and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors.
- **Biological Resources**. The Paradise Valley project area is bounded on the south by the Congressionally designated Mecca Hills and Orocopia Mountains Wilderness Areas, and on the north by the Joshua Tree National Park. It contains high value desert tortoise habitat. Riparian vegetation was observed within the wash area and would be impacted by the creation of a new separate corridor through undisturbed open space. Thus, given its current natural landscape, the area is most likely host to a variety of plant and wildlife species that could be impacted by a new corridor as well.

- **Visual Resources**. Although the alternative route would be farther south of I-10, this alternative route would create a new, second corridor through a vast open space area, bordered by wilderness.
- **Hydrology**. The alternative would traverse a greater portion of a large wash that would extend from the northwestern portion of the plan area southeast towards Box Canyon Road and thus would be in an area subject to flooding.

C.5.2.7 Substation Alternatives

SCE's PEA states that the Midpoint Substation may be required as a component of the DPV2 project if the DSWTP is completed. This is considered as an optional project component that may or may not be constructed in conjunction with the rest of the project. The PEA includes the evaluation of two alternative sites for the substation that would be located south and west of Blythe, California.

The Midpoint Substation or an alternative would be constructed within a rectangular area approximately 1,000 feet by 1,900 feet, or 44 acres. With the Proposed Project, the terminating transmission tower or turning pole would be the tallest structure at the substation, ranging between 150 and 180 feet. The tallest component in the switchrack, the dead-end, would be approximately 133 feet. The substation would be constructed within a rectangular area approximately 1,000 feet by 1,900 feet (approximately 44 acres).

The switching facilities would be constructed within the substation property. The 500 kV switching station would include buses, circuit breakers, and disconnect switches. The switchyard would be equipped with 108-foot-high dead-end structures. Outdoor night lighting would be designed to illuminate the switchrack when manually switched on.

A new telecommunications facility would be installed onsite to provide microwave and fiber optic communications for protective relaying and SPS requirements. Three new microwave paths and two fiber optic systems would be installed at the Midpoint Substation. The proposed fiber optic systems are Midpoint–Buck Boulevard Substation and Midpoint-Devers-Harquahala.

A 45-foot by 70-foot mechanical-electrical room would be installed onsite to house all controls and protective equipment and a telecommunications room. A microwave tower would also be installed at the substation site.

Construction of the Midpoint Substation will require a temporary laydown area of approximately 5 acres. The laydown area would be located at or near the existing roadway at the preferred or either of the alternative sites.

C.5.2.7.1 Mesa Verde Substation Alternative

Description

This alternative site is located approximately 4.5 miles northwest of the Midpoint Substation site, also north of and adjacent to the DPV1 right-of-way on private land in the northwest quarter of Section 8, Township 3 North, Range 21 East, about 1.5 miles south of I-10. It is located northeast of the DPV1/DPV2 ROW at the point where the corridor turns from northwest-southeast to east-west. This substation alternative would require a 5-mile access road (as opposed to 3 miles with the proposed Midpoint Substation location). This alternative is illustrated in Figure Ap.1-7 as well as Figure C-2b (both on the enclosed CD).

Rationale for Elimination

Project Objectives, Purpose, and Need. The Mesa Verde Substation Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative is regulatorily, technically, and legally feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Alternative Length and Ground Disturbance**. This alternative would require 5.5 miles of access road construction to reach and construct the substation from Wiley Well Road, which will affect the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance.
- **Biological Resources**. Similar to the Proposed Midpoint Substation site, the Mesa Verde Substation site would be located in habitat for Mojave fringe-toed lizard.
- **Land Use**. Use of the Mesa Verde Substation Site Alternative would also create new land use impacts in an open space area by precluding use of private land for other purposes. The Midpoint Substation would be on BLM land.
- **Visual Resources.** There would also be greater visibility from I-10 and the Mesa Verde area (approximately 1 mile south of I-10).

C.5.2.7.2 Wiley Well Substation Alternative

Description

This site is approximately 9 miles northwest of the proposed Midpoint Substation and 5 miles due west of the Mesa Verde site, also north of and adjacent to the DPV1 right-of-way, about 17 miles west of Blythe. The site would be constructed in Section 5, Township 3 North, Range 20 East, about 0.5 miles east of Wiley Well Road on BLM land within the BLM Designated Utility Corridor K. This alternative is illustrated in Figure Ap.1-7 as well as Figure C-2b (both on the enclosed CD).

The Wiley Well Substation Alternative would be accessed via Wiley Well Road, an existing paved two-lane roadway with an exit off of I-10. The substation would be located approximately 0.8 miles south of I-10, just east of Wiley Well Road and immediately adjacent to the north of the DPV corridor. This substation alternative would require only a 100-foot access road (as opposed to 3 miles required for the proposed Midpoint Substation).

Rationale for Elimination

Project Objectives, Purpose, and Need. The Wiley Well Substation Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be located on BLM land but would not require amendments to Resource Management Plans. This alternative is regulatorily, technically, and legally feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Biological Resources**. This alternative substation site would be located in habitat of Mojave fringed-toed lizard (special status species) and within critical habitat for desert tortoise, whereas the proposed Midpoint Substation would not.
- **Recreation**. There would also be greater recreation impacts at the Wiley Well Alternative than at the Midpoint Substation because the site would be adjacent to Chuckwalla Valley Dune Thicket ACEC.
- **Visual Resources**. The closer proximity of this site to I-10 (approximately 0.8 miles south of I-10) and Wiley Well Road would create much greater visual impacts than those at the proposed Midpoint Substation site.

C.5.3 Transmission Line Route Alternatives: West of Devers

C.5.3.1 North of Existing Morongo Corridor Alternative

Description

This 8.9-mile alternative would diverge from the proposed route approximately 0.25 miles east of the eastern edge of the Morongo Indian Reservation. From there the route would head to the northwest for approximately 3 miles before heading west to parallel the proposed route for 4 miles, approximately 2 miles to the north of the existing corridor. The route would then turn to the southwest for 1.5 miles before rejoining the Proposed Project at the City of Banning. The Proposed Project would be approximately 7.5 miles long in this segment. If requirements resulting from the tribal negotiation would require implementation of this alternative, the four existing lines would also be removed from the existing corridor and rebuilt in this corridor. This alternative is illustrated in Figure Ap.1-10, as well as in Figure C-2b (both on the enclosed CD).

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Existing Morongo Corridor Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would proceed only if it were recommended and approved by the Morongo Band of Mission Indians and a new lease would need to be issued in order for it to move forward. The tribe indicated that this alternative was originally suggested because it would remove the existing 230 kV lines from the center portion of the tribal lands, making those lands available for other development options. In addition, due to the rugged terrain of the San Bernardino Mountains, there could be technical feasibility issues with siting all four circuits in a corridor to the north.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Ground Disturbance and Removal Activities.** Removing and reconstructing four transmission circuits would result in greater impacts and longer construction time than required for the Proposed Project's WOD components. This alternative would require removal and disposal of the existing towers, hardware, and conductors, and this additional construction and excavation could result in increased ground disturbance and impacts affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination (especially in the more developed area closer to

I-10), water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance.

- **Biological Resources**. While surveys of this route have not been completed, the habitat farther from I-10 and closer to the San Bernardino Mountains (just south of San Bernardino National Forest) is expected to be of higher quality due to its more undisturbed nature. Therefore, the potential to impact sensitive vegetation and habitat would be much greater under this alternative.
- **Cultural Resources**. In a report by Mooney/Hayes Associates (prepared for SCE), entitled *Cultural Resources Inventory of the Proposed Vista to Devers Transmission Line, Riverside and San Bernardino Counties* (February 2005), it is stated on page iv: "Some consideration has been given to the possibility of relocating a portion of the transmission line to higher elevations where the corridor crosses the Morongo Indian Reservation. This alternative route is conceptual only and while it was subject to limited levels of field reconnaissance, no effort has been made to include this acreage in the APE for the current cultural resource inventory." Although no survey data is presently available, by placing the line in the less disturbed areas farther north on the Morongo Reservation, there would most likely be a greater chance of encountering cultural resources due to the topographic relief and number of stream crossings. The new lines would also cut across entrance to canyons, which may hold a special importance to the tribe. On the other hand, the existing corridor is in an alluvial setting and the only potentially NRHP-eligible site is a historic water conduit that could be easily avoided.

C.5.3.2 Composite Conductor Alternative

Description

This alternative is presented in response to a comment letter filed in the CPUC's General Proceeding (A.05-04-015) prior to the EIR/EIS public scoping period (filed: May 16, 2005 by 3M Composite Conductor Program) and would include the replacement of existing conductors in the West of Devers 230 kV system with Aluminum Conductor Composite Reinforced (ACCR) or Aluminum Conductor Composite Core (ACCC) wires. In contrast to the Proposed Project, which would involve removing 40 miles of a single-circuit wood H-frame 230 kV line and a single-circuit lattice steel 230 kV line, this alternative would make use of existing structures in the corridor. Composite conductors have recently been developed and are being tested to provide roughly two to three times the transmission capability (ampacity) of the standard proposed Aluminum Conductor Steel Reinforced (ACSR) conductors, at somewhat higher but undisclosed costs. California utilities have operated the 3M ACCR on limited installations since 2005. See Section 4.3.3 in Appendix 1 of this EIR/EIS for further details.

Rationale for Elimination

Project Objectives, Purpose, and Need. This alternative would utilize the existing single-circuit 230 kV towers for the conductor conversion. This poses a risk to SCE achieving its system capacity goals for West of Devers because of the age of the existing structures and their outmoded design. Since reconductoring would make use of the existing structures, there would be uncertainty regarding the expected life of the newly reconductored corridor, in particular along portions on aged wood structures. The proposed steel tower double-circuit arrangement would provide a new system that would have a normal life expectancy. The proposed West of Devers upgrades would also provide a uniform capacity to each circuit in the corridor, which provides system stability in the case of an outage of one of the circuits. This would not be achieved under this alternative because of the different types of structures and the variety of conductor sizes across the corridor. An outage would therefore be more likely to overload the

remaining circuits. Additionally, tower replacement would likely be necessary in some areas~~, and costs of this alternative would be notably higher than the proposed West of Devers upgrades, which would diminish the likelihood of achieving the economic objectives of the Proposed Project~~. Use of the outmoded existing structures under this alternative would leave the West of Devers corridor incapable of meeting the basic project objective of adding 1,200 MW of transmission import capability.

Feasibility. Reconductoring the existing WOD 230 kV system with composite conductors appears to be legally, technically, and regulatorily feasible. However, by depending on existing older towers for the conversion, SCE's system capacity goals for West of Devers may not be achieved, which would fail to satisfy the objectives of the Proposed Project.

Potential Environmental Impacts. Because reconductoring the existing towers would not remove the existing single-circuit wood H-frame and lattice steel structures in the Devers–San Bernardino Junction segment, the existing towers would remain. The visual benefit of reducing the number of tower lines in the corridor would not be achieved. Also, these structures are aged and could require slightly more frequent maintenance than the new towers that would be installed under the Proposed Project.

C.5.4 Other Project Alternatives

C.5.4.1 Convert DPV1 from AC to HVDC Transmission Line

Description

This alternative was included in SCE's 2005 PEA (Section 2.2.4.2) and is discussed in further detail in Section 4.4.2 in Appendix 1 of this EIR/EIS. This alternative would modify the existing DPV1 500 kV transmission line to convert DPV1 from an AC line to a high-voltage direct-current (HVDC) line. Based on the preliminary power flow and stability studies, the project scope of the HVDC Alternative was identified as follows:

- Palo Verde Substation: Install a converter and associated filters for 3,000 MW
- Devers Substation: Install a converter and associated filters for 3,000 MW HVDC operation
- Build a new Devers-Valley #2 500 kV transmission line
- Build a new Valley-Serrano # 2 500 kV transmission line
- Drop load at eight SCE A bank stations
- Drop generation in Arizona for the loss of HVDC line

Rationale for Elimination

Project Objectives, Purpose, and Need. Converting DPV1 from AC to HVDC would increase California's transmission import capability from the Southwest and would enhance and support the competitive energy market in the Southwest. The conversion to HVDC would add sufficient transmission import capability to satisfy Proposed Project objectives, but the cost of this alternative would exceed the cost of the Proposed Project. Estimated costs for the HVDC line include: $450M for the two 500 kV HVDC converter stations with ~3,000 MW capacity ($225M at each end); other Devers-Harquahala upgrades (minor); cost of the proposed WOD 230 kV upgrades; and a delay in the project schedule to restart planning.

Increased costs associated with construction of the converter stations and other upgrades would need to be passed on from the transmission owner to the customers of transmission service. This would diminish the economic performance of the line and reduce the likelihood of achieving the economic objectives of the Proposed Project.

Combining the capacity of DPV1 and DPV2 into a single HVDC line, as would occur under this alternative, would decrease the reliability and flexibility of the transmission network. The HVDC line would operate in a manner similar to a new point load at the Palo Verde hub and a new source of power at Devers, and it would place the entire transmission capability of the Devers–Palo Verde corridor onto the single set of existing towers, which would increase the likelihood of large power outages. To address this, operation of the HVDC line would require the grid operator (CAISO) to establish special protection systems (SPS) or remedial action schemes (RAS) such as load shedding in the case of a line outage. Developing SPS and RAS requires planning-level coordination through WECC. The WECC planning process is in its third phase for the Proposed Project, and commencing the planning process for this alternative would delay the ultimate in-service date to beyond 2009. Further, imposing SPS and RAS measures would conflict with the Proposed Project objective of providing increased reliability, insurance value against extreme events, and flexibility in operating the grid. Because an outage of this HVDC line would force SCE to drop load at a number of substations and there would be reduced likelihood of achieving the economic objectives, this alternative would not meet all of the stated objectives of the Proposed Project. Therefore, converting DPV1 from AC to HVDC would increase California's transmission import capability from the Southwest and would enhance and support the competitive energy market in the Southwest, but it would not meet the objectives of providing increased reliability, insurance value against extreme events, and flexibility in operating the grid.

Feasibility. This alternative, as it was defined in SCE's 2005 PEA (Section 2.2.4.2), with the Devers-Valley-Serrano No. 2 500 kV, was eliminated from further study by SCE due to its higher cost when compared to DPV2. Technical feasibility was not examined by SCE in detail because of the economic cost of the alternative. Although the alternative appears to be technically feasible, it would place the entire transmission capability of the Devers–Palo Verde corridor onto the single set of existing towers, which would increase the likelihood of large power outages. As noted above, the alternative warrants dropping load at certain 230/66 kV substations in the event of a double-line outage of DPV1 and DPV2. This limits flexibility in operating the grid.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Land Use and Visual Resources.** Converter stations at Harquahala and Devers would require additional land disturbance beyond that of the Proposed Project. Construction of the converter stations would require permanent disruption of large new land areas, approximately 20 to 40 acres each, near Devers and the eastern termination point. The structure housing each converter station would be approximately 70 to 100 feet tall, and the footprint of the building would be approximately 400 to 600 feet on each side. This would introduce a new industrial land use to the two endpoints.
- **Additional Transmission Lines**. There would be less flexibility for interconnections with other existing or proposed AC transmission lines in the CAISO system, which could lead to construction of additional AC facilities parallel to the HVDC line. Converting DPV1 to HVDC would eliminate the availability of an optional interconnection at the Midpoint Substation in the Blythe area, or at any other location along the Devers–Palo Verde corridor, because the HVDC circuit would not be compatible with the surrounding AC system. The limited access nature of the HVDC circuit means that construction of the BEPTL or DSWTP, which might be avoided with an interconnection to DPV2, would become more likely.
- As this alternative is defined in the PEA, it would create additional environmental impacts due to construction of a second Devers-Valley-Serrano 500 kV line; however, this aspect of the alternative may be avoidable with a HVDC line rating of 2,918 MW.

C.5.4.2 Underground Alternative

Description

In order to construct an underground 500 kV transmission line, insulated power cables would be placed underground along specific high-impact segments or the entire transmission line alignment from Harquahala Substation to Devers Substation. There are four underground technologies for 500 kV that are commercially available: High-Pressure Fluid (HPFF) Cables; Self-Contained Fluid-Filled (SCFF); Solid Dielectric (XLPE) Transmission Cables; and Compressed Gas Insulated Transmission Lines (CGTL).

The choice of insulation, and essentially cable system type, is essentially a compromise as with few exceptions no proven insulation material/cable type is superior to all others in a cost-effective way for every application.

Regardless of the underground technology used, a transition structure would be required at the ends of the underground segment, as well as two transition structures at each substation, to support the underground cable terminations and to connect the underground cable to the overhead bus within the substations. This transition structure would take the place of the substation dead-end structure required for overhead line terminations. It is anticipated that the transition structure would be shorter than the typical overhead line "dead end" structure and would be approximately 80 feet high and with a footprint of approximately 2 to 3 acres. For the HPFF cable option, additional space would be required at the substation for the fluid pressurization equipment.

Undergrounding a 230 kV line for the West of Devers segment would be feasible and has been completed by SCE and Pacific Gas and Electric (PG&E); however, each circuit would require a 3-foot continuous trench creating much greater construction and habitat disturbance impacts than with the overhead Proposed Project.

Rationale for Elimination

Project Objectives, Purpose, and Need. The Underground Alternative would increase California's transmission import capability from the Southwest and would enhance and support the competitive energy market in the Southwest. In addition, in order to be comparable to the Proposed Project, underground construction options must meet the requirement for operation at 500 kV. Therefore, this alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. All of the technologies would be legally and regulatorily feasible. Three of the four technologies would be technically feasible for the Underground Alternative (SCFF, HPFF, and XLPE) in specific circumstances and lengths. For distances less than approximately 1,000 feet, CGTL technology would be feasible as well. However, none of the technologies have been implemented at 500 kV in the United States close to the length of even a portion of the Proposed Project and there has only been limited implementation in other countries. Therefore, as discussed in more detail in Section 4.4.3 of Appendix 1 of this EIR/EIS, the reliability of underground 500 kV technologies for use in the Underground Alternative has not been fully demonstrated.

Additionally, there are serious reliability concerns associated with slope construction and underground crossings of active fault zones, which question the feasibility of the Underground Alternative. Finally, the cost of undergrounding along the part of or the entire proposed route would be cost prohibitive.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Ground Disturbance**. Construction of the Underground Alternative (as either 230 kV or 500 kV) would require substantially more construction activity and ground disturbance due to the continuous trenching required. Overhead transmission line construction would result in construction disturbance primarily at individual structure sites, located approximately every 1,100 feet (assumes 784 towers over 230 miles) along the alignment. Underground construction and trenching would involve much greater ground disturbance and construction-related impacts (traffic, air quality and dust, and noise). There is also a greater potential to encounter contaminated soils and cultural resources, and to impact biological resources due to the greater ground disturbance.

  Installation of an underground transmission line requires grading and clearing of trees and vegetation along the entire length of the corridor prior to trenching (i.e., similar to pipeline construction) rather than only at tower sites. Such construction is much more difficult and results in much more land disturbance than overhead lines especially in hilly, rugged terrain where overhead lines can typically span between ridge tops (e.g., in the area around Alligator Rock) or in sensitive biological areas, such as San Timoteo Canyon west of Devers Substation.

- **Access Roads and Transition Stations**. Whenever possible, existing roads along the DPV1 corridor would be utilized to minimize new access road construction. Access roads must be created or improved to handle large construction vehicles and trucks hauling reels of cable. Scarring along the alignment would result from the installation of all-weather access roads, splice vaults, and potential aboveground cooling equipment resulting in substantial visual impacts. Construction of the transition stations would each require a footprint of 1 to 1.25 acres, resulting in temporary and permanent biological, cultural, and visual resources impacts as well.

- **Construction and Repair Time**. The installation of an underground transmission line would require more time than construction of an equivalent length of overhead line because of the time required for excavating trenches, constructing the duct banks, fluid reservoirs, and/or stop joints. Construction could be substantially extended due to restrictions on the times of the year available for construction, required to limit the impacts on the environment. In addition, maintenance and restoration time in the event of an outage would also be more difficult and could result in longer outages and repair times. Although electric fields are reduced with increasing burial depth, magnetic fields above underground conductors are generally higher than from overhead lines due to closer proximity to the conductors to the ground.

C.5.5 Non-Transmission Alternatives

C.5.5.1 New Conventional Generation

Description

For the New Conventional Generation Alternative, it is assumed that the most likely method of providing new power generation would be through the construction of combined cycle natural gas-fired turbine power plants. This, however, does not preclude the potential use of alternative energy technologies such as renewable resources, which are discussed in a separate section below. The specific configuration of new generation would vary depending on a number of uncontrollable factors (e.g., need, market forces), but the new facilities would likely be installed in a location with convenient and economical access to fuel supplies, existing transmission facilities, major existing substations, and load centers. Construction and operation of new generation facilities would be subject to separate permitting processes that would need

to be completed in advance of construction. Possible locations for new power generation facilities are illustrated on Figure Ap.1-12 (see enclosed CD). For the purposes of this analysis, new generation facilities are assumed to be the following:

- **Near the Devers Substation.** A new power plant could be developed similar to the 456 MW Ocotillo Energy Project, which was proposed by InterGen in May 2001 but never approved for construction, or an expanded generation facility could be installed at the 135 MW Indigo Energy Facility operated by Wildflower LLP near to the Devers Substation.
- **Near the Etiwanda Substation.** Etiwanda is northwest of the Vista Substation. New facilities could be installed at or near the 770 MW Etiwanda Generating Station (currently owned by Reliant Energy) or that facility could be repowered to create a state-of-the-art facility.
- **Near the Valley Substation.** New or expanded generation could occur at the Inland Empire Energy Center, now under construction. The Inland Empire Energy Center was originally proposed by Calpine Corporation in August 2001 and approved for 810 MW in June 2005.

Rationale for Elimination

Project Objectives, Purpose, and Need. The New Conventional Generation Alternative would enhance competition among generating companies supplying energy to California and the power supply within California would be increased. However, new conventional generation would not increase California's transmission import capability from the Southwest, and it would not provide additional transmission infrastructure for energy suppliers selling energy into California energy markets. Therefore, this alternative would not meet all of the stated objectives of the Proposed Project.

Building new generation would not provide the transmission upgrades of the Proposed Project, and as such, building new generation, either conventional or renewable, would not be comparable to an economic transmission line such as Proposed Project. Economic transmission lines provide access to many generators and facilitate a robust transmission system. SCE anticipates that DPV2 would not only allow for interconnection of new generation resources to the transmission grid but also provide for flexible delivery alternatives and increase access to a greater number of power generators. DPV2 also would provide load-serving entities, such as SCE, to procure short-, medium-, and long-term contracts with existing generation. Such flexibility in contracting would probably not be realized under the New Conventional Generation Alternative because new generating plants in southern California would likely require long-term contracts to meet financing requirements to be built and would likely have their full output secured through the contracts. Under this alternative, these generating plants would not be as likely to participate in short-term energy markets and produce the enhanced competition that SCE expects to facilitate with DPV2.

The economics of building new generation outside of California, and especially in the Palo Verde area, have historically been lower relative to new generation in southern California due to the following factors:

- Lower cost of delivered natural gas
- Lower labor rates
- Lower cost for bulk materials purchased locally (including State taxes)
- Lower costs for emissions offsets/credits
- Lower land costs.

These trends will likely continue into the future providing a continued economic incentive for developers of new generation outside of California.

Feasibility. Developing new conventional generation in southern California is feasible from a technical standpoint. This has been demonstrated by merchant power plant developers and other public utilities in the region that have successfully developed power plants recently to achieve economic gains.

Investor-owned utilities such as SCE have not recently pursued development of new conventional power plant facilities because of the capital requirements and the financial risk involved. SCE believes it is not in a position to make long-term financial commitments in generation due to uncertainty surrounding the SCE customer base, which could be diminished by direct access and municipalization trends, and the creditworthiness and financial condition of SCE, which were severely damaged in 2000 and 2001 (SCE, 2005a, PEA Appendix G-2, Section III(A)(2)). In addition, SCE could not develop a power plant without first getting CPUC approval on ratemaking, which would create project uncertainty. As such, this alternative is considered to be feasible, but not economically viable with SCE as a developer.[11]

The development of gas-fired power plants in southern California requires compliance with strict air quality regulations, governed by the South Coast AQMD. Mitigation requirements are extensive, requiring purchase of emission offsets and other requirements. However, these requirements have been met by several power plants, so compliance is considered to be feasible.

Potential Environmental Impacts. Major power plants require permanent loss of 20 or 30 acres of land, construction of varying length of transmission lines to connect with existing facilities, and construction of pipeline connections for natural gas and water. Construction impacts are generally contained near the plant itself, but operational impacts can be more regional. Air emissions from burning of fossil fuels to generate power occur during the life of the plant, and the plant facilities can be visible from large distances. Depending on technologies used, power plants can consume large amounts of water.

C.5.5.2 Renewable Generation Resources

Description

The principal renewable electricity generation technologies that could serve as alternatives to the Proposed Project and do not burn fossil fuels are geothermal, solar, hydroelectric, wind, and biomass.

Geothermal. Geothermal technologies use steam or high-temperature water (HTW) obtained from naturally occurring geothermal reservoirs to drive steam turbine/generators. Geothermal plants must be built at a geothermal reservoir site and typically require about 0.5 acres/MW (600 acres for 1,200 MW). The technology relies on either a vapor dominated resource (dry, super-heated steam) or a liquid-dominated resource to extract energy from the HTW. Geothermal is a commercially available technology, but it is limited to areas where geologic conditions result in high subsurface temperatures. There are no geothermal resources in the project vicinity, making this technology an infeasible alternative without substantial transmission infrastructure.

Biomass. Biomass generation uses a waste vegetation fuel source such as wood chips (the preferred source) or agricultural waste. The fuel is burned to generate steam. Biomass facilities generate substantially greater quantities of air pollutant emissions than natural gas burning facilities, though these emissions may be partially offset by the reduction in emissions from open-field burning of these fields. In

[11] There is a power facility currently proposed and under consideration by the California Energy Commission near the Valley Substation: the Sun Valley Power Project. This plant was proposed by a subsidiary of Edison International: Edison Mission Energy. Edison International is a parent company of both SCE and EME.

addition, biomass plants are typically sized to generate less than 20 MW, which is substantially less than the capacity of the 1,200 MW.

Solar. Currently, there are two types of solar generation available: solar thermal power and photovoltaic (PV) power generation.

- Solar thermal power generation uses high temperature solar collectors to convert the sun's radiation into heat energy, which is then used to run steam power systems. Solar thermal is suitable for distributed or centralized generation, but requires far more land than conventional natural gas power plants. Solar parabolic trough systems, for instance, use approximately five acres to generate one megawatt.
- Photovoltaic (PV) power generation uses special semiconductor panels to directly convert sunlight into electricity. Arrays built from the panels can be mounted on the ground or on buildings, where they can also serve as roofing material. Unless PV systems are constructed as integral parts of buildings, the most efficient PV systems require about four acres of ground area per megawatt of generation.

Solar resources would require large land areas in order to meet the project objective to supply 1,200 MW of electricity. While solar generation facilities do not generate problematic air emissions and have relatively low water requirements, there are other potential impacts associated with their use. Construction of solar thermal plants can lead to habitat destruction and visual impacts. PV systems can also have negative visual impacts, especially if ground-mounted. Furthermore, PV installations are highly capital intensive and manufacturing of the panels generates some hazardous wastes.

Both solar thermal and PV facilities generate power during peak usage periods since they collect the sun's radiation during daylight hours. However, even though the use of solar technology may be appropriate for some peaker plants, solar energy technologies cannot provide full-time availability due to the natural intermittent availability of solar resources.

Wind. Wind carries kinetic energy that can be utilized to spin the blades of a wind turbine rotor and an electrical generator, which then feeds alternating current (AC) into the utility grid. Most state-of-the-art wind turbines operating today convert 35 to 40 percent of the wind's kinetic energy into electricity. A single 1.5 MW turbine operating at a 40 percent capacity factor generates 2,100 MWh annually. Modern wind turbines represent viable alternatives to large bulk power fossil power plants as well as small-scale distributed systems. Wind turbines being manufactured now have power ratings ranging from 250 watts to 1.8 MW, and units larger than 4 MW in capacity are now under development (AWEA, 2004). The average capacity of wind turbines today is 750 kW. The San Gorgonio Pass and Tehachapi area are two likely sources of wind energy within SCE's territory.

In open, flat terrain, a utility-scale wind plant would require about 60 acres per MW of installed capacity. However, only 5 percent (3 acres) or less of this area would actually be occupied by turbines, access roads, and other equipment. The remainder could be used for other compatible uses such as farming or ranching. A wind plant located on a ridgeline in hilly terrain will require much less space, as little as two acres per MW (AWEA, 2004).

Hydroelectric Power. In order to locate a hydropower project with peaking capability of 100 MW, a significant area of land is required, typically on the order of 1,400 acres, with construction of a storage reservoir constituting the primary land use. While hydropower does not require burning fossil fuels and may be available (e.g., on the Colorado River or a local water resource), this power source can cause significant environmental impacts primarily due to the inundation of many acres of potentially valuable

habitat and the interference with fish movements during their life cycles. As a result of these impacts, it is extremely unlikely that new hydropower facilities could be developed and permitted in California within the next several years.

Rationale for Elimination

Project Objectives, Purpose, and Need. Renewable resources, in particular, tend to rely on dedicated, long-term, full-requirement contracts. SCE has stated that it is not aware of any renewable generation projects in southern California in which only a portion of its full capacity is secured by contract, and the remaining capacity is sold on a merchant basis. Therefore, use of renewable resources would be inconsistent with the objectives of the Proposed Project, which are focused on creating the ability for DPV2 to increase California's transmission import capability from the Southwest and enhance and support the competitive energy market in the Southwest.

SCE stated in the PEA that it specifically considered the solar and wind renewable generation as alternatives to this project. Generation from either technology is categorically "as available" and therefore does not provide the dispatch flexibility that resources delivered via DPV2 can potentially provide. Nevertheless, SCE's evaluation of DPV2 assumes full compliance with California's Renewable Portfolio Standard, in which SCE plans to meet the statutory requirement that 20 percent of its retail energy load be met by renewable generation and a significant portion of this goal is expected to be met through wind and solar generation. Moreover, SCE's future procurement activities will consider additional cost-effective renewable resources that go beyond the 20 percent statutory requirement.

Feasibility. As described below, each of the renewable technologies below would not be able to produce 1,200 MW as is required for the DPV2 Project. If several different technologies were combined together, such as development of wind technology in the Tehachapi area, the Stirling Solar Dish and/or the Imperial Valley geothermal reserves, it would be possible to generate more than 1,200 MW of power. However, the permitting and construction of the various projects within the project timeline would be unlikely and each of the projects would still require the construction of transmission lines to bring the power into the Los Angeles area.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts. Renewable technology facilities do not generate air emissions like conventional power plants, and they generally have relatively low water requirements. However, there are other potential impacts associated with their use. Construction of solar and geothermal plants and wind turbines can lead to habitat destruction and visual impacts. In addition, all forms of renewable energy would also require the construction of transmission of the point of generation to the load served, which would create similar types of impacts as the Proposed Project.

- **Geothermal**. While geothermal plants produce far fewer emissions than combined-cycle gas plants, geothermal reservoirs contain varying levels of hydrogen sulfide gas (H_2S), which smells like rotten eggs and can be toxic at high concentrations. The odor can be a nuisance even at very low concentrations during drilling and plant start-up, but is not an issue during normal plant operations. Geothermal plants also emit very low levels of carbon dioxide (CO_2) and sulfur oxides. Reservoirs with high concentrations of boron have the potential to harm nearby plant life. In addition, mercury and arsenic from a geothermal reservoir can accumulate in scale in plant piping systems in concentrations high enough to require monitoring, special handling and regulated disposal as hazardous wastes. Binary plants, which have closed cycles, avoid many pollution problems because they have virtually no emissions.

- **Biomass.** Biomass facilities generate substantially greater quantities of air pollutant emissions than natural-gas burning facilities. These emissions vary depending upon the precise fuel and technology used. The collection of biomass fuels can have significant environmental impacts. Harvesting timber and growing agricultural products for fuel requires large volumes to be collected, transported, processed and stored. Biomass fuels may be obtained from supplies of clean, uncontaminated wood that otherwise would be landfilled or from sustainable harvests. On the other hand, the collection, processing and combustion of biomass fuels may cause environmental problems if, for example, the fuel source contains toxic contaminants, agricultural waste handling pollutes local water resources, or burning biomass deprives local ecosystems of nutrients that forest or agricultural waste may otherwise provide.
- **Solar.** While solar generation facilities do not generate air emissions and have relatively low water requirements, there are other potential impacts associated with their use. Construction of solar thermal plants can lead to habitat destruction and visual impacts. PV systems can also have negative visual impacts, especially if ground-mounted. Furthermore, PV installations are highly capital intensive, and manufacturing of the panels generates some hazardous wastes.
- **Wind**. In addition, to the land and transmission lines that would be required for renewable technologies, wind turbines can create other environmental impacts, as summarized below (AWEA, 2004):
  - Erosion can be a concern in certain habitats such as the desert or on mountain ridgelines. Standard engineering practices can be used to reduce erosion potential.
  - Birds collide with wind turbines. Avian deaths have become a concern at Altamont Pass in California, which is an area of extensive wind development and also high year-round raptor use.
  - Wind energy can negatively impact birds and other wildlife by fragmenting habitat, both through installation and operation of wind turbines themselves and through the roads and power lines that may be needed.
  - Bat collisions at wind plants generally tend to be low in number and to involve common species, which are quite numerous. A high number of bat kills at a new wind plant in West Virginia in the fall of 2003 has raised concerns, and the problem of bat mortality at that site is currently under investigation.
  - Visual impacts of wind power fields can be significant, and installation in scenic and high traffic areas often results in strong local opposition.
  - Noise was an issue with some early wind turbine designs, but it has been largely eliminated as a problem through improved engineering and through appropriate use of setbacks from nearby residences. Aerodynamic noise has been reduced by changing the thickness of the blades' trailing edges and by making machines "upwind" rather than "downwind" so that the wind hits the rotor blades first, then the tower (on downwind designs where the wind hits the tower first, its "shadow" can cause a thumping noise each time a blade passes behind the tower). A small amount of noise is generated by the mechanical components of the turbine.
- **Hydroelectric**. Negative aspects of hydroelectric development primarily center around inundation to reaches of stream and riparian lands as a result of dam and reservoir development, that result in permanent changes to the environment. These include creating barriers for fish passage, displacing native plant and animal species, and eliminating whitewater recreation areas. Hydroelectric developments with large water storage components can create the potential for flooding downstream from high releases during storm events or due to catastrophic dam failures. Construction of new dams

and maintenance of old structures must undergo rigorous design analyses that demonstrate the ability to perform safely under the most adverse seismic and flood conditions.

C.5.5.3 Conservation and Demand-Side Management

Description

For the past 30 years, while per capita electricity consumption in the United States has increased by nearly 50 percent, California electricity use per capita has been relatively flat. This achievement is the result of continued progress in cost-effective building and appliance standards and ongoing enhancements to efficiency programs implemented by investor-owned utilities (IOUs), customer-owned utilities, and other entities. Since the mid-1970s, California has regularly increased the energy efficiency requirements for new appliances sold and new buildings constructed here. In addition, in a creative and precedent-setting move, the CPUC in the 1980s de-coupled the utilities' financial results from their direct energy sales, facilitating utility support for efficiency programs. These efforts have reduced peak capacity needs by more than 12,000 MW and continue to save about 40,000 gigawatt hours (GWh) per year of electricity (CPUC & CEC, 2005). SCE's 2005 Energy Efficiency Annual Report states that the 2004 results from all of SCE's 2004-2005 energy efficiency programs provided nearly 950 million kilowatt-hours (kWh) of net annualized energy savings, 175 megawatts (MW) of net peak demand reduction, and over $570 million of resource benefits (SCE, 2005b).

Rationale for Elimination

Project Objectives, Purpose, and Need. The Conservation and Demand-Side Management Alternative would not increase California's transmission import capability from the Southwest and nor would it enhance and support the competitive energy market in the Southwest. Therefore, this alternative would not meet most of the stated objectives of the Proposed Project.

Feasibility. Demand response programs are the most promising and cost-effective options for reducing peak demand on California's electricity system. Although the CPUC adopted demand reduction targets for investor-owned utilities in 2003, such as SCE, demand response programs have failed to deliver their savings targets for each of the last three years and appear unlikely to meet their targets for next year (CEC, 2005).

C.5.5.4 Distributed Generation

Description

Distributed Generation (DG) is generally considered to be generation, storage, or demand-side management devices, measures, and/or technologies connected to the distribution level of the transportation and distribution grid, usually located at or near the intended place of use. There are many DG technologies, including microturbines, internal combustion engines, combined heat and power (CHP) applications, fuel cells, photovoltaics and other solar energy systems, wind, landfill gas, digester gas and geothermal power generation technologies. Distributed power units may be owned by electric or gas utilities, by industrial, commercial, institutional or residential energy consumers, or by independent energy producers. Distributed generation is the generation of electricity from facilities that are smaller than 50 MW in net generating capacity. Local jurisdictions — cities, counties and air districts — conduct all environmental reviews and issue all required approvals or permits for these facilities. Most DG facilities are very small, for example, a fuel cell can provide power in peak demand periods for a single hotel building.

Rationale for Elimination

Project Objectives, Purpose, and Need. While DG technologies are recognized as important resources to the region's ability to meet its long-term energy needs, DG does not provide a means for SCE to meet its objectives for the project because of the comparatively small capacity of DG systems and the relatively high cost.

In addition, since it is usually located at or near the intended place of use, the DG Alternative would not increase California's transmission import capability from the Southwest and nor would it enhance and support the competitive energy market in the Southwest. Therefore, this alternative would not meet most of the stated objectives of the Proposed Project.

Feasibility. Consideration of DG as an alternative to the Proposed Project is not feasible because no single entity has proposed implementing a substantial DG program. Also, a number of serious barriers, including technical issues, business practices, and regulatory policies, make interconnection to the electrical grid in the United States difficult. Broad use of distributed resources would likely require regulatory support and technological improvements. There could be regulatory feasibility issues with the lengthy permitting process. Air permits are generally the first permits sought for DG facilities because air district requirements influence equipment selection. Once the DG equipment has been selected, the land use approval process can begin. Local governments must know what makes and models of equipment will be installed to evaluate potential significant environmental impacts (e.g., noise and aesthetics) and to specify mitigation measures. Building permits are sought last because construction plans must incorporate all project changes required by the local government planning authority to mitigate environmental impacts. This lengthy permitting process would make it impossible to construct this technology within the timeframe of the Proposed Project.

In a January 2002 report on DG the CEC concluded that "DG is capable of providing several Transmission and Distribution (T&D) services, but the extent to which DG can be successfully deployed to effectively supply them are limited by (1) the technical capabilities of various DG technologies; (2) technical requirements imposed by the grid and grid operators; (3) business practices by T&D companies; and (4) regulatory rules and requirements . . . some technical barriers resulting from key characteristics of the prime mover will prevent some DG technologies from providing certain T&D services." Some problems of specific types of distributed generation include the following:

- **Renewable Energy Sources.** As discussed above, the high cost and limited dispatchability of small-scale renewable energy sources such as solar and wind power essentially inhibit their market penetration. In addition, biomass and wind facilities require specific circumstances for siting (i.e., near sources of bio-fuel or in high wind areas), and have their own environmental consequences (e.g., requiring large land areas or resulting in large quantities of air emissions).
- **Fuel Cells.** The present high cost of and small generation capacity of fuel cells precludes their widespread use.
- **Other Fossil-fueled Systems.** Microturbines and various types of engines can also be used for distributed generation; these technologies are advancing quickly, becoming more flexible, and impacts are being reduced. However, they are still fossil-fueled technologies with the potential for significant environmental impacts, including noise. Such systems also have the potential for significant cumulative air quality impacts because individually they are typically small enough to avoid the regulatory requirements for air pollution control. Therefore, use of enough of these systems to constitute an alternative to the Proposed Project would potentially cause significant unmitigated air quality impacts.

Potential Environmental Impacts. Potential new impacts created by DG would depend on the type of generation that would be used. Impacts of solar and wind facilities are addressed above. Other types of DG have air quality and noise impacts.

C.6 No Project Alternative

Both CEQA and NEPA require an evaluation of a No Project or No Action Alternative in order for decision-makers to compare the impacts of approving the project with the impacts of not approving the project. Section C.6.1 describes the issues that affect the No Project Alternative, and Section C.6.2 describes what could occur in the No Project Alternative. The environmental effects of not approving the project are evaluated in each issue area's analysis in Section D.

C.6.1 Background

Consideration of the No Project Alternative is required by Section 15126.6(e) of the CEQA Guidelines, and NEPA requires the consideration of a No Action Alternative (40 C.F.R. 1502.14(c)). The analysis of the No Project Alternative must discuss the existing conditions at the time the Notice of Preparation was published (October 21, 2005), as well as: "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" [CEQA Guidelines Section 15126.6 (e)(2)]. The requirements also specify that: "If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed" [CEQA Guidelines Section 15126.6 (e)(3)(B)].

The No Action Alternative required under NEPA [40 C.F.R. 1502.14(c)] serves as a basis for comparison even if it would not satisfy the proposed action's purpose and need. The definition of the No Action Alternative depends on the nature of the project and in the case of the proposed DPV2 project the No Action Alternative describes what would occur without the federal agency's (BLM) approval. This EIR/EIS uses the CEQA term No Project Alternative to describe the No Action Alternative required by NEPA.

C.6.1.1 Economic Issues Affecting the No Project Alternative

The No Project Alternative has been studied by SCE and the CAISO as part of the economic evaluation of DPV2 (CAISO, 2005). The economic studies demonstrated that there were sufficient economic and transmission system reliability benefits to pursue the Proposed Project over the No Project Alternative. In choosing the Proposed Project over the No Project Alternative, the CAISO showed that although there would be some reliability benefits, substantial economic benefits could occur for California ratepayers with DPV2.

The economic context of the Proposed Project means that DPV2 is primarily driven by SCE's desire to reduce energy costs to California customers, not by a need for improved reliability (see Section A.2). The economic benefits would come mainly from lower energy costs based on the ability to access lower-cost energy supplies in the Southwest, particularly in Arizona. CAISO assumed that the costs of generating capacity would be lower in Arizona than California and that during early years of DPV2 a surplus of generating capacity will be available in Arizona (CAISO, 2005). By creating additional transmission infrastructure to increase the import of low-cost energy, DPV2 would not cause the disconnec-

tion or permanent shutdown of any of California's generating capacity, but existing generation in California would be operated for less time throughout the year.

Also, some California generators would be able to reduce their commitments to be available for grid and local area reliability reasons, for example in "reliability-must-run" (RMR) arrangements. This would reduce the level of payments made by SCE through CAISO to these California generators. Under the No Project Alternative, these economic benefits would not occur, and use of existing generation within California would continue.

C.6.1.2 Power Supply Issues Affecting the No Project Alternative

The economic studies done by CAISO for DPV2 show that by generally improving the efficiency of the transmission grid, the power supplied to California customers would come from different generators as a result of the Proposed Project (CAISO, 2005). Reducing generation from older and less efficient power plants in California and increasing generation from higher-efficiency power plants outside of California would provide an air emissions decrease in California, but an emissions increase in Arizona.

The CAISO has estimated that this shift in energy production will result in an approximate net annual reduction of 390 tons of NOx emissions in California and Arizona. Emissions of NOx within Arizona would increase roughly 200 tons per year, while NOx emissions within California would decrease approximately 590 tons per year (Appendix R of CAISO, 2005).[12] The Proposed Project would shift generation so that approximately 450 power plants throughout the western states would be affected. With the Proposed Project, the CAISO model showed that approximately 200 power plants would increase their generation, while 250 plants would decrease as follows:

- Roughly 80 percent of the incremental generation would be produced by 11 plants, with nine of these 11 being in the Palo Verde area, such as Mesquite, Redhawk, and Harquahala.
- Decreased generation would occur at dozens of plants mainly in California. Roughly 80 percent of the decreased generation would occur primarily at less efficient plants such as Ormond Beach, Haynes, and South Bay, and also at newer, more efficient plants such as Mountainview, High Desert, and Palomar.

Under the No Project Alternative, these power supply changes and emission benefits would not occur.

C.6.2 No Project Alternative Scenarios

Under the No Project Alternative, construction and operation of DPV2 would not occur. The baseline environmental conditions for the No Project Alternatives are the same as for the Proposed Project. These conditions are described in this EIR/EIS for each environmental discipline as the "environmental baseline" or "setting" in Section D. The baseline conditions would continue to occur into the future, undisturbed, in the absence of project-related construction activities.

The objectives of the Proposed Project would remain unfulfilled under the No Project Alternative. This means that the projected economic benefits of the Proposed Project would not occur, which could result in additional demand-side and supply-side actions becoming more viable. Additional demand response and energy conservation may occur, and supply-side actions could include accelerated development of low-

[12] CAISO Board Report, Economic Evaluation of the Palo Verde-Devers Line No. 2 (PVD2). Prepared by California ISO, Department of Market Analysis & Grid Planning, February 24, 2005.

cost generation or other new transmission projects. For example, 1,200 MW of transmission import capability into California would not be added, and the additional market competition and improved system reliability and operating flexibility associated with the Proposed Project would not occur.

No specific development scenario is envisioned, but certain consequences can be identified without undue speculation. The absence of the Proposed Project may lead SCE or other developers to pursue other actions to achieve the objectives of the Proposed Project. The events or actions that are reasonably expected to occur in the foreseeable future without DPV2 include the following:

- The existing transmission grid and power generating facilities would continue to operate without being reduced until other major generation or transmission projects could be developed.
- Continued growth in electricity consumption and peak demand within California is expected. To serve this growth, additional electricity would need to be internally generated or imported into California by existing facilities. Net air emissions reductions caused by reducing generation from older and less efficient power plants in California and increasing generation from higher-efficiency power plants outside of California would not occur.
- A continuation of baseline *demand-side* or *supply-side* actions may be expected to occur. *Demand-side* actions include additional energy conservation or load management. *Supply-side* actions can include accelerated development of generation, such as conventional, renewable, and distributed generation, or other major transmission projects. These are described in more detail below because they could lead to new adverse environmental effects. Development of other major transmission facilities or new generation triggered by the No Project Alternative would be unpredictable because this varies depending on a number of uncontrollable factors (e.g., energy cost, need, market forces).

C.6.2.1 Continuation of Demand-Side Actions

Demand-side management (e.g., conservation) and small-scale, localized generation (i.e., distributed generation or DG) could play an increased role in the SCE service territory under the No Project Alternative. Normally, demand-side management is fully pursued where technically and economically feasible. Under the No Project Alternative, the costs of developing DPV2 could be diverted to subsidize or improve the economic feasibility of some demand-side projects, although 1,200 MW of peak load reduction would not be achievable for the cost of DPV2. Because reductions in the cost of energy supplies enabled by DPV2 would not occur, the access to low-cost energy provided by DPV2 would not occur and the enhanced competition among generating companies would not occur. This means that under the No Project Alternative, a greater level of demand-side control could become economically feasible.

Demand-Side Management and Conservation

Demand-side management (DSM) programs are described in more detail in Appendix 1 (Alternatives Screening Report). DSM programs reduce customer energy consumption and overall electricity use. Some programs attempt to shift energy use to off-peak periods, which allows generators to operate more steadily over the course of a day. DSM programs and peak-shifting do normally involve any noteworthy construction activities.

The CPUC supervises various demand-side management programs administered by the regulated utilities, and many municipal electric utilities have their own demand-side management programs. The combination of these programs constitutes the most ambitious overall approach to reducing electricity demand administered by any state in the nation. As such, reducing demand is an essential part of SCE's operations with

or without the Proposed Project. Under the No Project Alternative, continuation of the current relatively high cost of energy may likely lead to increased conservation.

Distributed Generation

According to the California Energy Commission, distributed generation (DG) is the widespread generation of electricity from facilities that are smaller than 50 MW in net generating capacity. Most DG facilities are very small, for example, a fuel cell could provide power in peak demand periods for a single hotel building. More than 2,000 MW of DG are in place across California. Small business and retail customers of electricity normally install these systems to offset the power drawn from a utility such as SCE. Over the next ten years, the CPUC aims to provide incentives for up to 3,000 MW of new distributed generation State-wide, for customers who wish to install new "clean" onsite DG up to 1 MW (Self-Generation Incentive Program). DG is also described in more detail in Appendix 1 (Alternatives Screening Report).

Under the No Project Alternative, the continued relatively high cost of energy delivered to the SCE service territory may provide increased incentive for development of DG units by industrial, commercial, institutional, or residential energy consumers. There are many available DG technologies, including microturbines, internal combustion engines, combined heat and power (CHP) applications, fuel cells, photovoltaics, and other solar energy systems, wind, landfill gas, digester gas and geothermal power generation technologies. Local jurisdictions such as cities, counties, and air districts, would need to conduct environmental reviews and issue required approvals or permits for these facilities.

C.6.2.2 Continuation of Supply-Side Actions

Providing new power supply to meet California's growing demand occasionally involves development of generation, such as conventional, renewable, and distributed generation, or other major transmission projects. No new generation or major transmission facilities would be required if the DPV2 project is not constructed. The No Project Alternative could, however, accelerate development of alternate facilities.

The specific configuration of alternate facilities would vary depending on a number of uncontrollable factors (e.g., energy cost, need, market forces). Since the primary objectives of DPV2 are economic, new alternate facilities under any scenario would need to be economically competitive for developers to pursue. Such new facilities would probably be installed in locations with convenient and economical access to fuel supplies, existing transmission facilities, and load centers. Construction and operation of new generation and transmission projects would be subject to separate permitting processes that would need to be completed in the future. Because the Proposed Project has been a subject of the planning and permitting processes for many years, it is doubtful that any major new generation or transmission projects would be able to come online any earlier than the expected DPV2 in service date.

Any combination of the following three supply-side scenarios could occur as part of the No Project Alternative:

- **Unchanged or Increased Dependence on Existing Generation in California.** Existing generation located in California may continue to run or run more frequently, which would cause greater use of older and more inefficient power plants, forfeiting the economic benefits of the Proposed Project. Continuing the dependence on existing generation would perpetuate and exacerbate "reliability-must-run" payments to generators in California, and it may cause certain power plant retirements to

be postponed.[13] However, opportunities to develop or refurbish existing power plants near the load centers of southern California are limited, and there are lengthy timelines associated with planning, siting, and permitting major new generation or transmission facilities. As a result, this scenario is most likely to occur under the No Project Alternative.

- **Accelerated Development of Other Major Transmission Projects or Upgrades.** Other major transmission projects and upgrades may be built to achieve objectives similar to those of the Proposed Project. In its work with the Southwest Transmission Expansion Plan (STEP), the CAISO studied a number of other options that would increase the import capability into Southern California. The plan for DPV2 was established as preferable out of many far-reaching transmission alternatives that were studied by STEP.[14] No alternative transmission projects were found to yield the same level of cost benefit as the Proposed Project. In order to be an alternative to DPV2, a project would need to find a sponsor and undergo the planning and permitting processes, and it would be unlikely for any project sponsor to bring an alternative project online in time to meet the expected DPV2 in-service date. As such, no predictable transmission development scenario that can be reasonably expected to occur as part of the No Project Alternative.
- **Accelerated Development of New Generation in California or Elsewhere.** New, relatively efficient generation may be built in California to replace existing less efficient generation. With or without the Proposed Project, new facilities could be developed depending on the economic decisions made by project sponsors. Regardless of sponsor, planning, permitting, and construction of new generation facilities as an alternative to DPV2 would be unlikely to occur before the expected DPV2 in-service date. Because no project sponsors have been identified for a generation alternative, there is no predictable generation development scenario that can be reasonably expected to occur as part of the No Project Alternative. The discussion of "New Conventional Generation" as a project alternative is provided in Appendix 1 (Alternatives Screening Report).

If the Proposed Project is not approved or not constructed, project sponsors of alternate facilities would need to re-evaluate the prevailing economic conditions to determine the viability of alternate transmission or generation projects. SCE or other sponsors would need to develop alternative plans to achieve the largely economic objectives of the Proposed Project. Although development of alternative projects could be accelerated, for analysis of the No Project Alternative, NEPA and CEQA require consideration of what can be reasonably expected to occur in the foreseeable future, based on current plans. Without alternative plans or sponsors for alternate facilities, it would be speculative to assume that any specific transmission or generation projects are foreseeable under the No Project Alternative.

C.7 References

BLM & IID (U.S. Department of the Interior, Bureau of Land Management, and Imperial Irrigation District). 2005. Final Environmental Impact Report/Final Environmental Impact Statement for Desert Southwest Transmission Project. Prepared by Greystone. October.

[13] The STEP process that established the plan for the DPV2 project assumed that the following units would be retired prior to 2008: San Bernardino 1 and 2 (125 MW), Mohave 1 and 2 (1580 MW), Etiwanda 1, 2, and 5 (391 MW), and El Segundo 1 and 2 (350 MW).

[14] STEP, Southwest Transmission Expansion Plan, 2003 Status Report. Economic results of study of new line between Arizona and California (pp. 33 to 35).

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D.1 Introduction to Environmental Analysis

D.1.1 Organization of Each Section

Section D of this EIR/EIS examines the environmental consequences associated with the Proposed Project and the alternatives to it. Section D includes analyses of the 13 environmental issue areas listed below:

D.2 Biological Resources
D.3 Visual Resources
D.4 Land Use
D.5 Wilderness and Recreation
D.6 Agriculture
D.7 Cultural Resources
D.8 Noise
D.9 Transportation and Traffic
D.10 Public Health and Safety
D.11 Air Quality
D.12 Hydrology and Water Quality
D.13 Geology, Soils, and Mineral Resources
D.14 Socioeconomics

Within each issue area, discussions are presented in the following order:

- Environmental Setting for the Proposed Project – Devers-Harquahala
- Environmental Setting for the Proposed Project – West of Devers
- Applicable Regulations, Plans, and Standards
- Significance Criteria and Approach to Impact Assessment
- Environmental Impacts and Mitigation Measures for the Proposed Project – Devers-Harquahala
- Environmental Impacts and Mitigation Measures for the Proposed Project – West of Devers
- Alternatives for Devers-Harquahala
- Alternatives for West of Devers
- Environmental Impacts of the No Project Alternative
- Mitigation Monitoring, Compliance, and Reporting

By identifying the impacts associated with each issue area and the offsetting mitigation measures, the regulatory agencies and the general public are offered a discussion and full disclosure of the significant environmental impacts of this Proposed Project and its alternatives, including the No Project/No Action Alternative.

Analysis within each issue area includes consideration of the following components and segments of the Devers-Harquahala 500 kV portion of the Proposed Project:

Harquahala Switchyard to Kofa National Wildlife Refuge

- Construction of 500 kV transmission line and optical ground wire from Harquahala Generating Station switchyard to Kofa National Wildlife Refuge (continuing to Devers Substation)
- Installation of 500 kV line shunt reactor, dead-end structure, circuit breakers, and disconnect switches at Harquahala switchyard
- Installation of Special Protection Scheme relays at Palo Verde Nuclear Generating Station, Hassayampa, and Harquahala Switchyards
- Construction and installation of new telecommunications facility on Harquahala Mountain
- Construction of series capacitor bank, approximately 55 miles west of the Harquahala switchyard

Kofa National Wildlife Refuge

- Construction of 500 kV transmission line and optical ground wire across the Kofa National Wildlife Refuge

Kofa National Wildlife Refuge to Colorado River

- Construction of 500 kV transmission line and optical ground wire from Kofa National Wildlife Refuge to the Colorado River (continuing to Devers Substation)

Colorado River to Midpoint Substation

- Construction of 500 kV transmission line and new optical ground wire from the Colorado River to Midpoint Substation (continuing to Devers Substation)
- Construction of a fiber optic repeater site in the right-of-way at Milepost E105.4

Midpoint Substation to Cactus City Rest Area

- Construction of Midpoint Substation and switching facilities
- Construction of telecommunications facility
- Construction of mechanical-electrical equipment room

Cactus City Rest Area to Devers Substation

- Construction of 500 kV transmission line from Cactus City Rest Area to Devers Substation
- Construction and installation of new optical ground wire on Devers-Harquahala transmission line towers
- Installation of 500 kV line shunt reactor, dead-end structure, circuit breakers, and disconnect switches at Devers Substation
- Upgrades and replacement of circuit breakers, disconnects, relays, and switchrack conductors at Devers Substation
- Installation of Special Protection Scheme relays at Devers Substation

Analysis within each issue area includes consideration of the following components and segments of the **West of Devers (230 kV upgrade) portion of the Proposed Project**:

- Removal of two existing 230 kV single-circuit transmission lines from Devers to San Bernardino Junction
- Construction of a new double-circuit 230 kV transmission line from Devers to San Bernardino Junction
- Upgrade of an existing double-circuit 230 kV transmission line from Devers to San Bernardino Junction
- Upgrade of double-circuit 230 kV transmission line between San Bernardino Junction and Vista Substation
- Upgrades and replacement of circuit breakers, disconnects, relays, and switchrack conductors at Vista Substation
- Installation of Special Protection Scheme relays at Vista Substation
- Upgrade of 230 kV transmission line between San Bernardino Junction and San Bernardino Substation
- Upgrades and replacement of circuit breakers, disconnects, relays, and switchrack conductors at San Bernardino Substation.

The following alternatives are evaluated in each section:

- SCE Harquahala-West Alternative
- SCE Palo Verde Alternative
- Harquahala Junction Alternative
- Desert Southwest Transmission Line Alternative
- Three alternatives in the area of Alligator Rock
- Devers-Valley No. 2 Alternative
- No Project/No Action Alternative

D.1.2 Environmental Assessment Methodology

For the purpose of this document, and pursuant to CEQA Guidelines (Section 15125(a)), the environmental setting used for the impact analysis reflects conditions at the time of issuance of the Notice of Preparation (November 2005).

The EIR/EIS evaluates the environmental consequences and potential impacts that the Proposed Project and the alternatives would create. The impacts identified were compared with predetermined, specific significance criteria, and were classified according to significance categories listed in each issue area. The cumulative impacts of the project taken together with the related cumulative projects (listed in Section F) were assessed next, and mitigation measures for each impact were identified, if applicable. The focus in the cumulative impact analyses was to identify those project impacts that might not be significant when considered alone, but contribute to a significant impact when viewed in conjunction with future planned projects. The same methodology was applied systematically to each alternative project and alternative route alignment. A comparative analysis of the Proposed Project and the alternatives is provided in Section E of this document.

Once an impact was identified, diligent effort was taken to identify mitigation measures that would reduce the impact to a level that is not significant. Further, under NEPA, mitigation measures would be considered even for impacts that are not found to be significant. The federal Council on Environmental Quality's (CEQ) *Forty Most Asked Questions Concerning CEQ's NEPA Regulations* (Forty Questions). Question No. 19a asks about the scope of mitigation measures that must be discussed. The response states:

> *The mitigation measures discussed in an EIS must cover the range of impacts of the proposal. The measures must include such things as design alternatives that would decrease pollution emissions, construction impacts, esthetic intrusion, as well as relocation assistance, possible land use controls that could be enacted, and other possible efforts.* ***Mitigation measures must be considered even for impacts that by themselves would not be considered "significant."*** *[emphasis added] Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not "significant") must be considered, and mitigation measures must be developed where it is feasible to do so. Sections 1502.14(f), 1502.16(h), 1508.14.*

Because CEQ's NEPA guidelines require a demonstration of reduction of impacts to the maximum extent possible, mitigation measures were identified for all classes of impacts (except beneficial impacts). The mitigation measures recommended by this study have been identified in the impact assessment sections and presented in a Mitigation Monitoring, Compliance, and Reporting Table at the end of the analysis for each issue area (also see Section G for discussion of the Mitigation Monitoring Program).

Applicant Proposed Measures (APMs). The Applicant has incorporated a substantial number of measures and procedures to avoid or reduce impacts into the description of its Proposed Project. In the assessment of the impacts, these measures have been assumed to be part of the Proposed Project, and are not included as CPUC-recommended mitigation measures; however, implementation of each APM will be monitored by the CPUC. The APMs that are intended to reduce the potential impacts in a particular issue area (such as air quality, biology, etc.) are listed in the section addressing that issue area.

Impact Significance Criteria. While the criteria for determining significant impacts are unique to each issue area, the classification of the impacts was uniformly applied in accordance with the following definitions:

Class I: Significant; cannot be mitigated to a level that is less than significant

Class II: Significant; can be mitigated to a level that is less than significant

Class III: Adverse, less than significant

Class IV: Beneficial impact

D.2 Biological Resources

D.2.1 Regional Setting and Approach to Data Collection

Data Collection Methodology

Literature Review

Prior to the field portion of the biological study, a literature review was conducted to determine the federal and State listed endangered, threatened, proposed endangered or threatened, rare, and special-status plant and wildlife species that have potential to occur within the vicinity of the Proposed Project. The literature review included a literature search of the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Electronic Inventory for the 51 USGS 7.5' topographic quadrangles that the Proposed Project would traverse. A literature search of plant and wildlife species that are considered sensitive by local jurisdictions was also conducted. The California-related search included review of the California Endangered Species Act (CESA), California Native Plant Protection Act, California Desert Native Plant Act, Western Riverside County Multi-Species Habitat Conservation Plan, Coachella Valley Multi-Species Habitat Conservation Plan (DRAFT), and review of the General Plans for the Cities of Banning, Beaumont, Calimesa, Redlands, Loma Linda, Colton, and Grand Terrace. Searches of sensitive plant and wildlife species within Arizona included review of the State Endangered Species Act (AESA), including suitable habitat or presence of species within Maricopa and La Paz Counties; State of Arizona listed wildlife species, including Wildlife of Special Concern in Arizona (WSCA); Arizona Department of Agriculture's (ADA) Arizona Native Plant Law (Arizona Revised Statute; sensitive status species listed by the Bureau of Land Management (BLM) that occur in the Phoenix and Yuma, Arizona Field Office areas and in the California Desert District Office areas; Migratory Bird Treaty Act (MBTA) of 1918; and noxious weeds listed by ADA, ASLD, and BLM. The literature review also included a review of existing biological documents for the ROW including:

- Devers–Palo Verde No. 2 Transmission Line Project Results of Biological Clearance Studies (E. Linwood Smith and Associates, 1987)
- Proponents Environmental Assessment; Devers–Palo Verde No. 2 Transmission Line Project (Mackness and Miller, 2005)
- Biological Resources Inventory Report for the Devers–Palo Verde No. 2 Transmission Line Project (Dames and Moore, 1994)
- Devers-Harquahala 500 kV Transmission Line Sensitive Biological Resources Inventory (Environmental Planning Group, 2003)
- West of Devers 230 kV Transmission Line Upgrade Biological Resources Inventory Report (Bio-Resource Consultants, 2003)
- Combined Desert Tortoise Report Protocol Survey Report (Alice Karl and Associates/Tetra Tech EC, Inc./Greystone Environmental Consultants, Inc., 2005)
- Desert Southwest Transmission Project and Devers–Palo Verde No. 2 Transmission Line Project Coachella Valley Milkvetch and Mojave Fringe-toed Lizard Biological Survey Summary Report (Greystone, 2005)

Biological Reconnaissance Surveys

Arizona. A team of biologists surveyed the Arizona portion of the proposed DPV2 route on October 6, 7, 12, 13, 25, 26, and 27, 2005. In addition to performing an overview survey of the entire length of the proposed route, each tower site and spur road where disturbance would occur was surveyed. Aerial maps and staked locations were utilized for project area location. At each site, a data sheet was completed that included the following information. site name, observer, date, UTM coordinates, photo number, plant and wildlife species observed, site description, and threatened, endangered, and/or special status species concerns (SWCA, 2005). Vegetation types were classified and described according to Brown (1994). The general project area was also surveyed in 2002 and 2003 and the results of these surveys were used as a general reference in this section (EPG, 2003).

California. A biological reconnaissance survey was conducted by a qualified botanist and wildlife biologist who are familiar with the resources in the project vicinity. Field surveys were conducted during October and November 2005. Specific dates of the surveys were October 18–21 and 31, and November 1–3, 2005 (ECORP, 2005). Field conditions were dry and sunny with temperatures between 65 degrees Fahrenheit (°F) and 78°F and winds between 0 and 6 miles per hour.

The purpose of the field survey was to review and verify or modify the existing biological conditions and vegetation communities previously reported along the proposed right-of-way (ROW). The survey focused on a standard 200-foot width for the ROW and an additional buffer area of 500 feet on either side of the ROW. The reconnaissance survey was conducted beginning at the California-Arizona border and continued in an east to west direction, including all spurs and transmission lines that are proposed for removal or modification as part of the Proposed Project. The reconnaissance survey consisted of driving accessible areas of the ROW while reviewing the previous vegetation maps and making necessary changes to the vegetation communities on aerial photographs of the site. Areas that could not be accessed were surveyed from vantage points using binoculars. Areas that were inaccessible and could not be viewed from vantage points were mapped based on findings in previous reports and by comparing inaccessible areas on the aerial photograph to similar appearing areas that were accessible or that could be viewed through binoculars. The biologist and botanist frequently stopped and surveyed the ROW on foot in order to identify local plant and wildlife species, especially in habitat communities that afforded a greater abundance of biological resources, such as near water, riparian, and woodland. On-the-ground surveys focused on areas where ground disturbing activities would occur, including new transmission tower locations, existing transmission towers that would be removed, staging areas, pulling stations, and access roads. All plant and wildlife species observed were recorded in field notebooks and on project data sheets. Results of the literature review and field surveys were analyzed in order to identify portions of the ROW that are known to support listed and special-status plant and wildlife species, or are most likely to support habitat for listed and special-status plant and wildlife species.

D.2.1.1 Regional Setting

Section D.2.1 discusses the biological resources for the Proposed Project as a whole, and is grouped according to the resource location, either Arizona or California. Section D.2.1.1 presents the regional biological resources setting information. Section D.2.1.1.1 provides an overview of vegetation resources, and Section D.2.1.1.2 provides an overview of wildlife resources. Section D.2.1.1.3 discusses sensitive plant and wildlife species that exist within the project area. The final section is Section D.2.1.1.4, which provides an overview of the special habitat management areas that are located within the Proposed Project area.

Arizona

The Proposed Project would extend across approximately 102.2 miles of southwestern Arizona. The Arizona portion of the Proposed Project would be located within southwestern Arizona, which is a relatively undeveloped area of the western Sonoran Desert. Desert, mountains, hills, canyons, valleys, bajadas, and washes or arroyos are all part of the landscape within this area. This region of southwestern Arizona consists of mostly native desert habitats, including ~~pinyon juniper or~~ mixed shrub-scrub uplands, saguaro cactus forest, creosote-mesquite scrublands, xeroriparian, and riparian vegetation communities. Disturbed areas are also present along the route, including agricultural, pipeline and power pole infrastructure, mining activities, canals, roads (dirt and paved), grazed areas, and recreational activities. Elevations within the Arizona portion of the Proposed Project range from approximately 249 feet above mean sea level (msl) to approximately 2,182 feet above msl. In Arizona the Proposed Project would traverse many small and a few large ephemeral washes, but only one permanent watercourse, the Colorado River, would be crossed.

Within southwestern Arizona, the Proposed Project would traverse western Maricopa and southern La Paz Counties. The proposed route would begin in Maricopa County south of I-10 in the Harquahala Plain and north of Saddle Mountain, and would proceed east, until it would turn north and cross over I-10 and the Central Arizona Project (CAP) canal. Next the route would proceed west through the southern end of the Big Horn Mountains where it would cross over and parallel the CAP canal. The route would then turn southeast crossing over I-10 again, and would continue across the Harquahala Plain through the northern end of the Eagletail Mountains until it would enter into La Paz County. At this point, the route would proceed through the Ranegras Plain and enter the northern portion of the Kofa NWR, south of the New Water Mountains and north of the Kofa Mountains. The route would then traverse the La Posa Plain and State Highway 95, just clip the northeastern corner of the Yuma Proving Grounds (YPG), and proceed northwest through the central portion of the Dome Rock Mountains. The route would then turn southwest, and cross the Colorado River and the Arizona–California state line.

California

In California, the ROW for the Proposed Project is located within Riverside and San Bernardino Counties. The ROW would generally parallel Interstate 10 (I-10) between the Town of Blythe, at the California-Arizona border in Riverside County, and the Vista Substation in San Bernardino County. Except for the western end of the proposed route, the majority of the route would be located in Riverside County. A large portion of the proposed route is located within the Colorado Desert, which is the western extension (and subdivision) of the Sonoran Desert that covers southern Arizona and northwestern Mexico. The Colorado Desert is a desert of much lower elevation than the Mojave Desert to the north, and much of the land lies below 1,000 feet in elevation. Common habitat communities within the Colorado Desert include sandy desert, scrub, palm oasis, and desert wash. Summers are hot and dry and winters are typically cool and moister. The proposed route would cross several topographic and geographic features, public lands, private lands, and Indian land including, but not limited to, the Colorado River, City of Blythe, Palo Verde Valley, Chuckwalla Valley, Coachella Valley, Morongo Indian Reservation land, and San Timoteo Canyon.

In the western portion of the proposed ROW, the route would cross urbanized areas, canyons, and foothills, and traverse unincorporated areas of Riverside and San Bernardino Counties, and portions of the cities of Banning, Beaumont, Calimesa, Redlands, Loma Linda, Colton, and Grand Terrace. The desert scrub transitions to chaparral and sage scrub communities as the proposed route would progress through the area around the cities of Beaumont and Banning.

The ROW is located within a region that is characterized by a diversity of sensitive and unique types of native vegetation communities, including perennial and ephemeral streams, riparian habitat, desert dunes and washes, oak woodland, Riversidean alluvial fan sage scrub, Riversidean sage scrub, and coastal sage scrub. In addition, the diversity of vegetation communities in the proposed ROW provides a wide array of habitats that are available for wildlife species to utilize as foraging, breeding, and over-wintering areas. The ROW is also located in a region of varying topography that ranges from mountain ranges to relatively flat valleys and low desert areas. Substantial human impacts to desert habitats, coastal sage scrub, chaparral, riparian habitats, woodlands, and animal populations have resulted in a relatively fragmented distribution of native vegetation communities in the region. Plant communities generally separate themselves along environmental gradients related to soil type, hydrology, precipitation, humidity, salinity, exposure to wind, and altitude (Whittaker, 1967). The dominant vegetation types are discussed in more detail in Section D.2.1.1.1 below.

D.2.1.1.1 Vegetation Overview

Arizona

The Arizona portion of the Proposed Project would be primarily located within the Sonoran Desert scrub biotic community, as defined by Brown (1994). Within this biotic community, two subdivisions of Sonoran Desert scrub and two series within the subdivisions are represented (see Figure D.2-1). These include the Creosote Bush–White Bursage series of the Lower Colorado River Valley subdivision and the Palo Verde–Cactus–Mixed Scrub series of the Arizona Upland subdivision. ~~Several~~ Many areas along the route of the Proposed Project also contain an ecotonal, or transitional zone between these two subdivisions of Sonoran Desert scrub. However, disturbed areas are also present, mostly along the eastern portion of the Proposed Project route where the native vegetation has been removed and the area was converted to agricultural use. Additionally, a portion of the route that would be located adjacent to the Colorado River is within the Sonoran Riparian Deciduous Forest and Woodland biotic community (Brown, 1994). However much of this plant community has been severely compromised by the invasion of non-native species such as saltcedar (*Tamarix* spp.). Further detail for each of these series is provided below.

Creosote Bush–White Bursage Series. The majority of the Proposed Project route within Arizona would be located within the Lower Colorado River Valley subdivision of the Sonoran Desert scrub biotic community. This subdivision represents the largest area of the Sonoran Desert. This area is characterized by broad alluvial valley floors dominated by creosote bush (*Larrea tridentata* var. *tridentata*) and white bursage (*Ambrosia dumosa*). Creosote bush communities strongly dominate alluvial valley bottoms and frequently are dominant along mountain slopes. Although not a dominant part of this vegetation community, cacti species often include desert Christmas cactus (*Opuntia leptocaulis*), prickly pear (*O.* spp.), saguaro (*Carnegia gigantea*), and barrel cactus (*Ferocactus* spp.). In addition to the upland vegetation, xeroriparian vegetation can be found along drainages in this community.

Xeroriparian vegetation is associated with an ephemeral water supply (ephemeral washes typically flow only briefly, usually in direct response to significant precipitation in the immediate vicinity). Typically xeroriparian vegetation occurs as a linear corridor of sparse to dense shrubs and trees in areas with comparatively high soil moisture, such as washes and floodplains. Common species include blue palo verde (*Parkinsonia florida*), mesquite (*Prosopis* spp.), catclaw acacia (*Acacia greggii*), and desert ironwood (*Olnyea tesota*). These areas typically contain plant species that are also found in upland habitat, although riparian plants are commonly larger and occur at higher densities than those in adjacent uplands.

Palo Verde–Cactus–Mixed Scrub Series. This community type occurs at several locations along the proposed route. The palo verde–mixed cacti series occurs on the higher elevation slopes at the edges of the valleys and on rocky soils. This association is generally dominated by foothill palo verde (*Parkinsonia microphylla*) and triangle burr ragweed (*A. deltoidea*). Saguaros and other cacti including desert Christmas cactus, prickly pear (*O. phaeacantha* and/or *engelmannii*), pincushion cactus (*Mammallaria* sp.), and hedgehog cactus (*Enchinocereus* sp.) are also usually present. In addition to the upland vegetation, xeroriparian vegetation can be found along drainages in this community.

Sonoran Riparian Deciduous Forest and Woodland. ~~This~~ This vegetation community is only found ~~only along the Proposed Project route~~ along the Colorado River. The Sonoran Riparian Deciduous Forest and Woodland is a deciduous riparian community dominated usually either by velvet mesquite or Fremont cottonwood (*Populus fremontii*) and/or Goodding's willow (*Salix gooddingii*). Understory grasses are typically abundant. Typically perennial or near-perennial streams or springs are necessary to provide water for the trees, although this is not always the case for the mesquite series. This community is divided into the following two series, based on the dominant tree species: (1) Mesquite series or (2) Cottonwood-willow series. Historically, this community may have occurred in the vicinity of where the Proposed Project crosses the Colorado River. However, saltcedar (*Tamarix ramosissima*), an invasive non-native species, has invaded much of this community along the Colorado River. The vegetation where the ~~, habitat that occurs in the area where the~~ Proposed Project alignment crosses the Colorado River is now degraded and is dominated by nearly 100% cover of saltcedar. ~~has been degraded by the invasion of saltcedar (*Tamarix* spp.), an invasive non native species.~~

Developed and Disturbed Areas. Some areas along the Proposed Project route have been degraded or disturbed by past and present land uses. These disturbed areas include agricultural areas, pipeline and power line infrastructure, mining activities, canals, roads (dirt and paved), illegal dumping, grazed areas, and recreational activities including off-road vehicle uses. These activities have resulted in varying intensities and amounts of disturbance along the Proposed Project. Disturbed areas are typically dominated by populations of non-native weedy annuals including Russian thistle (*Salsola tragus*), Asian mustard (*Brassica tournefortii*), and Mediterranean grass (*Schismus* spp.). Puncture vine (*Tribulus terrestris*), a noxious weed, was observed at several locations along the Proposed Project alignment. Due to the level of disturbance associated with certain sections of the proposed route, it is possible that other species listed as noxious by the BLM or Arizona may also occur.

California

The eastern portion of the Proposed Project within California would occur within the Lower Colorado River Valley (Colorado Desert) subdivision of the Sonoran Desert. The western lowland basins are dominated by creosote bush, white bursage, and saltbushes (*Atriplex* ssp.) (Brown, 1982) (see Figures D.2-2 and D.2-3). The climate is very arid, with as little as five inches of precipitation per year. The Colorado Desert generally is composed of broad alluvial valley floors and is usually dominated by creosote bush (*Larrea tridentata*), in association with white bursage on rocky mountain slopes, bajadas or intergraded slopes, as well as in the alluvial valleys. These are also typically vegetated with populations of native grass such as big galleta (*Pleuraphis rigida*) which occur on the finer textured soils. Numerous dry washes occur within the valley bottoms that may support populations of desert trees and shrubs including blue palo verde (~~*Cercidium*~~ *Parkinsonia floridaum*), ironwood (*Olneya tesota*), honey mesquite (*Prosopis glandulosa*), white bursage, smoketree (*Cotinus coggygria*), and sweet bush (*Bebbia juncea*), as well as other upland plants typical of the surrounding habitats.

Desert scrub habitat transitions to chaparral and coastal sage scrub communities just west of the City of Banning. The western area of the California portion of the Proposed Project would lie largely within the most inland and interior extension of South Coast Floristic Region of California (Hickman, 1993). Specifically, this western area would lie within the Transverse Ranges and a small portion of the Peninsular Ranges (Mac et al., 1998). The Transverse Ranges include the San Bernardino, San Jacinto, Santa Monica, Santa Ynez, Topatopa, Santa Susanna, Liebre, and Sierra Pelona ranges. The Peninsular Ranges are a group of mountain ranges which stretch 1500 km (900 miles) from southern California in the United States to the southern tip of Mexico's Baja California peninsula; they are part of the North American Coast Ranges that run along the Pacific coast from Alaska to Mexico. The Peninsular Ranges include the Santa Ana Mountains, San Jacinto Mountains and Laguna Mountains of southern California with the Sierra Juarez, Sierra San Pedro Mártir, and La Giganta mountains of Baja California. Mount Palomar, home to Palomar Observatory, is in the Peninsular Ranges in San Diego County. The Peninsular ranges run predominantly north-south, unlike the Transverse Ranges to their north, which mostly run east-west.

These mountains all become hotter and drier to the east, where they border the Mojave (and Sonoran) Desert. Chaparral dominates the vegetation at lower elevations. Although these plant communities are adapted for a dry climate with the occasional brush fire, the frequency of wildfires in some of the areas has resulted in an open, disturbed vegetation community. Developed areas are prominent in and adjacent to the proposed ROW in the western portion of the Proposed Project. Due to the proximity to developments, much of the chaparral and sage scrub communities exhibit an understory of non-native grasses and invasive weeds that thrive in disturbed conditions. Disturbance along the proposed ROW has resulted from a variety of factors including, but not limited to, agricultural activities, cattle grazing, off-road vehicles, and utility corridors.

The vegetation communities found throughout the California segments of the Proposed Project are discussed in detail below. Other areas that exhibit plant communities that warrant discussion include agricultural areas, pasturelands, and windfarm facilities. A description of these developed and disturbed areas is also included below. Upland habitats were classified using Sawyer and Keeler-Wolf (1995).

Desert Scrub and Desert Dunes. The desert scrub communities can be classified as creosote bush scrub, brittlebush scrub, salt bush scrub, or catclaw scrub depending on which of the following plants is dominant, creosote bush, brittlebush (*Encelia farinosa*), saltbush, or catclaw acacia, respectively. Each community typically exhibits all four species, three of which occur as lesser components. The desert scrub communities are characterized by widely spaced shrubs, typically between 1 to 10 feet tall, on well-drained secondary soils of slopes, fans, and valleys. The most common of the desert scrub communities found along the proposed route is creosote bush scrub. Other components within these plant communities include ocotillo, desert croton (*Croton californicus*), indigo bush (*Psorothamnus schottii*), white bursage, and big galleta grass. Acacia scrub is dominant on a portion of the proposed ROW where the area has been heavily grazed. Several flowering annuals are expected to occur throughout the desert scrub during years of good rainfall. Species expected to occur during years with good rainfall and resultant desert blooms include members of the families Poaceae, Polygonaceae, Papaveraceae, Crassulaceae, Fabaceae, Onagraceae, Polemoniaceae, Hydrophyllaceae, Boraginaceae, and Asteraceae.

The physical formation of the desert dune communities can be attributed to two basic origins: aeolian (wind-blown) or alluvial (deposited by flowing water). Along the proposed project's ROW within the Colorado Desert, the majority of the desert dunes are of aeolian origin, and are populated with a sparse distribution of shrub and scrub species, including creosote bush, saltbush, and mesquite. However, in some places, such as at the western end of the proposed project, aeolian and alluvial dunes may be found to intersect where both wind and water currents influence dune formation. In this case, River-

sidean alluvial fan sage scrub species may be found mixed with desert dune species. Desert dune areas within or adjacent to the proposed route are primarily considered stabilized or partially stabilized desert dunes. The sand accumulates and becomes somewhat anchored by both native and non-native plants (shrubs, annuals, and grasses).

Riparian, Ephemeral Drainages, and Desert Washes. Riparian habitat is associated with the drainages and rivers that hold water for a significant portion of the year or that have a high water table. Riparian communities are distinctly different from surrounding lands because of unique soil and vegetation characteristics that are strongly influenced by the presence of water. The riparian vegetation types present within the proposed ROW include: desert willow/scalebroom scrub, willow scrub, mule fat scrub, oak riparian, and willow forest. Riparian habitat along the proposed ROW is limited to the major rivers and systems and a few of the "larger" ephemeral drainages.

Scattered within the proposed route are numerous washes and perennial streams, each with characteristic riparian vegetation, the extent of which depends on the hydrology. Many of the washes are dry almost the entire year and generally support upland vegetation that is consistent with the surrounding habitat. More commonly, washes that support many of the same species that are found on nearby uplands exhibit a greater plant density and stature that tends to be noticeably taller. Other washes are comprised of looser, sandy alluvial soils that do not allow for permanent plant growth and exhibit little to no vegetation.

More established ephemeral drainages support plant species that differ from adjacent uplands and typically include scalebroom (*Lepidospartum squamatum*), willows (principally *S. exigua*), and mule fat (*Baccharis salicifolia*). Most of these plants are structurally taller and woodier than the adjacent upland scrub habitat and may occur as isolated individuals or as sparse stands within drainages.

The desert washes, most of which are relatively small, are characterized by a pattern of braided washes made up of channels where waters tend to focus, join, and flow to termini at playas, sand dunes, or the Colorado River. The washes in the proposed project ROW are typically populated with ironwood, blue palo verde, mesquite, and smoketree. The vegetation types associated with these washes provide unique habitats which are based on periodic flooding and substrate alterations, and a high water table. Because of periodic higher water availability, higher water table, and the accumulation of fine sediments, this is a community of relatively high productivity, and with high local and regional biological values.

Chaparral. The distribution of this community is patchy as a result of fire, development, and other human disturbances. Chaparral communities present within the proposed ROW include: scrub oak-chaparral, chamise-chaparral, and Riversidean sage scrub-chaparral. Upland sites with stony or alluvial soils are often largely chaparral. These habitats are found primarily on the north-facing slopes and hilltops. Chaparral consists of dense evergreen shrubs with distinctive sclerophyllous leaves, which are small, stiff, and thick. Desert chaparral is associated with desert scrub communities in the western portion of the Proposed Project that would occur within the Transverse Ranges. It is more open than most chaparral communities and does not burn as often as these other forms. Chaparral communities have adapted to fire by being able to resprout from specially adapted structures after the main-stem has been destroyed by fire and by being able to produce fire-resistant seeds at an early age that can live in the soil for decades until environmental conditions are favorable for growth. Shrubs tend to recover slowly after fire, and ephemeral annuals may occupy spaces between shrubs in the first few seasons following a fire. Chaparral along a majority of the Proposed Project has been impacted by historical uses (e.g., agriculture, grazing) that has resulted in the introduction of non-native grass species. These include the brome grasses (*Bromus* spp.) and wild oats (*Avena* spp.) which can often be found in the open spaces between shrubs. These introductions have also changed the frequency of fires and have resulted in a more open type of chaparral habitat.

Sage Scrub Communities. Sage scrub communities are present in a patchy distribution in some portions of the proposed ROW. Sage scrub vegetation is considered to be a lower seral stage of vegetative progression than is chaparral, and tends to be found at lower elevations than chaparral. It may be maintained by a more frequent local wildfire regime than that of chaparral. Most of the sage scrub within and adjacent to the ROW is mixed with chaparral and/or grassland communities. In the absence of fire or other disturbance factors, areas that support a mixture of sage scrub and chaparral tend to eventually convert to a higher seral stage of the chaparral dominated community over time. Sage scrub communities present within the ROW include: Riversidean sage scrub-chaparral, Riversidean sage scrub, Riversidean alluvial fan sage scrub, and coastal sage scrub. Coastal sage scrub occurs from the eastern slopes of the Santa Ana Mountains to the San Jacinto Mountains at elevations of less than 5,000 feet. Sage scrub often occurs in a patchy distribution throughout its range (O'Leary, 1992). This plant community is dominated by low-statured, drought-deciduous shrubs and subshrub species. The composition of this community frequently varies depending upon the successional stage and physical circumstances of the area in which it occurs. The common plant species in this community include California sagebrush (*Artemisia californica*), California or flat-top buckwheat (*Eriogonum fasciculatum*), purple sage (*Salvia leucophylla*), laurel sumac (*Malosma laurina*), California encelia (*E. californica*), white sage (*S. apiana*), and black sage (*S. mellifera*). Other common species include brittlebush (*E. farinosa*), lemonade berry (*Rhus integrifolia*), sugarbush (*R. ovata*), yellow bush penstemon (*Keckiella antirrhinoides*), Mexican elderberry (*Sambucus mexicana*), sweet bush, boxthorn (*Lycium* spp.), shore cactus (*O. littoralis*), coastal cholla (*O. prolifera*), and tall prickly pear (*O. oricola*). Portions of the sage scrub in the ROW are considered mixed communities, in that they contain components of both sage scrub vegetative types and chaparral.

Riversidean Alluvial Fan Sage Scrub is a Mediterranean shrubland type that occurs in washes and on gently sloping alluvial fans. This community is comprised of drought-deciduous soft-leaved shrubs but it also has a significant component of the larger perennial shrub species more typically found in chaparral. Scalebroom is generally regarded as an indicator of this plant community. Other shrubs common to this community include white sage, redberry (*Rhamnus crocea*), flat-top buckwheat, our lord's candle (*Yucca whipplei*), California croton (*C. californicus*), cholla (*Opuntia* spp.), yerba santa (*Eriodictyon* spp.), mule fat, and mountain mahogany (*Cercocarpus betuloides*).

Grasslands. Grassland communities occur on deep soils of lower slopes and valley bottoms, the majority of which are now largely urbanized or used for grazing. Non-native grasslands are likely to be dominated by several species of grasses that have evolved to persist in concert with human agricultural practices. This community exists as both a monotypic grassland and mixed with other shrub-scrub communities. The grassland communities present within and adjacent to the proposed ROW include: grassland, grassland/chaparral, grassland/scrub mosaic, and catclaw/grassland/valley cholla. The grasslands are dominated by non-native grass species including ripgut (*Bromus diandrus*), foxtail chess (*B. madritensis*), soft chess (*B. hordeaceus*), barley (*Hordeum* spp.), rye grass (*Lolium multiflorum*), English ryegrass (*Lolium perrene*), rat-tail fescue (*Vulpia myuros*), Mediterranean schismus, and mustards (*Brassica* spp.) (Jackson, 1985; Sims and Risser, 2000). The presence of grassland communities may increase the frequency, duration, and extent of wildfires. This, in turn, has resulted in the establishment and spread of invasive and noxious weeds, and brought about a vegetative type conversion in some areas away from native perennial grasslands, such that only non-native grasses and other weedy annual species occur (Zedler et al., 1983).

Coast Live Oak Woodland. Coast live oak woodland vegetation occurs as scattered, isolated remnants within or in close proximity to the ROW. Coast live oak (*Quercus agrifolia*) is the characteristic dominant plant species. Larger drainages of the southerly slopes of the San Bernardino Mountains such as

the San Gorgonio River, along San Timoteo Creek, Santa Ana Mountains, and adjacent drainages to the west support this habitat type. Understory shrubs in this community typically include poison oak (*Toxicodendron diversilobum*), gooseberry (*Ribes* sp.), herbaceous plants, and grasses.

Agricultural, Pastureland, and Windfarms. Agricultural lands consist of areas that are farmed on a consistent or intermittent basis. These areas are subject to various ground disturbing activities that have resulted in the complete or almost complete removal of native vegetation. The agricultural areas occurring along the proposed ROW generally consist of row crops including grains, cotton, and alfalfa, as well as fruit orchards including avocados and citrus trees. Most of the agricultural areas appear to be in constant production, although some fields likely lie fallow for certain periods of time. In some areas, the large extensive agricultural areas are crisscrossed by an extensive array of irrigation canals. The banks of these canals generally exhibit little or no vegetation, although those that do support vegetation are primarily covered by non-native weedy plant species. Small farms, plant nurseries, and horse stables also comprise a portion of the agricultural and/or pasturelands located along the ROW.

Pasturelands generally comprise those areas that are actively being grazed by livestock such as cattle, horses, sheep, or goats, or that have been obviously grazed in the relatively recent past. Historically, these areas likely supported native plant communities but the long-term use as grazing lands has resulted in the replacement of most or all of the native vegetation with native weedy species or non-native invasive grasses and weeds. In addition, the large, flat expanses of the valleys were historically used as pasturelands but as development has moved in, the pasturelands have been shifted to the hillier areas. These areas generally exhibit somewhat compacted soils from the hooves and bedding areas or changes in soil character resulting from the deposition of organic matter. In addition, these areas often exhibit an increase in erosion due to the removal of the vegetation by the grazing activities.

Windfarms, where large wind turbines on tall towers are used to produce electricity, are present along the western portion of the ROW. The historic vegetation that covered these areas was likely desert scrub, with creosote bush the likely dominant plant species. Much of the native vegetation in these areas has been removed or disturbed by the construction and maintenance activities associated with the windfarms. The current vegetation communities in these areas are generally comprised of a mix of non-native grasslands and open desert scrub.

Developed and Disturbed Areas. Developed or disturbed lands consist of areas that have been disked, cleared, or otherwise altered. Developed lands may include roadways, existing buildings, and structures. The largest areas of developed lands are Interstate 10, which mostly parallels the ROW, and in the cities along the ROW. Scattered developed areas, including freeway rest stops or isolated homes/ businesses also fall under the category of developed or disturbed areas.

D.2.1.1.2 Wildlife Overview

Arizona

Animals adapt to specific biotic and abiotic conditions that generally coincide with different plant community types. These community types are in turn influenced by a variety of factors which can limit their distribution or use by wildlife. Each wildlife species has its own habitat requirements based on the type and structure of the vegetation, and availability of food, water, and shelter resources. A large number of wildlife species are known to occur within the Sonoran Desert, specifically within Maricopa and La Paz Counties of Arizona. The geography of the area produces unique topographic and climactic features that allow the presence of these species. Central and western Arizona are dominated by the

presence of the Sonoran Desert, and thus animal species found along the proposed route include a large variety of species appropriate to this environment. Because the habitat in Arizona is in general more homogeneous than communities located in the California segments of the Proposed Project wildlife species have been identified by group.

Wildlife species observed either directly (by sight) or indirectly (through sound or sign) during field reconnaissance along the proposed route include reptiles such as whiptail lizard (*Aspidoscelis* sp.), zebra-tailed lizard (*Callisaurus draconoides*), sidewinder (*C. cerastes*), desert iguana (*Dipsosaurus dorsalis*), and Sonoran desert tortoise (*Gopherus agassizii*). Avian species including red-tailed hawk (*Buteo jamaicensis*), kestrel (*Falco sparverius*), black-throated sparrow (*Amphispiza bilineata*), and loggerhead shrike (*Lanius ludovicianus*). Mourning dove (*Zenaida macroura*), gilded flicker (*Colaptes chrysoides*), western meadowlark (*Sturnella neglecta*), phainopepla (*Phainopepla nitens*), Gila woodpecker (*Melanerpes uropygialis*), and osprey (*Pandion haliaetus*) were also observed. Mammals observed included wild burro (*Equus asinus*), kangaroo rat (*Dipodomys* sp.), and wood rat (*Neotoma* sp.). The regional occurrences and ecological characteristics of these habitat types are described below.

Amphibians. In desert areas located away from the Colorado River, the only amphibians likely to be present are the highly adapted toads that appear on the desert floor in response to summer monsoon rainfall. These species spend most of the year sequestered in rodent burrows or wells dug into the soil awaiting the summer rains. When rainfall is sufficient, the toads emerge to breed in temporary rainfall pools and stock tanks. Species likely to be present include Couch's spadefoot toad (*Scaphiopus couchii*), Great Plains toad (*Bufo cognatus*), Sonoran Desert toad (*B. alvarius*), and red-spotted toad (*B. punctatus*). The Colorado River Toad, a Californis species of special concern is expected to occur in the river and drainages that occur in the region. The Colorado River also provides habitat to exotic aquatic species such as the bullfrog (*Rana catesbiana*).

Reptiles. Depending on substrate, a fairly diverse group of lizards and snakes may be found in habitats traversed by the Proposed Project. Fine, sandy soils are likely to host such species as banded sand snake (*Chilomeniscus cinctus*), sidewinder (*C. cerastes*), and desert iguana (*Dipsosaurus dorsalis*). Rocky slopes, outcrops, and washes support a different herpetofauna that includes such species as long-tailed brush lizard (*Urosaurus graciosus*), chuckwalla (*Sauromalus obsesus*), desert spiny lizard (*Sceloporus magister*), desert horned lizard (*Phrynosoma platyrhinos*), western whiptail (*Aspidoscelis [Cnemidophorus] tigris*), and desert glossy snake (*Arizona elegans*), among others. The aquatic habitats associated with the Colorado River make the presence of aquatic species, such as the spiny softshell turtle (*Trionyx spinifera*), possible.

Birds. It is likely that more than 75 species of birds could be found in the Sonoran Desert portions of the Proposed Project over the course of a year including vultures (*Cathartes spp.*), hawks (Family Accipitridae), quail, doves (*Z. macroura*), roadrunner (*Geococcyx californianus*), owls (Family Strigidae, Tytonidae), goatsuckers (Family Caprimulgidae), swifts (Family Apodidae), hummingbirds (Family Trochilidae), woodpeckers (Family Picidae), and a fairly diverse array of songbirds (flycatchers (Family Tyrannidae), larks (*Eremophila alpestris*), swallows (Family Hirundinidae), wrens (Family Troglodytidae), gnatcatchers (Family Sylviidae), mockingbird (*Mimus polyglottos*), thrashers (*Toxostoma spp.*), shrike, vireos (Family Vireonidae), warblers (Family Parulidae, Peucedramidae), orioles (*Icterus spp.*), tanagers (*Piranga spp.*), grosbeaks (Family Cardinalidae), finches (*Carpodacus spp.*), and sparrows (Family Emberizidae). The Colorado River and associated aquatic, wetland, and riparian habitats add to the overall diversity of the avifauna of the Arizona portion of the proposed route. Many species of waterfowl (Family Anatidae), shorebirds (Family Charadriidae), wading birds (Family Ardeidae), and piscivores are present because of the Colorado River.

Mammals. Generally, the mammalian fauna along the Arizona portion of the Proposed Project is comprised primarily of small, nocturnal species of bats and rodents, including the highly desert-adapted Heteromyid pocket mice (*Perognathus sp.* and *Chaetodipus sp.*) and kangaroo rats (*Dipodomys sp.*). The presence of mine shafts, natural caves, and cliffs, would naturally attract several species of bats along the Proposed Project route. It is likely that bats forage along the proposed route in Arizona. Diurnal species present include black-tailed jackrabbit (*Lepus californicus*), Harris antelope ground squirrel (*Ammospermophilus harrisii*), and rock squirrel (*Spermophilus variegatus*). Desert mule deer (*Odocoileus hemionus*) are present sparingly in foothills and along major washes. Desert bighorn sheep (*Ovis canadensis mexicana*) are fairly common in the Kofa NWR where the sheep population has remained stable and has been carefully tracked for over 14 years. Desert bighorn sheep can also be found in New Water and Plomosa Mountains with smaller populations in the Livingston Hills and the Dome Rock Mountains. The coyote (*Canis latrans*) is likely to be encountered almost anywhere along the Arizona portion of the Proposed Project. Kit fox (*Vulpes macrotis*) would also be expected to occur in the area.

Wild Horses and Burros. Wild horses and burros (*E. assinus*) were released by ranchers, miners, and others over the past 100 years, and are now common range land species in the western United States and particularly in Nevada, Arizona, and portions of California. Wild horses and burros are protected under Public Law 92-195, the Wild Free-Roaming Horse and Burro Act of 1971. Under this act, the BLM and United States Forest Service (USFS) are charged with managing and protecting these animals.

Wild horses prefer to graze on grasses and grass-like species found throughout the area located in the valley bottoms. They also utilize other shrubs and forbs when necessary. Foals are typically born in the spring and may be present in some areas during the proposed Project. HMAs that occur in the project area are identified in Section D.2.1.1.4 Overview of Special Habitat Management Areas.

California

The California portion of the Proposed Project supports a variety of habitats which are known to support a diversity of wildlife species, including mammals, birds, amphibians, reptiles, fish, and invertebrates. Each wildlife species has its own habitat requirements based on the type and structure of the vegetation, and availability of food, water, and shelter resources. The various types of wildlife habitats present in the ROW are described below.

Desert Scrub Habitats and Desert Dunes. Creosote bush scrub is the dominant plant community within the California segments of the Proposed Project. This habitat community has relatively limited plant species diversity and is structurally monotypic. These characteristics limit the wildlife species within the community to those that are adapted to harsh, arid environments.

Typical desert reptile species expected to occur within desert portions of the ROW include common collared lizard (*Crotaphytus collaris*), desert spiny lizard (*Sceloporus magister*), common chuckwalla, side-blotched lizard (*Uta stansburiana*), desert iguana (*Dipsosaurus dorsalis*), red coachwhip snake (*Masticophis flagellum*), sidewinder (*C. cerastes*), red diamondback (*C. ruber*), speckled rattlesnake (*C. mitchelli*), and desert tortoise (*G. agassizii*).

Common bird species expected to occur in the areas include: white-winged doves (*Z. asiatica*), greater roadrunner (*Geococcyx californianus*), loggerhead shrike, black-throated sparrow, northern flicker (*C. auratus*), verdin (*Auriparus flaviceps*), Gila woodpecker, Gambel's quail (*C. gambelii*), red-tailed hawk, common raven (*Corvus corax*), and prairie falcon (*F. mexicanus*).

Common mammal species likely to occur in desert scrub habitat include coyote (*C. latrans*), bobcat (*Lynx rufus*), American badger (*Taxidea taxus*), black-tailed jackrabbit, desert kangaroo rat (*D. deserti*), and desert pocket mouse (*C. penicillatus*).

Riparian and Wash Habitats. The proposed ROW crosses several desert washes, ephemeral drainages, and a few rivers, some of which support riparian communities. In the arid southwest, riparian habitats support higher species richness and densities of wildlife than any other desert habitat (Anderson and Ohmart, 1984). Those riparian habitats that are structurally diverse and that support a high diversity of plant species would be expected to support a higher diversity of wildlife species. The dry desert washes that typically support sparser vegetation communities, or that support plant species typical of the adjacent uplands rather than riparian plant species, would be expected to support a less diverse array of wildlife species. Riparian habitats infested with a dense cover of non-native plant species, such as salt cedar (*Tamarix* spp.), also would be expected to support a lower diversity of wildlife species.

The riparian areas and drainages that support variations of the willow riparian community would be expected to support a variety of wildlife that includes amphibians, reptiles, birds, and mammals. Some of the bird species expected to utilize the willow riparian areas include white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperi*), red-shouldered hawk (*B. lineatus*), northern flicker and various woodpeckers, black phoebe (*Sayornis nigricans*), yellow warbler (*Dendroica petechia*), ash-throated flycatcher (*Myiarchus cinerascens*), and song sparrow (*Melospiza melodia*).

Mammal species likely to occur in association with riparian habitats include desert cottontail (*Sylvilagus audubonii*), desert woodrat, raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), mule deer, and several species of bat.

Amphibians commonly found in riparian habitats include pacific treefrog (*Hyla regilla*), California treefrog (*H. cadaverina*), and western toad (*B. boreas*). Common reptiles that typically inhabit riparian habitats include southern alligator lizard (*Elgaria multicarinata*), western fence-lizard (*Sceloporus occidentalis*), ring-necked snake (*Diadophis punctatus*), striped racer (*Masticophis lateralis*), and California kingsnake (*Lampropeltis zonata*).

The desert washes would be expected to support common bird species characteristic of the surrounding desert habitats, such as verdin, Lucy's warbler (*Vermivora luciae*), phainopepla, white-winged dove, common ground dove (*C. passerine*), and Crissal thrasher (*Toxostoma crissale*). Amphibians that are typically associated with desert wash areas include western spadefoot toad and Couch's spadefoot toad. Reptiles and mammals, in general, typically utilize the desert washes as part of their habitat but they tend to be opportunistic and will also utilize the washes when water is present.

Chaparral and Sage Scrub Habitats. Numerous reptile species including side-blotched lizard, western whiptail (*Aspidoscelis tigris*), orange-throated whiptail (*A. hyperythra beldingi*), gopher snake (*Pituophis catenifer*), California kingsnake, southern Pacific rattlesnake (*C. viridus helleri*), and red diamond rattlesnake (*C. rubber)* typically inhabit the chaparral and coastal sage scrub vegetation communities. Some of these species are most common in the open areas along trails or washes or in areas where the vegetation is less dense. These habitats also provide foraging, nesting, and shelter opportunities for numerous bird species including California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), California thrasher (*T. redivivum*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), bushtit (*Psaltriparus minimus*), and California quail. Mule deer, coyote, bobcat, raccoon, striped skunk, desert cottontail rabbit (*Sylvilagus audubonii),* and small fossorial rodents such as dusky-footed woodrat, desert woodrat, Pacific kangaroo rat (*D. agilis*), deer mouse, are also common in chaparral and sage scrub habitats.

Grassland Habitats. Wildlife species that occupy the grasslands are typically those that feed on the grasses, annual plants, and seeds produced by the plants. Typical bird species associated with the grasslands include: California towhee, black phoebe, chipping sparrow (*Spizella passerine*), white-crowned sparrow (*Zonotrichia leucophrys*), western meadowlark, and lesser goldfinch (*Carduelis psaltria*). The grasslands that are located relatively near water sources or those areas where vernal pools or seasonally ponded areas occur would be expected to support a few amphibian species, including western spadefoot toad and western toad. Reptiles commonly found in the grasslands include gopher snake, red coachwhip, southern pacific rattlesnake, side-blotched lizard, western whiptail, and western fence lizard. Seed-eating mammals are also common in the grasslands. Mammals, such as deer mouse, western harvest mouse (*Rheithrodontomys megalotis*), southern grasshopper mouse (*Onochomys torridus*), house mouse (*Mus musculus*) (near developed areas), California ground squirrel (*S. beecheyi*), valley pocket gopher (*Thomomys bottae*), desert cottontail, black-tailed jackrabbit, and mule deer are often present. Common predators observed utilizing the grasslands for foraging include coyote, bobcat, fox, and several species of raptors.

Agricultural Areas, Pasturelands, and Windfarms. Agricultural areas are generally found on fertile soils that historically supported prime habitat for native species. Although agricultural fields can provide a year-round source of food for many wildlife species adapted or adjacent to disturbed areas, some agricultural practices such as disking, plowing, trapping, and applying pesticides and herbicides can reduce the value of these lands for wildlife. Suitable habitat for denning and nesting for such species generally occurs along the weedy edges of fields and irrigation canals as well as in the poorly maintained or fallow fields. Agricultural areas can provide a year-round water source for wildlife.

Where grazing has reduced native plant cover, there is generally a corresponding reduction in habitat value for wildlife species. However, some animals, such as raptors and burrowing owls (*Athene cunicularia*), may seek the non-native grasslands, pasturelands, and disturbed areas because the altered conditions have improved their foraging opportunities. Small lizards and rodent species including side-blotched lizards, western fence lizards, California ground squirrels, and deer mice are common species that occur in grasslands and other open habitats such as pasturelands and disturbed areas. Western meadowlarks, horned larks (*Eremophila alpestris*), and killdeer (*Charadrius vociferous*), common bird species that forage in open habitats, are also attracted to these areas.

Developed and Disturbed Areas. Developed and urban areas provide habitat for opportunistic wildlife species. American crows (*Corvus brachyrhynchos*), European starlings (*Sturnus vulgaris*), house sparrows (*Passer domesticus*), black phoebes, barn swallows (*Hirundo rustica*), and cliff swallows (*Petrochelidon pyrrhonota*) are bird species that often nest on artificial structures. Red-tailed hawks and common ravens frequently nest on the steel lattice towers of transmission lines. Coyotes, raccoons, and opossums (*Didelphis marsupialis*) frequently forage in residential areas and landfills.

Wild Horses and Burros

Wild horses and burros may also be found in the eastern most segments of California near the Colorado River.

D.2.1.1.3 Special Status Species Overview

The overview of special status species includes a description of the special status plant communities, plants, and wildlife species that either occur in the project area or that have a potential to occur. An extensive list of potentially occurring special status species was developed based on the species' range and elevational requirements, as well as on the species' habitat requirements. Species were included on the list if

they were identified during the literature review of the CNDDB, CNPS, and Bureau of Land Management (BLM), ADA, Arizona Game and Fish Department (AZGF); California Department of Fish and Game (CDFG), and United States Fish and Wildlife Service (USFWS) Sensitive Species Lists.

The following criteria were used to determine the potential for each species to occur along the Proposed Project route:

- **Present:** Species was observed within the proposed route at the time of the reconnaissance surveys.
- **High:** Both a historical record exists of the species within the proposed route or its immediate vicinity (approximately five miles) *and* the environmental conditions associated with species presence occur along the route.
- **Moderate:** Either a historical record exists of the species within the immediate vicinity of the proposed route (approximately five miles), *or* the environmental conditions (including soil type) associated with species presence occur along the route.
- **Low:** No records exist of the species occurring within the proposed route or its immediate vicinity (approximately five miles) and/or the environmental conditions (including elevation ranges and vegetation communities) associated with species presence are marginal along the route.
- **Not Likely to Occur:** Species was not observed during reconnaissance surveys and species is restricted to environmental conditions (including elevation ranges and vegetation communities) that do not occur along the proposed route.

For the purposes of presenting the locations of where these species occur or may occur in a tabular format, the various segments of the transmission line have been given acronyms to easily identify them. The acronyms for each segment are shown in Table D.2-1. The discussions of the specific locations of sensitive vegetation communities and species are provided in Sections D.2.2 and D.2.3.

Table D.2-1. Segment Acronyms

Acronym	Transmission Line Segment	Section Number
HAR-KNWR	Harquahala to Kofa National Wildlife Refuge	D.2.3.1
KNWR	Kofa National Wildlife Refuge	D.2.3.2
KNWR-COR	Kofa National Wildlife Refuge to Colorado River	D.2.3.3
COR-MS	Colorado River to Midpoint Substation	D.2.3.4
MS	Midpoint Substation	D.2.3.5
CCRA	Cactus City Rest Area	D.2.3.6
DEV	Devers Substation	D.2.3.7
BN-BM	Banning	D.2.4.1
BN-BM	Banning and Beaumont	D.2.4.2
SBJ-VS	Calimesa to San Timoteo Canyon	D.2.4.3
SBJ-VS	San Bernardino Junction to Vista Substation	D.2.4.4
SBJ-SBS	San Bernardino Junction to San Bernardino Substation	D.2.4.5

Special status species include those listed as threatened or endangered under the State or federal Endangered Species Acts (ESA), species proposed or candidates for listing, species of special concern, and other species identified either by the USFWS, BLM, California Department of Fish & Game (CDFG), or Arizona Game and Fish Department (AGFD) as unique or rare, and which have the potential to occur in the project area. Other species identified in this document include those species identified as otherwise protected under California Native Plant Protection Act, California Desert Native Plant Act. Wildlife of Special Concern in Arizona (WSCA) and plants protected under the Arizona Department of Agriculture's (ADA) Arizona Native Plant Law. Plants identified by the California Native Plant Society (CNPS) as Lists 1B. BLM's policy is to "ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered."

Arizona

Special Status Plant Species. Within the Arizona segments of the Proposed Project, the following special status plant species were considered:

- ~~Two~~ One endangered plant species protected by the USFWS under the ESA. This includes ~~(1) the Arizona agave (*Agave arizonica*), which is listed as endangered for Maricopa County but is also proposed for delisting from the ESA and (2)~~ the Arizona cliffrose (*Purshia subintegra*), which is listed as endangered for Maricopa County. Additional information on these species can be found in Appendix 7.
- Eleven sensitive plant species protected by the BLM. This includes (1) seven sensitive status plant species for the Phoenix Field Office: Arizona Sonoran rosewood (*Vauquelinia californica* ssp. *sonorensis*), California flannel bush (*Fremontodendron californicum*), giant sedge (*Carex spissa* var. *ultra*), Kofa Mountain barberry (*Berberis harrisoniana*), Hohokam agave (*Agave murpheyi*), Schott wire-lettuce (*Stephanomeria schottii*), Tumamoc globeberry (*Tumamoca macdougalii*), and (2) six sensitive status plant species for the Yuma Field Office: blue sand lily (*Triteleiopsis palmeri*), Kearney sumac (*Rhus kearneyi* ssp. *kearneyi*), Kofa Mountain barberry, Parish wild onion (*Allium parishii*), and sand food (*Pholisma sonorae*). Additional information on these species can be found in Appendix 7.
- All plant species (over 200) protected under the Arizona Native Plant Law (ANPL). A complete list of the plant species as protected by this law can be obtained from the ADA's website (http://www.azda.gov/ESD/protplantlst.htm).

Thorough analysis of the Proposed Project route including reconnaissance surveys revealed that only one species protected by either the USFWS and/or the BLM was found to have a Low potential for occurrence along the route for the Proposed Project. This species is the Kofa Mountain barberry. The remaining 12 species protected by the USFWS and BLM were found to be unlikely to occur along the Proposed Project route for one or both of the following reasons: (1) the Proposed Project route does not contain habitat conditions (i.e., soils, elevation, vegetation community) similar to those known to be necessary to support these species and (2) known geographic locations and/or records of these species were distant from Proposed Project route.

Although none of the plant species protected by the USFWS and/or BLM are expected to occur along the proposed route, there are many species protected by the ANPL that are known or are likely to be present. Although the ANPL does not prohibit the destruction of these species, the ADA must be notified prior to ground disturbing activities. Plant species that are protected under the ANPL that are known or are likely to be present within the proposed route include, but are not limited to, all cacti species (e.g., saguaro, chollas, prickly pears, hedgehogs, barrels), palo verdes, mesquites, ironwood, and agaves.

Special Status Wildlife Species. Within the Arizona segments of the Proposed Project, the following special status wildlife species were considered:

- ~~Two~~ One endangered plant species protected by the USFWS under the ESA. This includes ~~(1) the Arizona agave (*Agave arizonica*), which is listed as endangered for Maricopa County but is also proposed for delisting from the ESA and (2)~~ the Arizona cliffrose (*Purshia subintegra*), which is listed as endangered for Maricopa County. Additional information on these species can be found in Appendix 7.

- Twenty-one sensitive wildlife species as protected by the BLM PFO and YFO. This includes one bird species (one listed for PFO and one listed for YFO), eight mammal species (seven listed for PFO and seven listed for YFO), five fish species (five listed for PFO and one listed for YFO), no amphibian species, four reptile species (three listed for PFO and three listed for YFO), and three invertebrate species (two listed for PFO and two listed for YFO). A table with additional information on these species can be found in Appendix 7.
- Thirty-six WSCA species as listed by the AGFD with records in Maricopa and/or La Paz Counties. This includes 18 bird species (16 listed for Maricopa County and 9 listed for La Paz County), five mammal species (five listed for Maricopa County and three listed for La Paz County), six fish species (six listed for Maricopa County and four listed for La Paz County), three amphibian species (three listed for Maricopa County and one listed for La Paz County), four reptile species (three listed for Maricopa County and one listed for La Paz County), and no invertebrate species. A table with additional information on these species can be found in Appendix 7.
- All bird species (over 800) protected under the MBTA. A complete list of the bird species as protected by this Act can be obtained from the USFWS website (http://www.fws.gov/migratorybirds/intrnltr/mbta/mbtandx.html).
- Desert bighorn sheep (*O. canadensis*) as regulated as a big game animal by the AGFD, CDFG, BLM, and Kofa NWR.

Table D.2-2 contains a list of special status wildlife species that are protected by USFWS, BLM, CDFG, and/or AGFD in the vicinity of the Proposed Project, and have a moderate or high potential to occur within the proposed route. The criteria used to determine the potential for a species to occur within the project area is described above in the introduction to this Section (D.2.1.1.3). The remaining species protected by the USFWS, BLM, CDFG, and/or AGFD were found to be unlikely to occur within the Proposed Project alignment for one or more of the following reasons: (1) the Proposed Project route does not contain habitat conditions, such as elevation, vegetation community, similar to those known to be necessary to support these species and (2) known geographic locations and/or records of these species were distant from the Proposed Project route. A table with information on these species can be found in Appendix 7.

Table D.2-2. Special Status Wildlife with a High/Moderate Potential to Occur in the Vicinity of the Proposed Project

Scientific Name Common Name	Status		Potential to Occur/ Transmission Line Segment	Habitat and Known Locations
INVERTEBRATES				
Oliarces clara Cheese–weed moth lacewing	BLM:	SS/YFO	Moderate	Populations occur on or near bajadas. Larvae are associated with creosote-bush roots, upon which they likely feed (AGFD, 2003)
FISH				
Xyrauchen texanus Razorback sucker	ESA: AGFD:	END/LPC & MC WSCA/ LPC & MC	High	Slow backwaters of reservoirs and medium and large streams and rivers of the Colorado River Basin at elevations of 181 to 5,000 feet in elevation. Spawns in shallow waters with sandy, gravelly or rocky bottoms (AGFD, 2001)
REPTILES				
Sauromalus obesus Common chuckwalla	BLM:	SS/PFO & YFO	High	Predominantly found near cliffs, boulders, or rocky slopes, where they use rocks as basking sites and rock crevices for shelter. They can be found in rocky desert, lava flows, hillsides, and outcrops. Creosote bush is associated with this species (AGFD, 2005)
***Gopherus agassizii* (Sonoran population)** Sonoran Desert tortoise	AGFD:	WSCA/ LPC & MC	Present	Inhabits almost any desert habitats with friable soils for burrow and nest construction (AGFD, 2001)
Uma scoparia Mojave fringe-toed lizard	AGFD:	WSCA/ LPC	High	Restricted to fine, windblown sands and dunes, flats, riverbanks and washes of very arid low growing vegetation (AGFD, 2003)
Heloderma suspectum cinctum Banded Gila monster	BLM:	SS /YFO	High	Most commonly found in undulating rocky foothills, bajadas, and canyons of the Sonoran Desert and extreme western edge of Mojave Desert. (AGFD, 2002)
Charina trivirgata gracia Desert rosy boa	BLM:	SS/PFO & YFO	High	Occurs in rocky areas in desert ranges, especially in canyon with permanent or intermittent streams in elevations from 700 to 5,640 feet (AGFD, 2003)
BIRDS				
Pelecanus occidentalis californicus California brown pelican	ESA:	END/LPC & MC	Moderate	Shore bird usually found near sandy beaches and lagoons. Nests along coastal islands with shrubby vegetation and small trees. In Arizona, this species can be found at large inland lakes (Monson and Phillips, 1981)
Aechmophorus clarkii Clark's grebe	AGFD:	WSCA/ LPC	High	Found along the Colorado River year round and inhabits marshes, lakes, and bays (AGFD, 2003)
Egretta thula Snowy egret	AGFD:	WSCA/MC	High	Found in marshes, lakes, ponds, lagoons, and shallow coastal habitats. Breeds and winters along the lower Colorado River, in west-central Maricopa County along the Gila River, and along the Hassayampa River (AGFD, 2002)
Ardea alba Great egret	AGFD:	WSCA/ LPC & MC	High	Found in marshes, swampy woods, tidal estuaries, lagoons, mangroves, streams, lakes, rivers, and ponds (AGFD, 2002)

Table D.2-2. Special Status Wildlife with a High/Moderate Potential to Occur in the Vicinity of the Proposed Project

Scientific Name Common Name	Status		Potential to Occur/ Transmission Line Segment	Habitat and Known Locations
Pandion haliaetus Osprey	AGFD:	WSCA/MC	Present	Nests along rivers, lakes, sea coasts, and other large bodies of water in forest habitats (AGFD, 2002)
Athene cunicularia hypugea Western burrowing owl	BLM:	SS/PFO & YFO	High	Occurs in open scrub, grassland, and agricultural habitat (AGFD, 2001)
MAMMALS				
Macrotus californicus California leaf-nosed bat	AGFD:	WSCA/ LPC & MC	High	Sonoran Desert scrub with roosts in mines, caves, or rock shelters in CA, NV, AGFD, and Mexico at 160 to 3,980 feet in elevation (AGFD, 2001)
Myotis velifer Cave myotis	BLM:	SS/PFO & YFO	High	Desert scrub with roosts in caves, tunnels, mineshafts, and under bridges in extreme southwestern U.S. and south to Mexico at 300 to 5,000 feet in elevation (AGFD, 2002)
Nyctinomops femorosaccus Pocketed free-tailed bat	BLM:	SS/PFO & YFO	Moderate	Desert scrub and pine-oak forests near high cliffs and rugged, rocky out-crops in southwestern U.S. and central Mexico from 190 to 7,520 feet in elevation; roost site include rock crevices and human built structures (AGFD 2003)
Nyctinomops macrotis Big free-tailed bat	BLM:	SS/PFO & YFO	Moderate	Rugged, rocky county, and riparian areas throughout most of Arizona from 1,810 to 8,475 feet in elevation (AGFD, 2003i

Federal Designations (Federal Endangered Species Act, USFWS)

END: **Federally listed, endangered**
THR: **Federally listed, threatened**
C: **Federal candidate species**
PD: **Federally proposed for delisting**
PEND: **Federally proposed endangered**

State Designations:

WSCA: Wildlife of Special Concern in Arizona

Other Designations

SS: Bureau of Land Management sensitive species

California

Special Status Plant Communities. The literature review determined that 12 sensitive vegetation communities are known to occur in the vicinity of the Proposed Project. The field survey determined that all of these sensitive vegetation communities occur within or adjacent to the project survey area. The vegetation communities and the transmission line segments that would traverse each community are listed in Table D.2-3. General descriptions of these communities are provided in Appendix 7, and more detailed discussion of the locations of these communities within each segment of the Proposed Project can be found in Sections D.2.2.1 through D.2.3.5.

Special Status Plant Species. The CNDDB and CNPS literature search identified 150 listed or sensitive plant species that are known to occur within the project vicinity and that have potential to occur within the proposed ROW. These species and descriptions of each species' status, habitat requirements, potential for occurrence, and project segment(s) where each either occur or potentially occur are listed in Appendix 7.

Each of these species identified in the search was assessed for their potential to occur within the project area based on the criteria described above within the introduction to Section D.2.1.1.3. Table D.2-4 lists the plant species that have been documented in the project area and those that have either a high or moderate potential to occur. The plant species that are unlikely to occur or that have a low potential to occur are described in Appendix 7.

Table D.2-3. Sensitive Vegetation Community Occurrence within Proposed Project

Sensitive Vegetation Community	Occurs in Survey Area	Transmission Line Segment and Approximate MP (if found in survey area)
Coastal sage scrub	Yes	BN-BM SBJ-VS SBJ-SBS
Desert Dunes and Desert Sand Fields	Yes	MS-CCRA CCRA-DEV DEV-EBB
Desert Fan Palm Oasis Woodland	Yes	MS-CCRA CCRA-DEV DEV-EBB
Mesquite Bosque/Hummocks	Yes	MS-CCRA CCRA-DEV DEV-EBB
Riversidean Alluvial Fan Sage Scrub	Yes	BN-BM CL-STC
Riversidean Sage Scrub	Yes	BN-BM CL-STC
Southern Sycamore Alder Riparian Woodland	Yes	CL-STC SBJ-VS SBJ-SBS
Southern Coast Live Oak Riparian Forest	Yes	DEV-EBB CL-STC SBJ-VS
Southern Arroyo Willow Riparian Forest	Yes	DEV-EBB
Southern Cottonwood Willow Riparian Forest	Yes	COR-MS CCRA-DEV DEV-EBB BN-BM CL-STC
Southern Riparian Scrub	Yes	CL-STC
Southern Sycamore Alder Riparian Woodland	Yes	CL-STC
Southern Willow Scrub	Yes	CL-STC SBJ-VS

Source: CNDDB and CNPS database search of Aztec Mines, Beaumont, Blythe, Blythe NE, Cabazon, Catclaw Flat, Cathedral City, Corn Spring, Cottonwood Basin, Cottonwood Spring, Desert Center, Desert Hot Springs, East Deception Canyon, East of Aztec Mines, East of Red Canyon, East of Victory Pass, El Casco, Ford Dry Lake, Forest Falls, Hayfield, Hayfield Spring, Hopkins Well, Indio, La Quinta, McCoy Peak, McCoy Spring, McCoy Wash, Morongo Valley, Mortmar, Orocopia Canyon, Palm Springs, Palo Verde, Pilot Mountain, Red Canyon, Red Cloud Canyon, Redlands, Ripley, Riverside East, Rockhouse Canyon, Roosevelt Mine, San Bernardino South, San Gorgonio Mountain, Seven Palms Valley, Sidewinder Well, Sunnymead, Thermal Canyon, Victory Pass, West Berdoo Canyon, White Water, Yucaipa, Canyon 7.5 minute quads, 2005.

Location information on some sensitive species may be of questionable accuracy or unavailable; therefore, for survey purposes, environmental factors associated with species occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence.

Table D.2-4. Sensitive Plants Species with High/Moderate Potential to Occur in California

Scientific Name Common Name	— Status —	Flowering Period	Habitat	Potential to Occur: Transmission Line Segment
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: None CA: None CNPS: 1B R-E-D: 2-3-2 BLM: None FS: None	Jan–Sep	Chaparral; Coastal Scrub; Desert dunes (sandy)	High: DEV-EBB Moderate: CCRA-DEV; BN-BM; CL-STC; SBJ-VS; SBJ-SBS
Acleisanthes longiflora Angel trumpets	Fed: None CA: None CNPS: 2 R-E-D: 3-1-1 BLM: None FS: None	May	Sonoran Desert scrub; generally on limestone	Moderate: COR-MS; MS-CCRA; CCRA-DEV
Allium marvinii Yucaipa onion	Fed: None CA: None CNPS: 1B R-E-D: 3-3-3 BLM: None FS: None	Apr–May	(WR) Chaparral (in openings on clay soils)	High: DEV-EBB; BN-BM; CL-STC
Allium munzii Munz's onion	Fed: END CA: THR CNPS: 1B R-E-D: 3-3-3 BLM: None FS: S	Mar–May	(WR) Chaparral; Cismontane woodland; Coastal scrub; Pinyon and juniper woodland; Valley and foothill grassland (mesic, clay)	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS
Ambrosia pumila San Diego ambrosia	Fed: END CA: None CNPS: 1B R-E-D: 3-3-2 BLM: SS FS: None	Apr–Oct	(WR) Chaparral; Coastal scrub; Valley and foothill grassland; Vernal pools/ often in disturbed areas	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS
Ammoselinum giganteum desert sand-parsley	Fed: None CA: None CNPS: 2 R-E-D: 3-1-1 BLM: None FS: None	Mar–Apr	Sonoran Desert Scrub	High: MS-CCRA Moderate: COR-MS; CCRA-DEV
Astragalus insularis* var. *harwoodii Harwood's milkvetch	Fed: None CA: None CNPS: 1B R-E-D: 2-2-2 BLM: None FS: None	Jan–May	Desert dunes; Mojavean desert scrub (sandy or gravelly – mostly in creosote bush scrub)	High: COR-MS; MS-CCRA
Astragalus lentiginosus* var. *coachellae Coachella Valley milkvetch	Fed: END CA: None CNPS: 1B R-E-D: 2-2-3 BLM: None FS: S	Feb–May	(CV) Sonoran desert scrub (sandy flats, washes, outwash fans, sometimes on dunes)	Present: CCRA-DEV Moderate: DEV-EBB

Table D.2-4. Sensitive Plants Species with High/Moderate Potential to Occur in California

Scientific Name Common Name	— Status —	Flowering Period	Habitat	Potential to Occur: Transmission Line Segment
Astragalus pachypus* var. *jaegeri Jaeger's milkvetch	Fed: None CA: None CNPS: 1B R-E-D: 3-3-3 BLM: None FS: S	Dec–Apr	(WR) Chaparral; Cismontane woodland; Coastal scrub; Valley and foothill grassland	Present: CL-STC; SBJ-VS; SBJ-SBS High: BN-BM; DEV-EBB
Atriplex coronata* var. *notatior San Jacinto Valley crownscale	Fed: END CA: None CNPS: 1B R-E-D: 3-3-3 BLM: None FS: None	Apr–Aug	(WR) Playas; Valley and foothill grassland (mesic); Vernal pools (alkaline)	Moderate: BN-BM; CL-STC
Atriplex parishii Parish's brittlescale	Fed: None CA: None CNPS: 1B R-E-D: 3-3-2 BLM: None FS: S/SBNF	Jun–Oct	(WR) Chenopod scrub; Playas; Vernal pools	Moderate: CCRA-DEV; DEV-EBB
Ayenia compacta ayenia	Fed: None CA: None CNPS: 2 R-E-D: 2-1-1 BLM: None FS: None	Mar–Apr	Mojavean desert scrub; Sonoran desert scrub	High: MS-CCRA
Berberis nevinii Nevin's barberry	Fed: END CA: END CNPS: 1B R-E-D: 3-3-3 BLM: None FS: S	Mar–Apr	(WR) Chaparral; Cismontane woodland; Coastal scrub; Riparian scrub	Present: SBJ-VS; SBJ-SBS; CL-STC
Calochortus plummerae Plummer's Mariposa lily	Fed: None CA: None CNPS: 1B R-E-D: 2-2-3 BLM: None FS: S/SBNF	May–Jul	(WR) Chaparral; Cismontane woodland; Coastal scrub; Lower montane coniferous forest; Valley and foothill grassland (granitic, rocky)	Present: CL-STC High: BN-BM
Castela emoryi crucifixion thorn	Fed: None CA: None CNPS: 2 R-E-D: 2-1-1 BLM: None FS: None	Apr–Jul	Mojavean desert scrub; Playas; Sonoran desert scrub (gravelly)	High: MS-CCRA
Centromadia pungens* var. *laevis smooth tarplant	Fed: None CA: None CNPS: 1B R-E-D: 2-3-3 BLM: None FS: None	Apr–Sep	(WR) Chenopod scrub; Meadows and seeps; Playas; Riparian woodland; Valley and foothill grassland (alkaline)	Moderate: CL-STC; BN-BM
Chamaesyce abramsiana Abram's spurge	Fed: None CA: None CNPS: 2 R-E-D: 3-2-1 BLM: None FS: None	Sep–Nov	Mojavean desert scrub; Sonoran desert scrub (sandy)	Moderate: MS-CCRA

Table D.2-4. Sensitive Plants Species with High/Moderate Potential to Occur in California

Scientific Name Common Name	— Status —	Flowering Period	Habitat	Potential to Occur: Transmission Line Segment
Chamaesyce arizonica Arizona spurge	Fed: None CA: None CNPS: 2 R-E-D: 2-1-1 BLM: None FS: None	Mar–Apr	Sonoran desert scrub (sandy)	High: CCRA-DEV
Chamaesyce platysperma flat-seeded spurge/ sandmat	Fed: None CA: None CNPS: 1B R-E-D: 3-2-2 BLM: SS FS: None	Feb–Sep	(CV*) Desert dunes; Sonoran desert scrub (sandy)	High: CCRA-DEV
Chorizanthe parryi* var. *parryi Parry's spineflower	Fed: None CA: None CNPS: 3 R-E-D: ?-2-3 BLM: None FS: S/SBNF	Apr–Jun	(WR) Chaparral; Coastal scrub (sandy or rocky, openings)	High: DEV-EBB; BN-BM; CL-STC; SBJ-VS; SBJ-SBS
Chorizanthe polygonoides* var. *longispina long-spined spineflower	Fed: None CA: None CNPS: 1B R-E-D: 2-2-3 BLM: None FS: S/SBNF	Apr–Jun	(WR) Chaparral; Coastal scrub; Meadows and seeps; Valley and foot-hill grassland/often clay	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS
Chorizanthe xanti* var. *leucotheca white-bracted spineflower	Fed: None CA: None CNPS: 1B R-E-D: 2-2-3 BLM: None FS: None	Apr–Jun	Mojavean desert scrub; Pinyon and juniper woodland	Present: DEV-EBB High: BN-BM
Colubrina californica Las Animas colubrina	Fed: None CA: None CNPS: 2 R-E-D: 2-1-1 BLM: None FS: None	Apr–Jun	Mojavean desert scrub; Sonoran desert scrub	Moderate: COR-MS; MS-CCRA
Deinandra mohavensis Mojave tarplant	Fed: SC CA: END 1B CNPS: 1B R-E-D: 2-1-3 BLM: None FS: S/SBNF	Jul–Oct	(WR) Chaparral; Coastal scrub; Riparian scrub	High: BN-BM; DEV-EBB
Ditaxis claryana glandular ditaxis	Fed: None CA: None CNPS: 2 R-E-D: 3-2-1 BLM: None FS: None	Oct–Mar	(CV*) Mojavean desert scrub; Sonoran desert scrub	High: MS-CCRA
Ditaxis serrata* var. *californica California ditaxis	Fed: None CA: None CNPS: 3 R-E-D: ?-2-3 BLM: None FS: None	Mar–Dec	(CV*) Sonoran desert scrub	High: MS-CCRA; CCRA-DEV

Table D.2-4. Sensitive Plants Species with High/Moderate Potential to Occur in California

Scientific Name Common Name	— Status —	Flowering Period	Habitat	Potential to Occur: Transmission Line Segment
Dodecahema leptoceras slender-horned spineflower	Fed: END CA: END CNPS: 1B R-E-D: 3-3-3 BLM: None FS: S/SBNF	Apr–Jun	(WR) Chaparral; Cismontane woodland; Coastal scrub (sandy)	Present: CL-STC; SBJ-VS; SBJ-SBS High: BN-BM
Dudleya multicaulis many-stemmed dudleya	Fed: None CA: None CNPS: 1B R-E-D: 1-2-3 BLM: SS FS: S	Apr–Jul	(WR) Chaparral; Coastal scrub; Valley and foothill grassland/often clay	Moderate: CL-STC; SBJ-VS
Eriastrum densifolium* ssp. *sanctorum Santa Ana River woollystar	Fed: END CA: END CNPS: 1B R-E-D: 3-3-3 BLM: None FS: SBNF	Jun–Sep	(WR) Chaparral; Coastal scrub; alluvial fans/sandy or gravelly	High: SBJ-SBS Moderate: CL-STC; SBJ-VS
Erodium macrophyllum round-leaved filaree	Fed: None CA: None CNPS: 2 R-E-D: 2-3-1 BLM: None FS: None	Mar–May	(WR) Cismontane woodland; Valley and foothill grassland/ clay	Moderate: CL-STC; SBJ-VS; SBJ-SBS
Escobaria alversonii foxtail cactus	Fed: SC CA: None CNPS: 4 R-E-D: 1-1-3 BLM: None FS: None	Apr–Jun	Mojavean desert scrub; Sonoran desert scrub/ sandy or rocky, usually granitic	Present: MS-CCRA High: CCRA –DEV; COR-MS
Euphorbia misera cliff spurge	Fed: None CA: None CNPS: 2 R-E-D: 2-2-1 BLM: None FS: None	Dec–Apr	(CV*) Coastal bluff scrub; Coastal scrub; Mojavean desert scrub (rocky)	High: CCRA-DEV; DEV-EBB
Galium californicum* ssp. *primum California bedstraw	Fed: None CA: None CNPS: 1B R-E-D: 3-2-3 BLM: SS FS: S/SBNF	May–Jul	(WR) Chaparral; Lower montane coniferous forest (granitic, sandy)	High: CL-STC; SBJ-VS; SBJ-SBS
Gilia maculatus Little San Bernardino Mtns. gilia	Fed: None CA: None CNPS: 1B R-E-D: 3-2-3 BLM: SS FS: None	Mar–May	(CV) Desert dunes; Joshua tree "woodland"; Mojavean desert scrub; Sonoran desert scrub (sandy)	High: CCRA-DEV; DEV-EBB
Juglans californica Southern California black walnut	Fed: None CA: None CNPS: 4 R-E-D: 1-2-3 BLM: None FS: None	Mar–May	(WR) Chaparral; Cismontane woodland; Coastal scrub (alluvial)	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS; SBJ-SBS

Table D.2-4. Sensitive Plants Species with High/Moderate Potential to Occur in California

Scientific Name Common Name	— Status —	Flowering Period	Habitat	Potential to Occur: Transmission Line Segment
Lepidium virginicum* var. *robinsonii Robinson's pepper-grass	Fed: None CA: None CNPS: 1B R-E-D: 2-2-2 BLM: None FS: None	Jan–Jul	Chaparral; Coastal scrub	Moderate: DEV-EBB; BN-BM; CL and STC; SBJ-VS
Lilium humboldtii* ssp. *ocellatum ocellated Humboldt lily	Fed: None CA: None CNPS: 4 R-E-D: 1-2-3 BLM: None FS: None	Mar–Jul	(WR) Chaparral; Cismontane woodland; Coastal scrub; Lower montane coniferous forest; Riparian woodland/ openings	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS; SBJ-SBS
Lycium parishii Parish's desert-thorn	Fed: None CA: None CNPS: 2 R-E-D: 2-1-1 BLM: None FS: None	Mar–Apr	Coastal scrub; Sonoran desert scrub	High: SBJ-VS; SBJ-SBS
Matelea parvifolia spearleaf	Fed: None CA: None CNPS: 2 R-E-D: 3-1-1 BLM: None FS: None	Mar–May	Mojavean desert scrub; Sonoran desert scrub (rocky)	Moderate: MS-CCRA
Mentzelia tridentata creamy blazing star	Fed: None CA: None CNPS: 1B R-E-D: 2-1-3 BLM: None FS: None	Mar–May	Mojavean desert scrub	High: CCRA-DEV
Monardella macrantha* ssp. *hallii Hall's monardella	Fed: None CA: None CNPS: 1B R-E-D: 2-1-3 BLM: None FS: S/SBNF	Jun–Aug	Broadleafed upland forest; Chaparral; Cismontane woodland; Lower montane coniferous forest; Valley and foothill grassland	High: CL-STC Moderate: BN-BM
Muhlenbergia californica California muhly	Fed: None CA: None CNPS: 4 R-E-D: 1-1-3 BLM: None FS: None	Jun–Sep	(WR) Chaparral; Coastal scrub; Lower montane conif-erous forest; Meadows and seeps (mesic, seeps, and stream banks)	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS; SBJ-SBS
Myosurus minimus* ssp. *apus little mousetail	Fed: SC CA: None CNPS: 3 R-E-D: 2-1-3 BLM: None FS: None	Mar–Jun	(WR) Valley and foothill grassland; Vernal pools	Moderate: CL-STC; SBJ-VS; SBJ-SBS
Nemacaulis denudata* var. *gracilis slender woolly-heads	Fed: None CA: None CNPS: 2 R-E-D: 2-2-1 BLM: None FS: None	Mar–May	Coastal dunes; Desert dunes; Sonoran desert scrub	High: CCRA-DEV; DEV-EBB

Table D.2-4. Sensitive Plants Species with High/Moderate Potential to Occur in California

Scientific Name Common Name	— Status —	Flowering Period	Habitat	Potential to Occur: Transmission Line Segment
Opuntia wigginsii Wiggins' cholla	Fed: None CA: None CNPS: 3 R-E-D: 3-1-2 BLM: None FS: None	Mar	Sonoran desert scrub (sandy)	High: COR-MS
***Polygala cornuta* var. fishiae** Fish's milkwort	Fed: None CA: None CNPS: 4 R-E-D: 1-1-2 BLM: None FS: None	May–Aug	(WR) Chaparral; Cismontane woodland; Riparian woodland	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS
Quercus engelmannii Engelmann oak	Fed: None CA: None CNPS: 4 R-E-D: 1-2-2 BLM: None FS: None	Mar–Jun	(WR) Chaparral; Cismontane woodland; Riparian woodland; Valley and foothill grassland	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS
Ribes divaricatum var. parishii Parish's gooseberry	Fed: None CA: None CNPS: 1B R-E-D: 3-3-3 BLM: None FS: None	Feb–Apr	Riparian woodland	Moderate: CL-STC; SBJ-VS; SBJ-SBS
Romneya coulteri Coulter's matilija poppy	Fed: None CA: None CNPS: 4 R-E-D: 1-2-3 BLM: None FS: None	Mar–Jul	(WR) Chaparral; Coastal scrub (often in burns)	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS
Rorippa gambelii Gambel's water cress	Fed: END CA: THR CNPS: 1B R-E-D: 3-3-2 BLM: None FS: None	Apr–Sep	Marshes and swamps (freshwater or brackish)	Moderate: SBJ-VS; SBJ-SBS
Saltugilia latimeri Latimer's woodland gilia	Fed: None CA: None CNPS: 1B R-E-D: 2-2-3 BLM: None FS: None	Mar–Jun	Chaparral; Mojavean desert scrub (rocky or sandy)	Moderate: DEV-EBB; CCRA-DEV; MS-CCRA
Salvia greatae Orocopia sage	Fed: None CA: None CNPS: 1B R-E-D: 2-1-3 BLM: None FS: None	Mar–Apr	(CV) Mojavean desert scrub; Sonoran desert scrub	High: MS-CCRA
Satureja chandleri San Miguel savory	Fed: None CA: None CNPS: 1B R-E-D: 2-2-2 BLM: None FS: S	Mar–Jul	(WR) Chaparral; Cismontane woodland; Coastal scrub; Riparian woodland; Valley and foothill grassland/rocky, gabbroic or metavolcanic	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS

Table D.2-4. Sensitive Plants Species with High/Moderate Potential to Occur in California

Scientific Name Common Name	— Status —	Flowering Period	Habitat	Potential to Occur: Transmission Line Segment
Selaginella eremophila desert spike-moss	Fed: None CA: None CNPS: 2 R-E-D: 3-2-1 BLM: None FS: None	May–Jul	Sonoran desert scrub (gravelly or rocky)	High: MS-CCRA
Senna covesii Coves's cassia	Fed: None CA: None CNPS: 2 R-E-D: 2-2-1 BLM: None FS: None	Mar–Jun	Sonoran desert scrub (sandy)	High: MS-CCRA
Stemodia durantifolia purple stemodia	Fed: None CA: None CNPS: 2 R-E-D: 3-3-1 BLM: None FS: None	Jan–Dec	Sonoran desert scrub; (often mesic, sandy)	Moderate: CCRA-DEV; DEV-EBB
Symphyotrichum defoliatum San Bernardino aster	Fed: None CA: None CNPS: 1B R-E-D: 2-2-3 BLM: None FS: None	Jul–Nov	Meadows and seeps; Marshes and swamps; Coastal scrub; Cismontane woodland; Lower montane coniferous forest; Valley and foothill grassland (vernally mesic) / near ditches, streams, springs	Moderate: DEV-EBB BN-BM; CL-STC
Thelypteris puberula var. sonorensis Sonoran maiden fern	Fed: None CA: None CNPS: 2 R-E-D: 2-2-1 BLM: None FS: None	Jan–Sep	Meadows and seeps (seeps and streams)	Moderate: DEV-EBB
Xylorhiza cognata Mecca-aster	Fed: None CA: None CNPS: 1B R-E-D: 2-2-3 BLM: None FS: None	Jan–Jun	(CV) Sonoran desert scrub	Moderate: MS-CCRA; CCRA-DEV

Federal Designations (Federal Endangered Species Act, USFWS):
END federally listed, endangered
THR federally listed, threatened
FC federal candidate for listing
SC federal species of concern

State Designations (California Endangered Species Act, CDFG):
END State listed, endangered
THR State listed, threatened
RARE State listed rare

California Native Plant Society (CNPS) Designations: (Note: According to CNPS [Skinner and Pavlik, 1994], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions. See text.)

1A: Plants presumed extinct in California
1B: Plants rare and endangered in California and throughout their range.
2: Plants rare, threatened or endangered in California but more commons elsewhere in their range.
3: Plants about which we need more information; a review list.
4: Plants of limited distribution; a watch list.

CNPS R-E-D Code:
Rarity:
1: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2: Occurrence confined to several populations or one extended population.
3: Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.
Endangerment:
1: Not endangered.
2: Endangered in a portion of its range.
3: Endangered throughout its range.
Distribution:
1: More or less widespread outside California.
2: Rare outside California.
3: Endemic to California (i.e., does not occur outside California).
~~Bureau of Land Management (BLM):~~Other Designations
SS: Bureau of Land Management sSensitive species
S: Forest Service sensitive species
SBNF: San Bernardino National Forest sensitive species
(CV): Covered in the Coachella Valley Multiple Species Habitat Conservation Plan
(CV*): Not covered, but was considered in the Coachella Valley Multiple Species Habitat Conservation Plan
(WR): Covered in the Western Riverside Multiple Species Habitat Conservation Plan

Source: California Natural Diversity Data Base (CNDDB), California Native Plant Society Electronic Inventory (CNPSEI) 7.5 minute quadrangles.

Listed Plant Species. The results of the literature review indicated that 39 plant species that are listed as rare (California), threatened, and/or endangered, or are considered candidates for listing potentially occur in the region around the project area. Of these 39 species, 14 are either known to occur or have a high, moderate, or low potential to occur, and are discussed in more detail in Appendix 7. The remaining 25 species are unlikely to occur and are discussed in Appendix 7.

One listed species, the Coachella Valley milkvetch, is known to occur in the proposed ROW. Three species have a high potential to occur, and five species have a moderate potential to occur. The species are listed in Table D.2-4. Five species have a low potential to occur.

Sensitive Plant Species. Twenty-three sensitive species have a high potential to occur and another 23 species have a moderate potential to occur. All of these species are listed in Table D.2-4 and are discussed in more detail Appendix 7. The 65 sensitive plant species that are unlikely to occur, or that have a low potential to occur, are discussed in Appendix 7.

Special Status Wildlife Species. The results of the CNDDB search, the review of previous biological survey documents that include the project area, and the reconnaissance survey of the project area identified 127 wildlife species that are known to occur in the project vicinity or that have a potential to occur within the ROW. These species and descriptions of each species' status, habitat requirements, potential for occurrence, and project segment(s) where each either occur or potentially occur are listed in Appendix 7.

Each of these species identified in the search was assessed for their potential to occur within the project area based on the criteria described above in the introduction to Section D.2.1.1.3. Table D.2-5 lists the wildlife species that have been documented in the project area and those that have either a high or moderate potential to occur. The wildlife species that are unlikely to occur or that have a low potential to occur are described in Appendix 7

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
INVERTEBRATES			
Macrobaenetes valgum Coachella Valley giant sand-treader cricket	Fed: none CA: none BLM: none FS: none	High: CCRA-DEV; DEV-EBB	(CV) Found only in the Coachella Valley in active sand dunes and ephemeral sand fields.
Stenopelmatus cahuilaensis Coachella Valley Jerusalem cricket	Fed: none CA: none BLM: none FS: none	High: CCRA-DEV; DEV-EBB	(CV) Associated with sand dune and creosote bush scrub habitats in the Coachella Valley.
FISH			
CATOSTOMIDAE (suckers)			
Xyrauchen texanus razorback sucker	Fed: END CA: END/FP BLM: none FS: none	High: COR-MS	Found in the Colorado River. Spawns in shallow waters with sandy, gravelly or rocky bottoms.
AMPHIBIANS			
SALAMANDRIDAE (newts)			
Taricha torosa torosa coast range newt	Fed: none CA: CSC BLM: none FS: none	Moderate: DEV-EBB; BM-BN	(WR) Inhabits drier climates in southern California at elevations ranging from sea level to 6,000 amsl. Requires nearby water source for reproduction.
SCAPHIOPODIDAE (spadefoot toads)			
Scaphiopus couchii Couch's spadefoot toad	Fed: none CA: CSC BLM: SS FS: none	High: COR-MS Moderate: CCRA-DEV; DEV-EBB	Found in temporary desert rainpools with subterranean refuge sites in appropriate soil types nearby.
Spea hammondi western spadefoot toad	Fed: none CA: CSC BLM: SS FS: none	Moderate: BN-BM; CL-STC; SBJ-VS	(WR) Occurs in grassland, scrub, chaparral with nearby vernal pools or other seasonal waters for breeding.
BUFONIDAE (true toads)			
Bufo alvarius Colorado River toad	Fed: none CA: CSC BLM: none FS: none	High: COR-MS	Found along the Colorado River at elevations ranging from sea level to 1615 meters.
Bufo californicus arroyo toad	Fed: END CA: CSC BLM: none FS: none	High: DEV-EBB	(WR) Occurs in semi-arid regions near washes or intermittent streams.
RANIDAE (frogs)			
Rana muscosa mountain yellow-legged frog	Fed: END CA: CSC BLM: none FS: S	Present: BN-BM High: DEV-EBB	(WR) Found near permanent sources of water in the San Gabriel, San Jacinto and San Bernardino Mountains.
REPTILES			
TESTUDINIDAE (land tortoises)			
Gopherus agassizii desert tortoise	Fed: THR CA: THR BLM: none FS: none	Present: MS-CCRA; CCRA-DEV; DEV-EBB Moderate: COR-MS	(CV) Inhabits suitable desert habitats with friable soils for burrow and nest construction.

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
PHRYNOSOMATIDAE (fringe-toed lizards, horned lizards and relatives)			
Phrynosoma coronatum blainvillei San Diego horned lizard	Fed: None CA: CSC BLM: none FS: S/SBNF	Present: DEV-EBB, BN-BM High: CL-STC; SBJ-VS	(WR) Occurs in open scrub and other open areas with ample native ant prey base.
Phrynosoma mcallii flat-tailed horned lizard	Fed: none CA: CSC BLM: SS FS: S	Moderate: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB	(CV) Occurs in desert washes and desert flats in Riverside, San Diego and Imperial Counties.
Uma inornata Coachella Valley fringe-toed lizard	Fed: THR CA: END BLM: none FS: none	High: CCRA-DEV; DEV-EBB	(CV) Inhabits sand dunes in the Coachella Valley of eastern Riverside County.
Uma notata Colorado Desert fringe-toed lizard	Fed: none CA: CSC BLM: SS FS: none	Present: MS-CCRA Moderate: COR-MS	Inhabits sand dunes in the Colorado Desert in elevations below sea level to 180 meters (600') amsl.
Uma scoparia Mojave fringe-toed lizard	Fed: none CA: CSC BLM: SS FS: none	Present: MS-CCRA; Moderate: COR-MS; MS-CCRA; CCRA-DEV	Inhabits sand dunes in the Mojave Desert at elevations below sea level to 180 meters (600') amsl.
TEIIDAE (whiptails & relatives)			
Aspidoscelis hyperythra beldingi Belding's orange-throated whiptail	Fed: none CA: CSC BLM: none FS: none	Moderate: DEV-EBB; BN-BM; CL-STC; SBJ-VS	(WR) Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks.
ANNIELLIDAE (legless lizards)			
Anniella pulchra pulchra silvery legless lizard	Fed: none CA: CSC BLM: none FS: S/SBNF	Moderate: DEV-EBB, BN-BM; CL-STC; SBJ-VS	Found in moist, sandy or loamy soils with sparse vegetation.
HELODERMATIDAE (venomous lizards)			
Heloderma suspectum cinctum banded Gila monster	Fed: none CA: CSC BLM: SS FS: none	Moderate: MS-CCRA	Inhabits grassy and shrubby desert areas and occasionally found on low mountain slopes and nearby plains.
BOIDAE (boas)			
Charina umbratica southern rubber boa	Fed: none CA: THR BLM: none FS: S/SBNF	Moderate: DEV-EBB, BN-BM; CL-STC	(WR) Occurs in a variety of montane forest habitats within the vicinity of streams or wet meadows.
Charina trivirgata rosy boa	Fed: none CA: none BLM: SS FS: S/SBNF	High: CCRA-DEV, DEV-EBB Moderate: COR-MS; MS-CCRA	Occurs in desert and chaparral habitats with moderate to dense vegetation.
NATRICIDAE (live-bearing snakes)			
Thamnophis hammondi two-striped garter snake	Fed: none CA: CSC BLM: SS FS: S/SBNF	Moderate: DEV-EBB	Occurs in or near permanent water sources in elevations up to 2,134 meters (7,000') amsl.

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
VIPERIIDAE(vipers)			
Crotalus ruber ruber northern red-diamond rattlesnake	Fed: none CA: CSC BLM: none FS: none	Present: DEV-EBB, BN-BM High: CCRA-DEV Moderate: CL-STC, SBJ-VS	(WR) Occurs in chaparral, woodland, grassland, and desert areas in rocky areas with dense vegetation. Requires rodent burrows and/or cracks in rocks for cover.
BIRDS			
THRESKIORNITHIDAE (ibises and spoonbills)			
Plegadis chihi white-faced ibis (rookery site)	Fed: none CA: CSC BLM: none FS: none	Moderate: COR-MS; CL-STC; SBJ-SBS	(WR) Found in shallow freshwater marshes with dense tule thickets for nesting.
ACCIPITRIDAE (hawks, kites, harriers and eagles)			
Accipiter cooperii Cooper's hawk (nesting)	Fed: none CA: CSC BLM: none FS: none	High: DEV-EBB; CL-STC; SBJ-SBS	(WR) Nests in woodlands, typically in riparian areas and oaks.
Aquila chrysaetos golden eagle (nesting and wintering)	Fed: none CA: CSC/FP BLM: SS FS: none	High: CCRA-DEV; DEV-EBB; BN-BM; CL-STC	(WR) Occurs in rolling foothill mountain areas; nests in large trees in open areas or cliff-walled canyons.
Buteo regalis Ferruginous hawk (wintering)	Fed: none CA: CSC BLM: SS FS: none	High: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM; CL-STC	(WR) Found in prairie, grassland, forest and desert habitats; nests along streams or on steep slopes.
Buteo swainsonii Swainson's havk (nesting & migrant)	Fed: FSC CA: THR BLM: SS FS: S	Moderate: HAR-COR; COR-MS; DEV-EBB; BN-BM	(WR)Found in grassland, savannah, and desert habitats; nest in large mesquite shrubs in the Mojave Desert & Arizona, riparian trees near the Colo. River
Elanus leucurus white-tailed kite (nesting)	Fed: none CA: FP BLM: none FS: none	Moderate: BN-BM; CL-STC	(WR) Nests in trees near marshes or other sources of water in grassland, cropland and woodland-hardwood habitats.
Falco mexicanus prairie falcon	Fed: none CA: CSC BLM: none FS: none	Present: MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM Moderate: COR-MS	(WR) Nests in open, dry habitats on cliffs. Often found far away from permanent water sources.
Falco peregrinus peregrine falcon	Fed: DL CA: END/FP BLM: none FS: S/SBNF	Moderate: COR-MS	(WR) Found in open habitats ranging from desert communities to forest habitats.
RALLIDAE (rails, coots and gallinules)			
Laterallus jamaicensis coturniculus California black rail	Fed: none CA: THR/FP BLM: none FS: none	High: COR-MS	(CV) Occurs in tidal salt marsh and freshwater and brackish marshes at low elevations.
Rallus longirostris yumanensis Yuma clapper rail	Fed: END CA: THR/FP BLM: none FS: none	High: COR-MS	(CV) Requires dense growth of pickle weed or cord grass for nesting or escape cover.
CHARADRIIDAE (plovers and relatives)			
Charadrius montanus mountain plover (wintering)	Fed: none CA: CSC BLM: none FS: none	High: BN-BM; SBJ-SBS Moderate: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB; CL-STC	(WR) Found in desert, grassland and cropland habitats.

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
LARIDAE (gulls and terns)			
CUCULIDAE (cuckoos and relatives)			
Coccyzus americanus occidentalis western yellow-billed cuckoo	Fed: FC CA: END BLM: None FS: S	High: COR-MS Moderate: SBJ-SBS	(WR) Nests in riparian areas of larger river systems.
STRIGIDAE (owls)			
Asio otus long-eared owl (nesting)	Fed: none CA: CSC BLM: none FS: none	Moderate: DEV-EBB; CL-STC	Nests in riparian bottomlands and live oaks adjacent to streams.
Athene cunicularia burrowing owl (burrow sites)	Fed: none CA: CSC BLM: SS FS: none	Present: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB High: BN-BM	(CV, WR) Occurs in open scrub, grassland, and agricultural habitat.
Micrathene whitneyi elf owl	Fed: none CA: END BLM: none FS: none	High: COR-MS	Nests in California along the Colorado River in cottonwood-willow and mesquite riparian zones.
PICIDAE (woodpeckers)			
Colaptes chrysoides gilded flicker	Fed: none CA: END BLM: none FS: none	Moderate: COR-MS	Found in deserts, cottonwood and willow riparian areas near the Colorado River.
Melanerpes uropygialis Gila woodpecker	Fed: none CA: END BLM: none FS: none	High: COR-MS	Found in cottonwood trees and other desert riparian trees. Nests in riparian trees or saguaro cactus.
TYRANNIDAE (tyrant flycatchers)			
Empidonax traillii willow flycatcher	Fed: none CA: END BLM: none FS: S/SBNF	Moderate: COR-MS; CL-STC	Associated with willow-covered islands and riparian habitats at elevations up to 2,400 meters (7,875 feet) amsl.
Empidonax traillii extimus southwestern willow flycatcher	Fed: END CA: END BLM: none FS: none	High: CL-STC Moderate: COR-MS; DEV-EBB	(CV, WR) Occurs in riparian woodlands in southern California.
Myiarchus tyrannulus brown-crested flycatcher (nesting)	Fed: none CA: CSC BLM: none FS: none	High: DEV-EBB Moderate: COR-MS	Nests in desert riparian habitats along the Colorado River.
Pyrocephalus rubinus vermillion flycatcher (nesting)	Fed: none CA: CSC BLM: none FS: none	High: COR-MS; DEV-EBB Moderate: MS-CCRA	Nests in desert riparian habitats near irrigation fields and ditches.
LANIIDAE (shrikes)			
Lanius ludovicianus loggerhead shrike (nesting)	Fed: none CA: CSC BLM: none FS: none	Present: COR-MS; MS-CCRA High: CCRA-DEV; DEV-EBB; BN-BM; CL-STC; SBJ-SBS	(WR) Inhabits large, open areas conducive to hunting. Nests in dense brush and shrubs.

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
VIREONIDAE (vireos)			
Vireo bellii pusillus least Bell's vireo	Fed: END CA: END BLM: none FS: none	High: COR-MS; DEV-EBB; BN-BM; CL-STC	(CV, WR) Nests in low riparian habitat in the vicinity of water or dry river bottoms below 609 meters (2,000') amsl.
ALAUDIDAE (larks)			
Eremophila alpestris actia California horned lark	Fed: none CA: CSC BLM: none FS: none	Present: CCRA-DEV High: CL-STC Moderate: SBJ-SBS; BN-BM	(WR) Occurs in grasslands and other open habitats.
SYLVIIDAE (gnatcatchers)			
Polioptila californica californica coastal California gnatcatcher	Fed: THR CA: CSC BLM: none FS: none	Moderate: SBJ-VS	(WR) Occurs in coastal sage scrub below 2,500' from Ventura to Baja California.
MIMIDAE (mockingbirds and thrashers)			
Toxostoma bendirei Bendire's thrasher	Fed: none CA: CSC BLM: SS FS: none	High: COR-MS; MS-CCRA	Nests in yucca, cholla, palo verde or small trees in desert succulent shrub/Joshua tree habitats.
Toxostoma crissale Crissal thrasher	Fed: none CA: CSC BLM: none FS: none	High: COR-MS; MS-CCRA	(CV) Inhabits desert riparian and desert wash habitats.
Toxostoma lecontei Le Conte's thrasher	Fed: none CA: CSC BLM: SS FS: none	Present: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB	(CV) Requires dense, spiny shrubs for nesting. Found in a variety of desert habitats.
PARULIDAE (wood-warblers)			
Dendroica petechia brewsteri yellow warbler (nesting)	Fed: none CA: CSC BLM: none FS: none	High: DEV-EBB; CL-STC	(CV, WR) Prefers to nest in willows, cottonwoods, aspens and other trees in riparian areas.
Dendroica petechia sonorana Sonoran yellow warbler	Fed: none CA: CSC BLM: none FS: none	High: COR-MS	Summer resident of the Colorado River Valley; nests in cottonwood and willow trees in riparian deciduous habitat.
Icteria virens yellow-breasted chat (nesting)	Fed: none CA: CSC BLM: none FS: none	Moderate: COR-MS; DEV-EBB	(CV, WR) Nests in riparian thickets of willows and other brushy tangles along watercourses.
THRAUPIDAE (tanagers)			
Piranga rubra summer tanager (nesting)	Fed: none CA: CSC BLM: none FS: none	High: COR-MS	(CV) Nests in desert riparian areas near the lower Colorado River. Requires cottonwood-willow riparian for nesting and foraging.
EMBERIZIDAE (sparrows, buntings, warblers and relatives)			
Aimophila ruficeps canescens southern California rufous-crowned sparrow	Fed: none CA: CSC BLM: none FS: none	High: CL-VS Moderate: BN-BM	(WR) Occurs on steep, dry hillsides in scrub and chaparral habitats.

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
Amphispiza belli belli Bell's sage sparrow	Fed: none CA: CSC BLM: none FS: none	Moderate: BN-BM; SBJ-VS; CL-STC	(WR) Occurs in chaparral habitat with dense stands of chamise.
MAMMALS			
PHYLLOSTOMIDAE (leaf-nosed bats)			
Macrotus californicus California leaf-nosed bat	Fed: none CA: CSC BLM: none FS: S/SBNF	High: COR-MS Moderate: MS-CCRA; CCRA-DEV; DEV-EBB	Roosts in mines, caves or rugged terrain in desert riparian, desert wash and desert scrub habitats.
VESPERTILIONIDAE (evening bats)			
Antrozous pallidus pallid bat	Fed: none CA: CSC BLM: SS FS: S/SBNF	High: MS-CCRA Moderate: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM; CL-STC; SBJ-VS	Roosts in dry, open habitats. Occurs in desert, grasslands, shrub lands, woodlands and forests.
Corynorhinus townsendii Townsend's big-eared bat	Fed: none CA: CSC BLM: SS FS: S/SBNF	High: COR-MS Moderate: MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM; CL-STC; SBJ-VS; SBJ-SBS	Occurs in a variety of habitats throughout California. Roosts in open areas.
Euderma maculatum spotted bat	Fed: none CA: CSC BLM: SS FS: none	High: COR-MS; DEV-EBB Moderate: MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM; CL-STC; SBJ-VS	Found in various habitats including desert, montane and chaparral communities.
Lasiurus xanthinus western yellow bat	Fed: none CA: none BLM: none FS: none	High: CRRA-DEV; DEV-EBB; BN-BM Moderate: COR-MS; CL-STC; SBS-VS; SBS-SBJ	(CV) Roosts in palm trees in foothill riparian, desert wash and palm oasis habitats with access to water for foraging.
Myotis occultus Arizona myotis	Fed: none CA: CSC BLM: none FS: none	High: COR-MS Moderate: MS-CCRA	Occurs in the lowlands of the Colorado River and desert mountain ranges nearby.
Myotis thysanodes fringed myotis	Fed: none CA: none BLM: SS FS: none	Moderate: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM; CL-STC; SBJ-SBS	Roosts in caves and attics of buildings and houses.
Myotis velifer cave myotis	Fed: none CA: CSC BLM: SS FS: none	High: COR-MS Moderate: MS-CCRA	Found in the lowlands of the Colorado River and adjacent mountain ranges with access to caves or mines for roosting.
Myotis yumanesis Yuma myotis	Fed: none CA: CSC BLM: none FS: none	High: COR-MS Moderate: CCRA-DEV; DEV-EBB	Occurs in open forests and woodlands with close vicinity to permanent water sources for foraging and drinking.
MOLOSSIDAE (free-tailed bats)			
Eumops perotis californicus western mastiff bat	Fed: none CA: CSC BLM: SS FS: none	High: MS-CCRA Moderate: COR-MS; MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM; CL-STC; SBJ-VS	Roosts in crevices of high cliffs and trees in open, arid and semi-arid habitats.
Nyctinomops femorosaccus pocketed free-tailed bat	Fed: none CA: CSC BLM: none FS: none	High: MS-CCRA Moderate: COR-MS; CCRA-DEV; DEV-EBB	Found in pine-juniper woodlands, desert scrub and palm oasis habitats in southern California.
Nyctinomops macrotis big free-tailed bat	Fed: none CA: CSC BLM: none FS: none	Moderate: COR-MS; MS-CCRA CCRA-DEV; DEV-EBB; CL-STC; SBJ-VS	Roosts on high cliffs or rocky outcrops.

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
LEPORIDAE (rabbits and hares)			
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: none CA: CSC BLM: none FS: none	High: BN-BM	(WR) Found in coastal sage scrub habitats in southern California.
SCIURIDAE (squirrels and relatives)			
Spermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	Fed: FC CA: CSC BLM: none FS: none	High: CCRA-DEV; DEV-EBB	(CV) Found in the Coachella Valley in succulent desert scrub, desert wash and desert scrub habitats.
HETEROMYIDAE (kangaroo rats, pocket mice and kangaroo mice)			
Chaetodipus californicus femoralis Dulzura pocket mouse	Fed: none CA: CSC BLM: none FS: none	High: BN-BM Moderate: CL-STC; SBS-VS; SBJ-SBS	Found in coastal scrub, chaparral and grassland habitats.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: none CA: CSC BLM: none FS: none	High: DEV-EBB; BN-BM; CL-STC; SBS-VS; SBJ-SBS	(WR) Found in coastal scrub, chaparral and grassland communities with sandy, herbaceous areas.
Chaetodipus fallax pallidus pallid San Diego pocket mouse	Fed: none CA: CSC BLM: none FS: none	High: MS-CCRA Moderate: COR-MS; CCRA-DEV; DEV-EBB	Found in sandy, herbaceous areas occurring in desert wash, desert scrub and desert succulent shrub habitats.
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: END CA: CSC BLM: none FS: none	Moderate: CL-STC; SBJ-SBS; SBJ-VS	(WR) Occurs in alluvial scrub habitat with sandy soils for burrowing.
Dipodomys stephensi Stephen's kangaroo rat	Fed: END CA: THR BLM: none FS: none	High: BN-BM Moderate: CL-STC; SBS-VS	(WR) Found in annual and perennial grasslands, preferring buckwheat, chamise, brome grass and filaree.
Perognathus alticolus alticolus San Bernardino white-eared pocket mouse	Fed: none CA: CSC BLM: none FS: S/SBNF	Moderate: BN-BM; CL-STC	Historically found in open pine forests, grassy flats and pinyon-juniper woodland habitats.
Perognathus longimembris bangsi Palm Springs pocket mouse	Fed: none CA: CSC BLM: none FS: none	High: CCRA-DEV; DEV-EBB	(CV) Found in desert scrub, desert riparian, desert scrub and sagebrush habitats.
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: none CA: CSC BLM: none FS: S/SBNF	High: DEV-EBB; BN-BM; CL-STC; SBS-VS Moderate: CCRA-DEV; CL-STC	(WR) Associated with sandy washes, scrub, and grasslands.
MURIDAE (mice, rats and voles)			
Neotoma lepida intermedia San Diego desert woodrat	Fed: none CA: CSC BLM: none FS: none	High: BN-BM; CL-STC	(WR) Occurs in scrub with dense canopies and rocky cliffs and slopes.
Onychomys torridus ramona southern grasshopper mouse	Fed: none CA: CSC BLM: none FS: none	Moderate: BN-BM; CL-STC; SBJ-SBS; SBJ-VS	Inhabits open country with grasses and sagebrush. Prefers sandy to gravelly soils.

Table D.2-5. Known or Potentially Occurring Wildlife

Scientific Name Common Name	– Status –	Potential to Occur: Transmission Line Segment	Habitat
Sigmodon arizonae plenus Colorado River cotton rat	Fed: none CA: CSC BLM: none FS: none	Moderate: COR-MS	Inhabits the Colorado River floodplain in areas with marsh plants such as sedges and rushes.
MUSTELIDAE (weasels and relatives)			
Taxidea taxus American badger	Fed: none CA: CSC BLM: none FS: none	High: COR-MS; BN-BM; SBJ-SBS Moderate: MS-CCRA; CCRA-DEV; DEV-EBB; BN-BM; SBJ-VS	Associated with dry scrub, forest, and herbaceous habitats.
FELIDAE (cats and relatives)			
Puma concolor browni Yuma mountain lion	Fed: none CA: CSC BLM: none FS: none	Moderate: COR-MS; MS-CCRA	Nocturnal; found in rugged mountains and forests.
BOVIDAE (sheep and relatives)			
Ovis canadensis nelsoni Nelson's bighorn sheep	Fed: none CA: none BLM: SS FS: S/SBNF	High: COR-MS Moderate: MS-CCRA	Inhabits open, rocky, steep areas with access to water and herbaceous vegetation.
Ovis canadensis nelsoni (cremnobates) peninsular bighorn sheep	Fed: END CA: THR/FP BLM: none FS: none	High: CCRA-DEV; DEV-EBB; BN-BM Moderate: MS-CCRA	(CV) Found in open desert scrub below 4,000 feet elevation ranging from south of San Gorgonio Pass to Mexico.

Federal Designations (Federal Endangered Species Act, USFWS):
END: federally listed, endangered
THR: federally listed, threatened
FC: federal candidate species
FSC: federal species of concern
FPD: federal proposed for delisting
DL: federal delisted

State Designations (California Endangered Species Act, CDFG):
END: State listed, endangered
THR: State listed, threatened
CSC: California special concern species
FP: DFG fully protected species

Other Designations:
SS: Bureau of Land Management sensitive species
S: U.S. Forest Service sensitive species
SBNF: San Bernardino National Forest sensitive species

MSHCP Designations:
CV: Proposed covered species under Coachella Valley Multiple Species Habitat Conservation Plan
WR: Species covered under Western Riverside County Multiple Species Habitat Conservation Plan

Source: California Natural Diversity Data Base (CNDDB), Western Riverside Multiple Species Habitat Conservation Plan, Coachella Valley Multiple Species Habitat Conservation Plan, Environmental Planning Group (December 2003), BioResource Consultants (October 2003), Dames and Moore (September 1994), Greystone Environmental Consultants (August 2005), TetraTech and Alice Karl & Associates (August 2005).

DENOTES "unlikely" along most of the ROW, with one to three exceptions in cases where PFO is "low" in some segments. .

Listed Wildlife Species. The results of the literature review indicate that 33 wildlife species that are listed as threatened and/or endangered, or are considered candidates for listing, potentially occur in the region around the project area. Of these 33 listed species, 23 are either known to occur or have a high, moderate, or low potential to occur, and are discussed in more detail in Appendix 7. The remaining 10 species are unlikely to occur and are also discussed in detail in Appendix 7.

Two listed species, the Coachella Valley fringe-toed lizard and desert tortoise, are known to occur in the proposed ROW, and 19 species have a high or moderate potential to occur. These species are listed in Table D.2-5. Two species have a low potential to occur.

Sensitive Wildlife Species. Seventy-five sensitive wildlife species are known to occur in the project area or have a potential to occur within the project area, and are discussed in more detail in Appendix 7. Eleven sensitive wildlife species have been recorded in or adjacent to the proposed ROW. Thirty-four sensitive wildlife species have a high potential to occur and another 19 species have a moderate potential to occur. Table D.2-5 lists the sensitive wildlife species that are either known to occur in the project area or that have a high or moderate potential to occur in the project area. Eleven sensitive wildlife species are unlikely to occur, or have a low potential to occur in the project area.

D.2.1.1.4 Overview of Special Habitat Management Areas

Arizona

The Proposed Project is located in the vicinity of several designated Special Habitat Management Areas in Arizona.

- BLM Desert Tortoise Management Areas Categories II, and III
- Kofa National Wildlife Refuge
- BLM Wilderness areas (See Section D.5 Wilderness and Recreation)
- United States Fish and Wildlife Service (USFWS) Designated Critical Habitat for the razorback sucker
- ~~Cactus Ferruginous Pygmy-owl Survey Zone 3~~

BLM Desert Tortoise Management Areas Categories I, II, and III. Portions of the Proposed Project are located within BLM–administered lands, which have category designations associated with habitat for the Sonoran population of the desert tortoise and are outlined in the December 1996 *Management Plan for the Sonoran Desert Population of the Desert Tortoise in Arizona.* These categories include Category I, Category II, and Category III. The Category I designation includes areas with a goal to maintain stable, viable populations; protect existing tortoise habitat values; and increase populations, where possible. The most important criterion used for designating areas as Category I habitat is that these habitat areas are essential to the maintenance of large, viable populations. The Category II designation includes areas with a goal to maintain stable, viable populations and halt further declines in tortoise habitat values. The most important criterion used for designating areas as Category II habitat is that these habitat areas may be essential to the maintenance of viable populations. The Category III designation includes areas with a goal to limit tortoise habitat and population declines to the extent possible by mitigating impacts. The most important criterion used for designating areas as Category III habitat is that these habitat areas are not essential to maintenance of viable populations. The Proposed Project crosses through areas designated as Category II and Category III. Areas where the Proposed Project passes through Category II include approximately one mile in the Eagletail Mountains and approximately 12 miles in the Dome Rock Mountains. Areas where the Proposed Project passes through Category III include approximately eight miles in the Big Horn Mountains.

Kofa National Wildlife Refuge. The Proposed Project would traverse approximately 20 miles within the boundaries of the Kofa NWR. The Kofa NWR was established in 1939 and encompasses 665,400 acres of pristine desert. The refuge manages populations of desert bighorn sheep, desert tortoise, and the California palm (*Washingtonia filifera)*, the only native palm in Arizona. Wildlife species found in the area include the white-winged dove, American kestrel, white-winged dove, northern flicker, Say's phoebe, cactus wren, phainopepla, orange-crowned warbler, desert kit fox, and several lizards and snakes. The Kofa Mountain barberry (a rare plant found only in southwest Arizona) occurs on the refuge as well as giant saguaro, ferocacti and several types of opuntia.

Arizona Game and Fish Department (AGFD) Game Management Units. The Arizona Game and Fish Department (AGFD) has divided the State into six regions and each region into Game Management Units. These units are geographic areas in which game populations are monitored and hunting privileges are assigned or restricted. The Proposed Project is located within the boundaries of several Game Management Units (GMU), as designated by the Arizona Game and Fish Department (AGFD). These include GMU 41E, GMU 43A, GMU 44B (South), GMU 45A, and GMU 45B. Within these GMUs, the AGFD monitors populations of game animals, such as bighorn sheep, mule deer, javelina, dove, and quail, in order to assess how much hunting of each species in the GMU should be allowed.

Desert bighorn sheep (*Ovis canadensis nelsoni*) live in dry, desert mountain ranges and foothills, near rocky cliffs, in an environment that is almost waterless and relatively barren of vegetation. Rutting season is in the autumn and early winter though mating can last from July to December. While births may occur year round the highest concentration of lambing occurs from January to May. Utility ROWs are allowed through the refuge in accordance with refuge planning policy Management of Utility Rights of Way – Guidance for the management of utility easements in non-wilderness portions of Kofa NWR can be found in 50 CFR 29.21. No additional guidance is needed.

United States Fish and Wildlife Service (USFWS) Designated Critical Habitat for the Razorback Sucker. The land within the Proposed Project segment that would cross the Colorado River is Designated Critical Habitat for the razorback sucker, which is federally listed as Endangered and State listed as Wildlife of Special Concern in Arizona (WSCA). The USFWS defines critical habitat as specific geographic areas, whether occupied by a listed species or not, that are essential for its conservation and that have been formally designated by rule published in the Federal Register.

~~**Cactus Ferruginous Pygmy-owl Survey Zone 3.** The portion of the Proposed Project within Maricopa County would be located within the designated Survey Zone 3 for the federally endangered and State WSCA cactus ferruginous pygmy-owl (CFPO) as defined by the USFWS in the March 2000 *Recommended Guidance for Private Landowners Concerning the Cactus Ferruginous Pygmy-owl* (USFWS 2000). CFPO Survey Zone 3 is defined as areas within the historic range of the pygmy-owl with a low potential of occupancy. The cactus ferruginous pygmy-owl (CFPO is federally listed as endangered and is considered a Wildlife of Special Concern in Arizona (WSCA) by the Arizona Game and Fish Department (AGFD). On April 13, 2006, the USFWS announced that the CFPO would be removed from protection under the ESA effective on May 15, 2006. However, this species will still receive protection under the Migratory Bird Treaty Act (USFWS, 2006a).~~

~~The CFPO occurs from southern Arizona east to extreme southwestern Texas, and southward in Mexico to Guerrero, Nuevo Leon, and southern Tamaulipas (Oberholser, 1974, cited in Millsap and Johnson, 1988). In Arizona, breeding pairs recently have been found at Organ Pipe Cactus National Monument, in areas northwest of Tucson, north of the Tortolita Mountains, and in the Buenos Aires National Wildlife Refuge. The owl was formerly more widespread in Arizona, occurring as far north as New River (Johnson et al., 1999; Millsap and Johnson, 1988). Historically in Arizona, CFPOs were found in mesquite woodlands, cottonwood-willow riparian forests, and less commonly in palo verde-mixed cacti forest. However, most recent observations of this species are from habitats dominated by mesquite, palo verde, desert ironwood, and catclaw acacia. The most current USFWS data shows that the population is hovering around 20 individuals. These individuals are located in the following areas: Organ Pipe Cactus National Monument, the Altar Valley, northwest Tucson, south central Pinal County, and the Tohono O'odham Nation lands (USFWS, 2006b).~~

~~All portions of the Proposed Route for the DPV2 project that are located south of I-10 and within Maricopa County would fall within the USFWS recommended Survey Zone 3. This is a USFWS classification of CFPO habitat that includes areas within the historic range of the CFPO with a low potential of occupancy. However, the Proposed Route does not contain suitable CFPO habitat, as defined by the January 2000 USFWS protocol for the species. Habitat components (mesquites, palo verde, and columnar cacti) were observed but they did not occur with the same density and structure as defined by the January 2000 USFWS protocol for the species. Furthermore, only approximately 20 individuals are currently known to exist and these locations are 60 miles or greater from the eastern end of the Proposed Route. Therefore, CFPO surveys are not recommended for this project due to the lack of suitable habitat and the considerable distance of the Proposed Route to the nearest known current locations. Because the pygmy owl has a low potential of occurring within the project area, it is not addressed further in this document.~~

California

Within California, the Proposed Project would be located in the vicinity of federal, State, and local designated Special Habitat Management Areas.

- California Desert Conservation Area
- Wild Horse and Burro Management area
- BLM Wilderness areas (designated by California Desert Protection Act, See Section D.5, Wilderness and Recreation)
- Areas of Critical Environmental Concern
- Riverside County Natural Areas/Reserves
- Other State Lands
- Other Federal Lands
- Multiple Species Habitat Conservation Plan areas
- Designated Critical Habitat

California Desert Conservation Area. The California Desert Conservation Area (CDCA) is a 25-million-acre expanse of land in southern California designated by Congress in 1976 through the Federal Land Policy and Management Act (FLPMA). The BLM administers about 10 million of those acres. When Congress created the CDCA, it recognized its special values, proximity to the population centers of southern California, and the need for a comprehensive plan for managing the area. Congress stated that the California Desert Conservation Area Plan must be based on the concepts of multiple use, sustained yield, and maintenance of environmental quality. The proposed project ROW, from just west of Whitewater Canyon to the Colorado River falls within the CDCA.

The Wildlife Element of the CDCA contains objectives and goals designed to: manage federally and State listed species and their habitats; comply with existing legislation and BLM policies; provide certain species designated as sensitive by the BLM special consideration and attention in the planning process; consider the habitat of all fish and wildlife in implementing the Plan; manage representative habitats using a holistic approach; give habitats unique to the CDCA special management consideration and manage them so as to maintain their unique biological characteristics; and manage sensitive habitat using a holistic, systems-type approach. Some examples of sensitive habitats include: riparian areas, wetlands, sand dunes, relict and island habitats, washes, and important ecological zones between different major ecosystems and deserts.

The primary active wildlife management tools used in the Plan are Areas of Critical Environmental Concern (ACEC)[1] and Habitat Management Plans (HMP). The Plan also affords protection to fish and wildlife resources through the designation of Multiple-Use Class L, which limits the number and location of routes that are approved. In addition, the Plan also includes a designation of Special Areas (SA) that highlights habitats and species that should receive special consideration in the environmental assessment process for all project types. Two additional designations in the Wildlife Element are Research Natural Area (RNA) and Sikes Act Agreement. RNAs have been proposed in a few locations where research and education would be the primary uses. Sikes Act Agreements are cooperative agreements between the BLM and the CDFG for joint development and implementation of an HMP. The Plan identified 89 special fish and wildlife areas that would receive active habitat management and/or special attention in the environmental assessment process. Twenty-eight areas were identified as ACECs solely or partially to protect fish and wildlife resources.

The Plan also provides guidelines for the implementation and monitoring to gauge the effectiveness and overall success of the Wildlife Element as well as the entire Plan. ACECs located within or adjacent to the ROW include Chuckwalla Valley Dune Thicket, Chuckwalla Mountains (bighorn sheep habitat), Whitewater Canyon, and Big Morongo Canyon. The Orocopia Mountains and Chuckwalla Mountains Native Ungulate HMPs prescribe management for species and habitats, but primarily focus on the management actions addressing the needs of burro deer and bighorn sheep. These plans were prepared in cooperation with the CDFG. An HMP has yet to be developed for the Eagle Mountains.

The Vegetation Element of the Plan contains the following goals: to conserve federally and State listed rare, threatened, or endangered plants and to further the purposes of the ESA and similar State laws; to treat unusual plant assemblage (UPA) rates as highly sensitive and very sensitive in a manner that will preserve their habitat and ensure their continued existence; to manage wetland and riparian areas in the desert; to sustainably maintain the continued existence and biological viability of the vegetation resource in the CDCA while providing for the consumptive needs of wildlife, livestock, wild horses and burros, and public uses; to provide guidance for the manipulation of plant habitats or vegetation; and to encourage the use of private desert lands for commercial production of valuable desert plants. The Plan identifies the need for monitoring efforts and directing these efforts to those areas with the greatest management need. The Plan also identifies plant assemblages that are associated with springs, and more specifically palm oases, that are present in the Chuckwalla Mountains, Orocopia Mountains, Mecca Hills, Eagle Mountains, and Indio Hills. None of these oases are located within the proposed ROW; however, the oases are close.

The Wild Horse and Burro Element contains the following goals: to provide year-long food requirements of wild horses and burros; to provide adequate cover for wild horses and burros; to provide adequate water to meet the year-long requirements of wild horses and burros; to provide adequate living space for wild horses and burros; and to protect wild horses and burros on public lands. The CDCA established 17 Herd Management Areas (HMAs) where the populations of wild horses and burros would be protected and managed. Two HMAs are present near the ROW, including the Chocolate/Mules HMA and the Morongo HMA. According to the CDCA, the Yuma, Arizona BLM District was given the lead for writing and implementing the Herd Management Area Plan (HMAP) for the Colorado River HMAP, which includes the Dead Mountain, Chemehuevi, Chocolate/Mules, and Picachos HMAs. The Low Desert

[1] The term "areas of critical environmental concern" refers to areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards (FLPMA Section 103 (a), 1976).

HMAP, which includes the Kramer, Morongo, Palm Canyon, and Coyote Canyon HMAs, is a lower priority because of the small populations of burros in these areas.

Wild Horse and Burro Management. Management of wild free-roaming horses and burros was authorized by Congress in the early 1970s and policies were amended by The Federal Land Policy and Management Act of 1976 and The Public Rangelands Improvement Act of 1978. The regulations found at 43 CFR Part 4700 and the 4700 BLM Manual series prescribe the authorities, objectives, and policies that guide the protection, management, control, and disposition of wild free-roaming horses and burros in accordance with the Act. The policy of the BLM is to manage wild horses and burros in a manner that will ensure healthy herds for future generations of Americans, and contribute to the diversity of life forms on public lands administered by the BLM. The areas where wild horses and burros were known to exist at the time of the passage of the Wild Horse and Burro Act for the California Desert District are managed by the California BLM. However, the narrow strip of California which lies along the Colorado River is managed by the Arizona BLM. Separate herd management area plans (HMAPs) provide more specific burro management guidance. Two Herd Management Areas (HMAs) are located near the ROW, including Morongo and Chocolate/Mules HMAs.

California Desert Protection Act. On October 31, 1994, Congress enacted the California Desert Protection Act (CDPA) (Public Law 103 433), thereby designating certain lands in the California desert as wilderness in furtherance of the purpose of the Wilderness Act and Sections 601 and 603 of FLPMA. Of the 69 areas designated as BLM wilderness through the CDPA, three occur adjacent to the ROW. These include Chuckwalla Mountains, Mecca Hills, and Orocopia Mountains. Within the wilderness areas, management activities are allowed, as well as the continued grazing of livestock in those areas where it was established prior to the date of enactment of the CDPA.

Areas of Critical Environmental Concern. The locations where the Proposed Project crosses Areas of Critical Environmental Concern are shown in Figures D.5-1 through D.5-4.

- **Chuckwalla DWMA ACEC.** The Chuckwalla Desert Wildlife Management Area (DWMA), which is also designated as an ACEC through the Northern and Eastern Colorado Desert Coordinated Management Plan, was designated to protect desert tortoise, and significant natural resources including special status plant and animal species and natural communities. This vast area contains a variety of desert habitats that are still relatively undisturbed in most places. The dominant plant community in the area is creosote bush scrub, with creosote bush, burro weed, ocotillo, and brittle bush, as the most conspicuous species. In the alluvial washes the typical wash woodland includes mesquite, desert ironwood, smoke tree, palo verde, and desert willow (*Chilopsis linearis*). There are stands of the California fan palm (*Washingtonia filifera*) in several of the oases. At least two rare plants, a cactus, *Escobaria vivipara var. alversonii*, and *Ditaxis californica*, occur in the Chuckwalla DWMA. Within the area, there is a wide variety of lower-Sonoran animal life. Over 20 species of reptiles likely occur in the area. The desert bighorn (*Ovis canadensis*) is found in the mountains.
- **Chuckwalla Valley Dune Thicket ACEC.** The Chuckwalla Valley Dune Thicket ACEC is located in the Chuckwalla Valley, at the confluence of a wash and a small dune system. The area supports a series of small pockets, 0.25 to 0.6 acres in extent, of desert wash woodland. Palo verde is the dominant species with desert ironwood scattered throughout. Prominent elements of the understory are *Brandegea bigelovii* and *Sarcostemma cynanchoides* ssp. *hartwegii*. The areas adjacent to the woodlands are occupied by creosote bush, some of which exceed 10 feet in height. The Mojave fringe-toed lizard (*Lima scoparia*) is also found in this ACEC, which is near the southern extent of its range.

- **Coachella Valley Preserve and Willow Hole-Edom Hill Preserve/ACEC.** The Coachella Valley Preserve is actually a preserve system that includes three separate units, totaling over 20,000 acres. The Preserve was initially established pursuant to the Coachella Valley Fringe-Toed Lizard Habitat Conservation Plan that was approved in 1986. The three preserves that were established included: Coachella Valley (Thousand Palms), Whitewater Floodplain, and Willow Hole/Edom Hill. The goal in establishing three separate preserves was to ensure that three separate desert sand dune ecosystems, each with separate sand sources and processes, were fully protected. The largest of these units, at roughly 17,000 acres, is centered on Thousand Palms Canyon which cuts through the Indio Hills, and borders the northern edge of the Coachella Valley half way between the Cities of Palm Springs and Indio. This preserve ranges from near sea level at its southern extreme to over 1000 feet amsl in the Indio Hills. The other two preserve units occur at the western end of the valley, north of the City of Palm Springs.

  The Coachella Valley Preserve was established through a Habitat Conservation Plan to protect the federally threatened, Coachella Valley fringe-toed lizard (*Uma inornata*). The lizard was listed in 1980; however, the preserve system was not officially dedicated until April of 1986. Beginning in 1984, there was a two-year process of study, planning and negotiation that involved the nine cities, Riverside County, the USFWS, CDFG and The Nature Conservancy. The Coachella Valley Preserve System Management Plan, in part, addressed the management of public lands in the Thousand Palms, Willow Hole-Edom Hill, and Indian Avenue Preserves primarily for the protection of the Coachella Valley fringe-toed lizard. Public lands within these areas were designated as an ACEC. The proposed Coachella Valley Multiple Species Habitat Conservation Plan effort would dramatically expand and enhance the security and viability of the preserve system.

  The preserve system has been managed collectively by the agencies, including USFWS, BLM, CDFG, CDPR and the Nature Conservancy, that own land within the preserves. In 1997, The Nature Conservancy (TNC) decided to transfer their ownership and management responsibilities so that they could focus their resources on protecting endangered landscapes elsewhere. The Center for Natural Lands Management was selected to continue and expand upon TNC's role in the protection and management of the Coachella Valley preserve system.

- **Big Morongo Canyon ACEC.** Big Morongo Canyon is located in the Little San Bernardino Mountains north of the City of Desert Hot Springs. The desert oasis at Big Morongo Canyon is one of the 10 largest cottonwood and willow riparian habitats in California. The upstream end of the canyon lies in the Mojave Desert, while its downstream portion opens into the Colorado Desert. In 1974, approximately 240 acres of land owned by The Nature Conservancy and San Bernardino County was combined and dedicated as a Wildlife Preserve. In 1982, the BLM recognized the ecological features of the area and designated almost 3,700 acres of the ridge and canyon as an ACEC. Big Morongo Canyon Preserve now encompasses 31,000 acres, with wildlife corridors connecting the Preserve to Joshua Tree National Park. These corridors allow wildlife, including mule deer, bighorn sheep, mountain lions, and the California black bear to move freely across wilderness in search of food and water. Today the Preserve is managed by BLM with the assistance from the Friends of Big Morongo Canyon Preserve. The Big Morongo Canyon ACEC Management Plan was prepared to provide additional protection to an area especially high in wildlife and vegetation values.

- **Whitewater Canyon ACEC.** Whitewater Canyon is characterized as a canyon varying in width, flanked by steep slopes on the west and moderate slopes on the east. In this area, montane and desert species meet. Vegetation is a mixture of desert wash, desert slope and riparian communities with some mountain species extending into the canyon. Desert bighorn sheep (*Ovis canadensis nelsoni*) occasionally occur in the upper reaches of the canyon. There is a rich and varied population of amphib-

ians and reptiles including the mountain yellow-legged frog (*Rana muscosa*). The San Gorgonio cutthroat trout (*Salmo clarki euermanni*) was probably found in the headwaters of the Whitewater River at one time, but now is most likely extinct. The Whitewater River drains the easterly slopes of San Gorgonio Peak and flows permanently in much of the canyon, disappearing underground in the boulder-strewn lower reaches where it reaches the desert. Roads, homes, quarrying, and a trout hatchery have disturbed portions of the area, but the main threat to the fauna is over-collecting. The Whitewater Canyon ACEC Management Plan was prepared to provide protection to wildlife and Native American resource values.

Riverside County Natural Areas/Reserves.

- **McCoy Wash.** McCoy Wash, northwest of the City of Blythe, drains portions of the Big and Little Maria and McCoy Mountains and supports extensive ironwood woodlands containing ironwood, palo verde, smoke tree, desert willow, and mesquite. The lush woodland grades into a creosote bush scrub in the higher sections. Creosote and burro-weed, *Ambrosia dumosa*, are the main elements of the scrub. The woodland is an important refuge for migrating birds and it also provides nesting grounds for a number of breeding birds. It also supports a diverse population of mammals. With the exception of a few rocky outcrops, most of the area is composed of dissected alluvial fans or riverwash.
- **Indio Hills Native Palms Natural Area.** This is one of 24 oases located along the San Andreas Fault zone where the native California fan palm is found, and it is also one of the few publicly owned. Twenty-three palms are located in this group. To the north is the "badland" topography of the Indio Hills. The canyon to the north presents an intricately sculptured landscape, characterized by a labyrinth of gorges separated by ridges varying from sharply crested to nearly flat-topped.
- **Indio Hills Palm Oases.** Of the 24 oases distributed along the San Andreas or associated faults, the 11 in the Indio Hills are among the most pristine and one, Thousand Palms, is considered the finest of all Palm oases in the State. Over a quarter of the known California fan palms are found in these oases. This palm is now restricted to localities with permanent water supplies, usually found in fault areas. The tree is comparatively uncommon, with perhaps 100 stands in California, ranging from two or three specimens up to several thousand at Palm Canyon. There is one stand in Arizona and a number of large stands in Baja California. The Indio Hills oases consist of two types: the seep type, which is found on the hillsides, and the wash type, which is found on the floors of canyons. There is a distinct difference in vegetation, with the seep type marked by the rush (*Juncus mexicanus*) and the saltbush and the wash type characterized by the smoke tree, which is dependent on flood waters and rock abrasion for seed dissemination and germination.
- **Orocopia Mountains.** The Orocopia Mountains are a geological area of considerable interest in determining the displacement history of the San Andreas Fault. The rocks exposed in the mountain ranges are from Pre-Cambrian gneiss, which has yielded at least one radiometric age date of 2,400,000 years, to recent alluvium. The area is riddled with faults, and various colored, folded strata, which have been uncovered by erosion, form spectacular displays. Vegetation on the slopes is sparse and consists of creosote bush scrub, with occasional cactus gardens. The washes support a greater amount of plant life. The area supports a typical Colorado Desert fauna, including the desert tortoise, which is relatively abundant in the area.
- **Mecca Hills.** Lying to the north of the Salton Sea, the Mecca Hills are noted for their unusual geological features as well as the uniqueness of the rock formations. Vegetation is sparse except in the washes where typical species include smoke tree, palo verde, ironwood, mesquite, catclaw, and desert willow. On the hillsides creosote bush scrub occurs. Two rare plants have been reported in the area, *Xylorhiza cognata* and *Salvia greatae*. Wildlife species typical of the desert would be expected to occur. Desert bighorn sheep have been observed in the area.

- **Box Springs Reserve.** Box Springs Reserve is located near the top of the Box Springs Mountains, which lie immediately east of the University of California Riverside campus. This reserve is in an ecotone between the coastal sage scrub and chaparral plant communities. There is an intermittent streambed located near the north boundary of the reserve that contains riparian habitat. This area supports a diverse population of wildlife species, including the coast horned lizard and the orange-throated whiptail lizard (*Cnemidophorus hyperythru*), which have been recorded in the reserve, as have nearly 50 species of birds. As part of the University of California Natural Land and Water Reserves System, the Box Springs Reserve is virtually undisturbed; however development has occurred in nearby areas.

Other State Lands.

- **Potrero Creek Conservation Unit – San Jacinto Wildlife Area.** The Potrero Creek Conservation Unit is a 9,117-acre area located in the San Jacinto Mountains south of the City of Beaumont and east of the San Jacinto Valley. This Conservation Unit resulted from a cooperative partnership between The Conservation Fund, Lockheed Martin Corporation, the State of California, the U.S. Fish and Wildlife Service, and Riverside County. The Conservation Unit was added to the CDFG's San Jacinto Wildlife Area. The habitats in the Potrero Creek Conservation Unit include grasslands, sage scrub, chaparral, and riparian woodlands. The site supports one of the largest known contiguous populations of the federal and State listed Stephens' kangaroo rat and includes a significant portion (2,000 to 2,200 acres of occupied and potential habitat, or approximately 7 percent) of the known Stephens' kangaroo rat population in Riverside County. The site also supports 30 other species of concern. The inclusion of this property as part of the San Jacinto Wildlife Area will protect the core habitat for bobcat, cactus wren, loggerhead shrike, and Bell's sage sparrow and facilitate wildlife movement north of the San Jacinto Mountains.

Other Federal Lands.

- **Joshua Tree National Park.** On the border between the Mojave and Colorado Deserts, Joshua Tree National Park (JTNP) supports a rich and diverse flora and fauna. Plant communities range from low desert wash to a pinyon-juniper forest, with single-leaved pinyon pine (*Pinus monophylla*), California juniper (*Juniperus californica*), and some scrub oak (*Q. turbinella*). The major communities are the Joshua tree woodland and the creosote bush scrub. The Joshua trees (*Yucca brevifolia*) form dense and extensive groves. Several palm oases occur in the JTNP. The desert bighorn sheep and desert tortoise are two of the species that occur in the JTNP, and that are actively managed for conservation purposes. The JTNP encompasses all or part of a number of mountain ranges, including the Little San Bernardinos, Pinto, Eagle, Hexie, Cottonwood, and Coxcomb. All but the latter two are considered a part of the Transverse Range Province. Management of JTNP is defined by the General Management Plan (GMP). In 1999, the GMP was amended by the Back Country and Wilderness Management Plan, whose goal was update the GMP with the provisions of the California Desert Protection Act. The purpose of the GMP is to define the overall preservation and use management strategy for resources within the Park. This is approached through management zoning on all lands. Management zoning determines how specific lands in the JTNP are to be managed to protect resources, including species and habitats, and still provide for visitor enjoyment. Four zone classifications are used in the GMP, including Natural, Historic, Development, and Special Use. Within each zone, subzones may be designated to allow for particular management needs and some implementation plans have been developed for specific resources.

- **San Jacinto and Santa Rosa Mountains National Monument.** This Monument was established through the approval of the Santa Rosa and San Jacinto Mountains National Monument Act and was

signed into Public Law 106-351 in October of 2000. The Monument contains nationally significant biological, cultural, recreational, geological, educational, and scientific values. The National Monument Management Plan, completed in 2004, reflects the efforts of the two lead agencies, BLM and U.S. Forest Service (USFS), to develop a plan which is capable of dealing with the issues of access, recreation, and the protection of threatened and endangered species, as well as the conservation of native plants and other wildlife and the removal of non-native, invasive, and noxious species. The Management Plan contains implementation decisions that are tiered to the CDCA Plan and San Bernardino National Forest Land and Resource Management Plan (LRMP). The activities associated with these decisions will be implemented as funding permits. The decisions related to the biological resources are focused on the following: habitat management — noxious, non-native, and invasive plant species; management of special status species; and monitoring programs. The Peninsular bighorn sheep, desert tortoise, and desert slender salamander, which are all listed federal species, are present within the boundaries of the Monument.

Multiple Species Habitat Conservation Plans.

- **Western Riverside MSHCP:**
  - **The Pass Area Plan.** The Pass Area Plan covers the area from east of the border of the City of Banning, which is the northeastern boundary of the Western Riverside MSHCP planning area, to the hills west of the Cities of Beaumont and Calimesa. The northern boundary is the Riverside County line and the southern boundary extends approximately to the San Jacinto Mountains. This Plan area includes all of the Cities of Banning, Beaumont, and Calimesa. The Pass Area Plan is divided into three Subunits, including the Potrero/Badlands Subunit, Badlands/San Bernardino National Forest Subunit, and San Timoteo Creek Subunit. Within each Subunit, planning species, and biological issues and considerations are identified that will achieve the conservation goals for the Subunit. The target conservation acreage range for this Plan Area is 22,510 to 27,895 acres, which is comprised of approximately 13,970 acres of existing Public/Quasi-Public Lands and 8,540 to 13,925 acres of Additional Reserve Lands. A number of Cores, Linkages, Constrained Linkages, and Noncontiguous Habitat Blocks are located within this Plan Area.
  - **Potrero/Badlands Subunit.** The target acreage range for Additional Reserve Lands within this Subunit is 5,570 to 9,275 acres. This Subunit includes Cell Groups A, B, and C and an additional six Cells that do not fall within one of these Cell Groups. The Planning Species considered in this subunit include: arroyo toad, Bell's sage sparrow, cactus wren, least Bell's vireo, loggerhead shrike, Southern California rufous-crowned sparrow, bobcat, Los Angeles pocket mouse, mountain lion, San Bernardino kangaroo rat, and Stephens' kangaroo rat. The biological issues and considerations in this Subunit include: (1) provision of a new Core Area focused on the Potrero Creek area, (2) maintenance of large blocks of undisturbed habitat for Core Area purposes and for large mammal movement between the northern and southern sections of the San Bernardino National Forest, (3) conservation of Potrero Creek and associated Riversidean alluvial fan sage scrub for maintenance of key species, (4) conservation of large habitat blocks in the Badlands, (5) maintenance of Core Area for bobcat, (6) maintenance of core and linkage habitat for mountain lion, (7) maintenance of Core Area in Potrero Valley for Stephens' kangaroo rat, (8) determination of the presence of possible scattered populations of San Bernardino kangaroo rat in the tributaries to San Jacinto River, and (9) determination of the presence of potential Core Area for Los Angeles pocket mouse in tributaries to San Timoteo Creek.

- **Badlands/San Bernardino National Forest Subunit.** The target acreage range for Additional Reserve Lands within this Subunit is 1,105 to 2,195 acres. This subunit includes Cell Groups D and an additional 29 Cells that do not fall within one of these Cell Groups. The Planning Species considered in this Subunit include: Bell's sage sparrow, bobcat, Los Angeles pocket mouse, San Bernardino mountain king snake. The biological issues and considerations in this Subunit include: (1) provision of a connection in the Cherry Valley area from the Badlands to Bogart Park, (2) maintenance of a wetland connection via Noble Creek, (3) determination of the presence of potential linkage area for bobcat, (4) determination of the presence of potential Core Area for Los Angeles pocket mouse in tributaries to San Timoteo Creek, and (5) maintenance of Core Area for San Bernardino mountain king snake.
- **San Timoteo Creek Subunit.** The target acreage range for Additional Reserve Lands within this Subunit is 1,865 to 2,455 acres. This subunit includes Cell Groups E, F, G, and H and an additional 11 Cells that do not fall within one of these Cell Groups. The Planning Species considered in this subunit include: Bell's sage sparrow, Cooper's hawk, least Bell's vireo, loggerhead shrike, southwestern willow flycatcher, white-tailed kite, yellow-breasted chat, yellow warbler, bobcat, Los Angeles pocket mouse, mountain lion, San Bernardino kangaroo rat, and Stephens' kangaroo rat. The biological issues and considerations in this Subunit include: (1) maintenance of wetlands for purposes of connection, wildlife dispersal, and wetlands species conservation, (2) maintenance of a contiguous connection between potential conservation areas in San Bernardino County and the proposed Badlands Core Area, (3) maintenance of winter roosts for white-tailed kites, (4) maintenance of Core and Linkage Habitat for bobcat, (5) maintenance of linkage area for mountain lion and Stephens' kangaroo rat, (6) determination of the potential for scattered populations of San Bernardino kangaroo rat along San Timoteo Creek, and (7) determination of the presence of potential Core Area for Los Angeles pocket mouse in San Timoteo Creek.
- **Reche Canyon/Badlands Area Plan.** The Reche Canyon/Badlands Area Plan covers a large area in northeastern Riverside County. The Reche Canyon/Badlands Area Plan is divided into four Subunits, including Sycamore Canyon/Box Springs East located east of Riverside, Reche Canyon, Badlands North that lie between Beaumont and Moreno Valley, and San Jacinto Wildlife Area/Mystic Lake. Within each Subunit, planning species, and biological issues and considerations are identified in order to achieve the conservation goals for the Subunit. The target conservation acreage range for this Area Plan is 30,815 to 35,905 acres. This target acreage is comprised of approximately 20,295 acres of existing Public/Quasi-Public Lands and 10,520 to 15,610 acres of Additional Reserve Lands. A number of Cores, Linkages, Constrained Linkages and Noncontiguous Habitat Blocks are located within this Plan Area. The City of Moreno Valley sits entirely within the boundaries of this Area Plan.
- **Box Springs East Subunit**. The target acreage range for Additional Reserve Lands within this Subunit is 175 to 350 acres. This Subunit includes Cell Groups A and B and the Planning Species considered in this Subunit include: Bell's sage sparrow, cactus wren, loggerhead shrike, southern California rufous-crowned sparrow, and bobcat. The biological issues and considerations in this Subunit include: (1) conservation of existing, intact upland habitat augmenting existing Box Springs Mountain Reserve, (2) conservation of existing populations of Bell's sage sparrow and cactus wren, and (3) maintenance of linkage areas to Box Springs Mountain for bobcat.
- **Reche Canyon Subunit**. The target acreage range for Additional Reserve Lands within this Subunit is 1,215 to 2,615 acres. This Subunit includes Cell Groups C through P and an additional 10 Cells that do not fall within one of these Cell Groups. The Planning Species considered in this subunit include: Bell's sage sparrow, bobcat, Stephens' kangaroo rat, and Nevin's

barberry. The biological issues and considerations in this Subunit include: (1) conservation of upland habitat in the Badlands, (2) maintenance of a connection between Blue Mountain and Reche Canyon, (3) conservation of existing populations of Bell's sage sparrow, (4) maintenance of a Core Area for bobcat, (5) maintenance of core and linkage habitat for mountain lion, (6) determination of the presence of a potential small population of San Bernardino kangaroo rat, (7) determination of the presence of potential Core Area for Los Angeles pocket mouse, and (8) maintenance of Core Area for Nevin's barberry.

- **Badlands – North Subunit**. The target acreage range for Additional Reserve Lands within this Subunit is 8,270 to 10,895 acres. This subunit includes Cell Groups Q through Y, A' through H', and an additional four Cells that do not fall within these Cell Groups. The Planning Species considered in this subunit include: Bell's sage sparrow, cactus wren, loggerhead shrike, Southern California rufous-crowned sparrow, bobcat, Los Angeles pocket mouse, mountain lion, San Bernardino kangaroo rat, Stephens' kangaroo rat, and Nevin's barberry. The biological issues and considerations in this Subunit include: (1) conservation of large habitat blocks in the Badlands, (2) maintenance of Core Area for bobcat, (3) maintenance of core and linkage habitat for mountain lion, (4) maintenance of linkage areas to San Jacinto Wildlife Area for Stephens' kangaroo rat, (5) determination of the potential for scattered population of San Bernardino kangaroo rat along San Timoteo Creek, (6) determination of the presence of potential Core Area for Los Angeles pocket mouse, and (7) maintenance of Core Area for Nevin's barberry.
- **San Jacinto Wildlife Area/Mystic Lake Subunit.** The target acreage range for Additional Reserve Lands within this Subunit is 860 to 1,750 acres. This Subunit includes Cell Groups Z, D', I', and an additional 12 Cells that do not fall within these Cell Groups. The Planning Species considered in this subunit include: American bittern, black-crowned night heron, burrowing owl, California horned lark, double-crested cormorant, loggerhead shrike, mountain plover, northern harrier, osprey, peregrine falcon, tricolored blackbird, white-faced ibis, white-tailed kite, bobcat, Los Angeles pocket mouse, Stephens' kangaroo rat, California orcutt grass, Coulter's goldfields, Davidson's saltscale, San Jacinto Valley crownscale, smooth tarplant, spreading navarretia, thread-leaved brodiaea, vernal barley, and Wright's trichocoronis. The biological issues and considerations in this Subunit include: (1) conservation of alkali playa and other habitat to augment existing conservation in the San Jacinto Wildlife Area and Mystic Lake, (2) conservation of existing vernal pool complexes associated with the San Jacinto river floodplain, (3) provision for a connection of intact habitat between San Jacinto Wildlife Area/Mystic Lake to adjacent Badlands area to the north, (4) conservation of Willow-Domino-Travers soils supporting sensitive plants, (5) provision for and maintenance of a continuous linkage along the San Jacinto River from the southern boundary of the Reche Canyon/Badlands Area Plan to the southeastern Area Plan boundary, (6) maintenance of Core Area for bobcat, (7) maintenance of linkage area for Stephens' kangaroo rat to San Jacinto Wildlife Area, and (8) determination of the presence of potential Core Area for Los Angeles pocket mouse between the Badlands and San Jacinto Wildlife Area.

Final Draft Coachella Valley MSHCP. The Coachella Valley Association of Governments has taken the lead in developing the Coachella Valley MSHCP (CVMSHCP). The planning area for this MSHCP is located within Riverside County and includes most of the urban and urbanizing area in the Coachella Valley, as well as in the Santa Rosa Mountains. The CVMSHCP primarily addresses issues of urbanization, but because the area is within the CDCA, some of the decisions in the CVMSHCP will amend the CDCA. The CVMSHCP will serve as a habitat conservation plan, therefore the decisions in the CVMSHCP will apply to federal, State, and private lands. The CVMSHCP covers 27 species, called Covered Species, and includes 5 plants, 2 insects, 1 fish, 1 amphibian, 3 reptiles, 11 birds, and 4 mammals. In addition, the CVMSHCP identifies 27 natural communities that provide habitat for Covered Species, and these communities are the focal point for establishment of Conservation Areas.

The CVMSHCP also includes the establishment of an MSHCP Reserve System, setting Conservation Objectives to ensure the conservation of the Covered Species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, and a Monitoring Program and Adaptive Management. The MSHCP Reserve System will be established from lands within 21 Conservation Areas from the following components: existing conservation lands managed by local, State, or federal agencies, or non-profit organizations; complementary conservation; and additional conservation lands. The existing conservation lands include the Coachella Valley fringe-toed lizard (CVFTL) Preserve system established pursuant to the CVFTL Habitat Conservation Plan (HCP), approved in 1986. Three preserves were established; Coachella Valley (Thousand Palms), Whitewater River Floodplain, and Willow Hole–Edom Hill. The Conservation Areas lying within or adjacent to the ROW for the proposed DPV2 project include Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/ Windy Point, Whitewater Canyon, Highway 111/I-10, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Willow Hole, Thousand Palms, East Indio Hills, Joshua Tree National Park, Desert Tortoise and Linkage, Mecca Hills/Orocopia Mountains, and Santa Rosa and San Jacinto Mountains. The Draft CVMSHCP describes the types of Covered Activities relating to operation and maintenance that may occur in existing rights-of-way. For substation facilities, these activities include:

- Preventive maintenance, including electrical test of high voltage equipment, electric test of protection relays and communication system
- Corrective maintenance in case of an unscheduled event, shutdown, or emergency (repairs as necessary involving cranes, service trucks, pick-up trucks, etc.)
- Routine operational activities and temperature readings.

Additional Covered Activities are allowed for overhead/underground power and communication line facilities within Conservation Areas. These include:

- Patrol on existing access roads
- Maintenance of existing access roads
- Corrective maintenance/repair of transmission facilities as needed, using existing access roads.

The Draft CVMSHCP contains provisions for any public service provider, such as a utility company or public district that operates facilities and/or owns land within the CVMSHCP Area. These public service providers may request Take Authorization for their activities from the Coachella Valley Conservation Commission (CVCC) pursuant to the Permits as a Participating Special Entity. Such activities must be consistent with the terms and requirements of the Permits, the Plan, and the Implementing Agreement (IA). The process for submitting an application, review by CVCC and the Wildlife Agencies, and granting of Take Authorization is described in the IA for the CVMSHCP. Participating Special Entities shall contribute to the CVMSHCP implementation through payment of a fee or other appropriate mechanism based on the type of proposed activity.

Northern and Eastern Colorado Desert Coordinated Management Plan. The Northern and Eastern Colorado (NECO) Desert Coordinated Management Plan is a landscape-scale, multi-agency planning effort that seeks to protect and conserve natural resources while simultaneously balancing human uses of the California portion of the Sonoran Desert ecosystem. The planning area, which is located in the southeastern CDCA, encompasses over 5 million acres and hosts 60 sensitive plant and animal species. BLM's CDCA Plan is being amended through six concurrent plan amendments, one of them being the NECO Plan. This multiple use planning effort also takes into account other uses of the desert, such as hiking, hunting, rock hounding, off-highway recreation, commercial mining, livestock grazing, and utility

transmission. The NECO Plan provides reserve management for the desert tortoise, integrated ecosystem management for special status species and natural communities for all federal lands, and regional standards and guidelines for public land health for BLM lands. The Plan focuses on the conservation of species and habitats through the use of a system of large (50 percent larger than recommended in the desert tortoise recovery plan) DWMAs for the desert tortoise and wildlife habitat management areas (WHMAs) for other special status species and natural communities. DWMAs and WHMAs would replace all current special designations for species and habitats. DWMAs generally coincide with, but are smaller than, current tortoise critical habitat areas, and would be managed as ACECs and feature a 1 percent surface disturbance limit. The focus of WHMAs is on mitigation, habitat improvements, and federal ownership. The NECO Plan also addresses designation of routes of travel, land ownership pattern, access to resources for Economic/Social needs, bighorn sheep management, and burro and wild horse management.

Designated Critical Habitat.

- **Desert Tortoise.** In 1994, the U.S. Fish and Wildlife Service designated 6.4 million acres of Critical Habitat for the tortoise in California, Nevada, Utah, and Arizona. The proposed DPV2 ROW traverses through the Eastern Colorado Recovery Unit that was identified in the Desert Tortoise Recovery Plan. The Eastern Colorado Recovery Unit includes the Chuckwalla and Joshua Tree DWMAs. The NECO Plan designated DWMAs where desert tortoise recovery efforts are focused.
- **Coachella Valley Fringe-Toed Lizard.** The USFWS listed the Coachella Valley fringe-toed lizard as threatened, under the Endangered Species Act, in 1980. It is listed as an endangered species by the State of California. At the time the USFWS listed the lizard as threatened, about 12,000 acres of critical habitat were designated. This acreage includes areas with the highest lizard concentrations and a source of the "blow sand" habitat on which the lizard depends for its long-term survival. The 3,709-acre Coachella Valley National Wildlife Refuge was established by the USFWS in 1985 to protect the lizard. The Coachella Valley Preserve, cooperatively managed by TNC, BLM, California Department of Parks and Recreation, CDFG, USFWS, and the Center for Natural Lands Management, encompasses an additional 16,405 acres of fringe-toed lizard habitat adjacent to the refuge.

D.2.2 Environmental Setting for the Proposed Project – Devers to Harquahala

D.2.2.1 Harquahala to Kofa National Wildlife Refuge

Plant Communities and Sensitive Habitats

The beginning of the Proposed Project that would be located within the Harquahala Plain contains disturbed areas, such as agricultural lands that have been cleared of native vegetation. These areas were either planted with alfalfa (*Medicago* sp.) or were fallow during the time of field reconnaissance. The remaining areas of this segment of the Proposed Project contain species typical of upland and xeroriparian areas of the Creosote bush–White Bursage series of the Lower Colorado River Valley subdivision of the Sonoran Desert scrub biotic community (See Section D.2.1.1.1 for a description of the community). The dominant plant species observed in proposed ground-disturbing areas within the Harquahala to Kofa NWR segment of the Proposed Project during field reconnaissance include creosote bush, white bursage, foothill palo verde, ratany (*Krameria* sp.), plantain (*Plantago* sp.), and velvet mesquite (*P. velutina*).

Special Status Plant and Wildlife Species and Documented Sensitive Biological Resources

The Harquahala to Kofa NWR segment of the Proposed Project contains plant species that are protected under the Arizona Native Plant Law as regulated by the Arizona Department of Agriculture (ADA). Plant species that are protected under this law and were observed in proposed ground-disturbing areas within the Harquahala to Kofa NWR segment of the Proposed Project during field reconnaissance include: blue palo verde, foothill palo verde, velvet mesquite, desert ironwood, and ocotillo. Additionally, all cacti (saguaro, chollas, barrel, hedgehog, beavertail, prickly pear, desert Christmas, and nipple) located within the Proposed Project are designated as Salvage Restricted. Additional detail on this can be found in Section D.2.1.1.3.

Within the Harquahala to Kofa NWR segment of the Proposed Project, 11 protected species have a moderate or higher potential to occur within the alignment. This includes eight Sensitive status species as protected by the BLM and three WSCA species as protected by the AGFD. These species include the cheese-weed moth lacewing, common chuckwalla, Sonoran desert tortoise, banded Gila monster, desert rosy boa, osprey, western burrowing owl, California leaf-nosed bat, cave myotis, pocketed free-tailed bat, and big free-tailed bat. Migratory birds may also occur in the project area. These species are protected under the Migratory Bird Treaty Act. Big horn sheep are managed by the AGFD, BLM, and Kofa NWR and are expected to occur within the vicinity of the Harquahala to the Kofa NWR segment of the Proposed Project. Additional detail on these species can be found in Section D.2.1.1.3.

Special Habitat Management Areas Overview

The Proposed Project would traverse areas designated by BLM as Category II and Category III for the Sonoran desert tortoise. Areas where the Proposed Project would pass through Category II designated land within the Harquahala to Kofa NWR segment include approximately one mile in the Eagletail Mountains. Areas where the Proposed Project would pass through Category III designated land include approximately eight miles in the Big Horn Mountains. Additional detail on these can be found in Section D.2.1.1.4.

Harquahala Telecommunications Site

The proposed Harquahala Mountain facility would be located on BLM land, approximately seven miles north of the Harquahala to Kofa National Wildlife Refuge transmission line portion of the Proposed Project in the Harquahala Mountains. There is an existing telecommunications facility owned, maintained, and operated by the Central Arizona Water Control District (CAWCD) at this site. An existing 10-mile dirt road leads to Harquahala Mountain. A temporary construction area adjacent to the new facility would be established for vehicle parking and material storage. This area would be fenced and gated. It is estimated that the temporary construction area would occupy approximately one acre and the permanent facility would occupy approximately 0.5 acres.

Habitat in the project area is consistent with that described above for Sonroan desert scrub. At the proposed telecommunication site the area is characterized as Arizona Chaparral Series and supports populations of shrub live oak (*Q. turbinella*), bear grass (*Nolina microcarpa*), and yellow leaf silk tassel (*Garrya flavescens*). Non-native and native grasses are also present. One sensitive plant species protected under the Arizona Native Plant Law, straw topped cholla, has been documented at the Telecom site. This area is within the known range of big horn sheep.

D.2.2.2 Kofa National Wildlife Refuge

Plant Communities and Sensitive Habitats

The portion of the Proposed Project within the boundaries of the Kofa NWR contains species typical of upland and xeroriparian areas of Palo verde–Cactus–Mixed Scrub series of the Arizona Upland subdivision of the Sonoran Desert scrub biotic community. The dominant plant species observed in proposed ground-disturbing areas within the Kofa NWR segment of the Proposed Project during field reconnaissance include Creosote bush, foothill palo verde, saguaro (*Carnegia gigantea*), desert ironwood, catclaw acacia, buckhorn cholla (*Cylindropuntia~~O.~~ acanthocarpa*), and mesquite. Additional detail concerning these plant communities can be found in Section D.2.1.1.1.

Special Status Plant and Wildlife Species and Documented Sensitive Biological Resources

The Kofa NWR segment of the Proposed Project contains plant species that are protected under the Arizona Native Plant Law as regulated by the ADA. Plant species that are protected under this law and were observed in proposed ground-disturbing areas within the Kofa NWR segment of the Proposed Project during field reconnaissance include blue palo verde, foothill palo verde, velvet mesquite, desert ironwood, and ocotillo. Additionally, all cacti (saguaro, chollas, barrel, hedgehog, beavertail, prickly pear, desert Christmas, and nipple) located within this segment of the Proposed Project are designated as Salvage Restricted. Additional detail on this can be found in Section D.2.1.1.3.

Within the Kofa NWR segment of the Proposed Project, 10 protected species, including eight Sensitive status species as protected by the BLM and two WSCA species as protected by the AGFD, have a moderate or higher potential to occur. These species include the cheese-weed moth lacewing, common chuckwalla, banded Gila monster, desert rosy boa, western burrowing owl, cave myotis, pocketed free-tailed bat, big free-tailed bat, Sonoran desert tortoise, and California leaf-nosed bat. Additional detail on these species can be found in Section D.2.1.1.3.

Additionally, migratory birds as protected under the Migratory Bird Treaty Act and bighorn sheep as managed by the AGFD, BLM, and Kofa NWR are all expected to occur within the vicinity of the Kofa NWR segment of the Proposed Project. Additional detail on these can be found in Section D.2.1.1.3.

Special Habitat Management Areas Overview

The Kofa NWR segment of the Proposed Project is located within and directly adjacent to the boundaries of the New Water Wilderness Area as designated and managed by the Kofa NWR and the BLM. However, the proposed ROW is not a part of the Wilderness Area. The Proposed Project would traverse approximately 20 miles within the boundaries of the Kofa NWR, which is also within and directly adjacent to the boundaries of the New Water Mountains Wilderness Area. Additional detail on these can be found in Section D.2.1.1.4.

D.2.2.3 Kofa National Wildlife Refuge to Colorado River

Plant Communities and Sensitive Habitats

The Kofa NWR to the Colorado River segment of the Proposed Project contains species typical of upland and xeroriparian areas of the Creosote bush–White Bursage series of the Lower Colorado River Valley subdivision of the Sonoran Desert scrub biotic community. The portion of the segment in the

Dome Rock Mountain represents an area within the transitional zone between the Lower Colorado River Valley subdivision and the Arizona Upland subdivision of the Sonoran Desert scrub biotic community. Additionally, the portion of the Proposed Project along the Colorado River and the Arizona–California border is located within the Sonoran Riparian Deciduous Woodland biotic community. The dominant plant species of the Creosote bush–White Bursage series observed in proposed ground-disturbing areas within the Kofa NWR to the Colorado River segment of the Proposed Project during field reconnaissance include Creosote bush, white bursage, foothill palo verde, ratany, plantain, and velvet mesquite. The dominant plant species of the portion of this segment in the transitional zone portions between the Lower Colorado River Valley and the Arizona Upland subdivisions observed in proposed ground-disturbing areas within the Kofa NWR to the Colorado River segment of the Proposed Project during field reconnaissance include creosote bush, foothill palo verde, saguaro, desert ironwood, catclaw acacia, and buckhorn cholla. The Sonoran Riparian Deciduous Woodland biotic community along the Colorado River in proposed ground-disturbing areas was dominated by saltcedar (*Tamarix* sp.); thus, this area has been invaded by the non-native saltcedar and does not have the characteristics of true Sonoran Riparian Deciduous Woodland, as defined by Brown (1994). Additional detail concerning these plant communities can be found in Section D.2.1.1.1.

Special Status Plant and Wildlife Species and Documented Sensitive Biological Resources

The Kofa NWR to Colorado River segment of the Proposed Project contains plant species that are protected under the Arizona Native Plant Law as regulated by the ADA. Plant species that are protected under this law and were observed in proposed ground-disturbing areas within this segment of the Proposed Project during field reconnaissance include blue palo verde, foothill palo verde, velvet mesquite, desert ironwood, agave, and ocotillo. Additionally, all cacti (saguaro, chollas, barrel, hedgehog, beavertail, prickly pear, desert Christmas, and nipple) located with the Proposed Project alignment are designated as Salvage Restricted. Additional detail on this can be found in Section D.2.1.1.3.

Within the Kofa NWR to Colorado River segment of the Proposed Project, 17 protected species have a moderate or higher potential to occur within the alignment. This includes two endangered species as protected by the USFWS, eight Sensitive status species as protected by the BLM, and seven WSCA species as protected by the AGFD. These species include the razorback sucker, California brown pelican, cheese-weed moth lacewing, common chuckwalla, banded Gila monster, desert rosy boa, Mojave Fringed-toed lizard, western burrowing owl, Clark's grebe, snowy egret, great egret, osprey, California leaf-nosed bat, cave myotis, pocketed free-tailed bat, big free-tailed bat, and Sonoran desert tortoise. Additional detail on these species can be found in Section D.2.1.1.3.

Additionally, migratory birds as protected under the Migratory Bird Treaty Act and bighorn sheep as managed by the AGFD, BLM, and Kofa NWR are all expected to occur within the vicinity of the Kofa NWR to Colorado River segment of the Proposed Project. Additional detail on these species is presented in Section D.2.1.1.3.

Special Habitat Management Areas Overview

The Kofa NWR to Colorado River segment of the Proposed Project would cross through areas designated as Category II for the Sonoran desert tortoise. Areas where the Proposed Project would pass through Category II in the Kofa NWR to Colorado River segment include approximately 12 miles in the Dome Rock Mountains. Additional detail on this can be found in Section D.2.1.1.4.

D.2.2.4 Palo Verde Valley (Colorado River to Midpoint Substation)

As discussed in Section D.2.1, sensitive plant and wildlife surveys were conducted in California in 2005, which was a high rainfall year. The sensitive and listed plant and wildlife species that have been reported in the ROW, and those that have either a high or a moderate potential, as determined by CNDDB and CNPS searches and literature reviews, to occur within or adjacent to the ROW are discussed below. Those species that have a low potential or are not expected to occur in this segment of the ROW are not discussed in this section, but are presented in Appendix 7. Plant and wildlife species were assessed for their potential to occur within the project area based upon the criteria listed in Section D.2.1.1.3, under Threatened, Endangered, and Sensitive Plant Species.

Plant Communities and Sensitive Habitats

Plant communities in this segment include riparian habitat along the Colorado River and agricultural land throughout the Palo Verde Valley and City of Blythe. The riparian habitat in the proposed ROW west of the Colorado River in California is disturbed and dominated by honey mesquite and invasive salt cedar. Arroweed also occurs along the bank of the Colorado River within the ROW. Intact cottonwood and willow riparian occur along the Colorado River outside the ROW, although a few of these species are present within the proposed ROW. Local occurrences of emergent plant communities that are associated with isolate oxbows of the Colorado River, sloughs, and ponds are present on the California side of the Colorado River. However, there are no major emergent plant or marshland communities within one mile of the proposed location where the Proposed Project would cross the Colorado River.

The agricultural areas in this segment are generally located between MPs E102.3 and E112.6, and consist of scattered residences and fields that are crossed by irrigation canals. These agricultural areas are dominated by what appears to be row crops, hay, cotton, and some fallow fields. The irrigation canals are generally channelized with sparse to fairly dense vegetation along the edges. These vegetated areas tend to be dominated by non-native and weedy species of plants.

This segment transitions from agriculture to desert vegetation communities from MPs E112.6 through E112.8, and rises rapidly in elevation from approximately 250 feet to 325 feet amsl. The area at the base of the slope appears to support some water flow during storm events. The vegetation in this transition area consists primarily of Sonoran desert scrub, but larger shrubs, such as mesquite, also occur in this area. From MP 112.8 through to the proposed Midpoint Substation located at MP E113.8, the vegetation primarily consists of a sparse Sonoran desert scrub community.

Special Status Plant and Wildlife Species

As discussed in Section D.2.1, surveys for sensitive plants were conducted within this segment in 2005. The species with a high or moderate potential to occur are discussed below; however, none of these species were actually observed during the 2005 surveys. Additional details about the following species are presented in Table D.2-4 and D.2-5.

Plant Species

No State or federally listed plant species are known to occur in this segment of the Proposed Project. Three sensitive plant species have a high potential to occur in this segment, including Harwood's milkvetch, foxtail cactus, and Wiggins's cholla. The Harwood's milkvetch, a CNPS List 1B species, is known to occur in the desert scrub between the agricultural areas and the proposed Midpoint Substa-

tion, and was observed during surveys conducted in 2005 (Tetra Tech, 2005). The foxtail cactus and Wiggin's cholla are known to occur in desert scrub habitat, but are not expected to occur in the agricultural areas of this segment. However, foxtail cactus, a federal species of concern, has been documented west of this segment in similar desert scrub habitat. Wiggin's cholla, which is not a federal or State protected species, is known to occur south of the Proposed Project in Imperial County.

Three other sensitive plant species including angel trumpets, desert sand-parsley, and Las Animas colubrine, have a moderate potential to occur within this segment, and are known to occur in Sonoran desert scrub habitats. None of these plants are federal or State special status species, but are designated CNPS 2 species. These plant species are known to occur at various locations within this segment. See Table D.2-4 for additional information.

Wildlife Species

Fishes and Amphibians. One sensitive fish, razorback sucker (*Xyrauchen texanus*), and two sensitive amphibian species, Colorado River toad (*Bufo alvarius*), and Couch's spadefoot toad (*Scaphiopus couchii*), have a high potential to occur along the ROW in this segment. The razorback sucker, a State and federal endangered species and CDFG fully protected species, has a high potential to occur in this segment. Suitable aquatic habitat for this species is present both in the Colorado River and throughout various drainages in the Palo Verde Valley. Known sightings of this species have been recorded close to the location of where I-10 spans the Colorado River (CNDDB, 2005). The Colorado River toad, California special concern species, also has a high potential to occur in the Colorado River and the drainages and channels in this segment. Historical sightings of this species have been documented in the vicinity of the Cities of Blythe, California and Ehrenberg, Arizona. Suitable habitat exists within the Palo Verde Valley for Couch's spadefoot toad, a California special concern species and BLM sensitive species, and several observations have been made of this species within five miles of the project ROW (CNDDB, 2005).

Reptiles. The Mojave fringe-toed lizard, a California special concern species and BLM sensitive species, has a high potential to occur in this segment, but only in the desert scrub habitat located between the agricultural areas and the proposed Midpoint Substation. This species was observed in areas north and northeast of the ROW (Tetra Tech, 2005). Two other reptile species, including the desert tortoise and Colorado Desert fringe-toed lizard, have a moderate potential to occur along the proposed ROW. Desert tortoise, which is a federally and State threatened species is known to occur in areas west of the proposed Midpoint Substation, but has not been documented in this segment and is not expected to occur in the agricultural areas in the Palo Verde Valley. The Colorado Desert fringe-toed lizard, a California special concern species and BLM sensitive species, also has not been documented in this segment during previous surveys, most likely because well-developed sand dunes are not present. However, the habitat located west of the agricultural area, where the soils are sandy and the desert scrub is sparse, would be considered potentially suitable for this species.

Birds. Several federal and State listed, as well as sensitive bird species, are known to occur or have the potential to occur within this segment. The burrowing owl, a California special concern species and BLM sensitive species, was the only sensitive bird species observed in this segment. Several burrowing owls were sighted along the edges of the fields and irrigation canals near the ROW during surveys (ECORP Consulting, Inc, 2005). This species may winter and/or nest in the agricultural areas between the Colorado River and the proposed Midpoint Substation.

Thirteen listed or sensitive bird species have a high potential to occur along the ROW in this segment. The six listed bird species include:

- California black rail
- Yuma clapper rail
- western yellow-billed cuckoo
- elf owl
- Swainson's hawk
- Gila woodpecker
- least Bell's vireo

The California black rail and Yuma clapper rail are both known to utilize freshwater marsh areas along the Colorado River, and have been documented close to the Proposed Project. The habitat located within the ROW along the Colorado River is not suitable because it does not include the cattails and bulrushes that constitute the typical habitat utilized by these species. However, the irrigation canals in the agricultural areas to the west that contain dense patches of cattails and bulrushes could potentially support these species. The western yellow-billed cuckoo, elf owl, and Gila woodpecker all have high potential for occurrence in certain riparian habitats located outside of the ROW along the Colorado River, including riparian habitat associated with large rivers, cottonwood-willow and mesquite riparian zones, and desert riparian habitats, respectively. The least Bell's vireo, which has been documented less than five miles from the Proposed Project, also nests in riparian areas. However, similar to the two rail species above, the riparian habitat along the Colorado River within the ROW is not suitable nesting habitat for the least Bell's vireo. The irrigation canals within the agricultural areas also do not appear to be suitable nesting habitat because there is no dense riparian vegetation.

The seven sensitive bird species that have a high potential to occur include:

- ferruginous hawk
- Bendire's thrasher
- Le Conte's thrasher
- vermillion flycatcher
- Crissal thrasher
- Sonoran yellow warbler
- summer tanager

The ferruginous hawk is known to winter in the desert areas of southern California. This species would not be expected to nest within this segment because of the lack of suitable nesting areas; however it would be expected to forage in the area. Bendire's thrasher has been documented less than five miles from the proposed ROW, even though the only suitable habitat for this species exists west of the agricultural areas. The desert scrub areas in this segment provide suitable habitat for Le Conte's thrasher, which also has been documented close to the Proposed Project. The vermillion flycatcher is known to nest in desert riparian habitat near agricultural areas, and suitable habitat exists within this segment in areas adjacent to the ROW near the Colorado River. The Crissal thrasher inhabits desert wash and desert riparian habitat, and has limited suitable habitat located adjacent to the ROW along the Colorado River. The Sonoran yellow warbler and summer tanger have high potential to occur in the riparian habitat along the Colorado River outside of the proposed ROW.

The following three listed and four sensitive species of birds have a moderate potential to occur along the ROW:

- peregrine falcon
- southwestern willow flycatcher
- willow flycatcher
- white-faced ibis
- mountain plover
- brown-crested flycatcher
- yellow-breasted chat

The peregrine falcon may forage within this segment, but suitable nesting habitat does not occur within this portion of the Proposed Project. The willow flycatcher and southwestern willow flycatcher are typically found in riparian habitats; however the habitat along the Colorado River within the ROW would not be suitable nesting habitat. Suitable nesting habitat does, however, occur outside of the proposed

ROW. The white-faced ibis inhabits marsh areas and shallow water, and may occur along the fringes of the Colorado River or in the agricultural canals where cattails have created dense thickets. The brown-crested flycatcher and yellow-breasted chat both utilize desert riparian habitat along the Colorado River, but the habitat within the ROW would not be suitable nesting habitat. The mountain plover frequents cropland and desert habitats, and may occur within the ROW along this entire segment.

Raptors are known to nest along this portion of the Proposed Project. This species has been documented in the project area and is known to nest in the existing towers located along the DPV1 ROW southwest of the Midpoint Substation between the agricultural areas and the proposed Midpoint Substation (Tetra Tech, 2005).

Mammals. The following five species of bats and one mammal species have a high potential to occur in or adjacent to the proposed ROW:

- Townsend's big-eared bat
- cave myotis
- California leaf-nosed bat
- Arizona myotis
- Yuma myotis
- American badger

These bats are typically associated with desert habitats, cliffs or rock outcrops, and areas where water is available. These species would be expected to forage in this portion of the Proposed Project, but suitable roosting areas are likely limited due to the lack of rocky outcrops. The badger is associated with open desert habitats and could potentially occur in the desert scrub located west of the agricultural areas.

The following six species of bats and three mammal species have a moderate potential to occur in this segment of the Proposed Project:

- pallid bat
- western mastiff bat
- pocketed free-tailed bat
- big free-tailed bat
- fringed myotis
- western yellow bat
- pallid San Diego pocket mouse
- Colorado River cotton rat

These bat species have a high potential to occur due to the presence of suitable foraging habitat. For a majority of these bat and mammal species, the most suitable habitat in this segment occurs in the western portion where desert scrub habitat is present. However, several of the bats would be expected to forage in the agricultural areas, as would the Colorado River cotton rat.

Special Habitat Management Areas Overview

The Palo Verde Valley portion of the transmission line route traverses both the CDCA and NECO Plan area. This segment is primarily used for agriculture and it does not contain any management areas identified in these plans that are directed toward the preservation of species or habitats, or the management of wild horses and burros. This segment of the Proposed Project does not traverse critical habitat for the desert tortoise.

D.2.2.5 Midpoint Substation

This section of the Proposed Project contains the same species identified below in Section D.2.2.6, Midpoint Substation to Cactus City Rest Area.

D.2.2.6 Midpoint Substation to Cactus City Rest Area

Plant Communities and Sensitive Habitats

Plant communities within this segment of the Proposed Project primarily consist of creosote bush scrub habitat and dry desert washes dominated by the Sonoran desert scrub community. The spacing of the desert scrub is sparse, but the density of shrubs increases as the project ROW approaches the base of the hills and mountains. The composition of the vegetation community also varies across this segment, with some areas increasing in plant density and/or diversity, as the ROW progresses westward. White bursage becomes more common in upper bajadas, whereas scattered desert dunes occur near MP E116 and become more common between MPs E120.4 and E123. This segment is also marked by numerous desert washes that support desert scrub plant species and larger shrubs, such as honey mesquite, blue palo verde, and ironwood.

The Chuckwalla and Cottonwood Mountains, located adjacent to the proposed ROW, support scattered occurrences of Desert Fan Palm Oasis Woodland, a sensitive plant community. Several occurrences of this community are located within 10 miles of the ROW; however no occurrences actually exist within the ROW.

Special Status Plant and Wildlife Species

As discussed in Section D.2.1, surveys for sensitive plants were conducted within this segment in 2005. The species with a high or moderate potential to occur, which are discussed below, were not observed during the 2005 surveys. Additional details about the following species are presented in Table D.2-4 and D.2-5.

Plant Species

Two sensitive species, including Harwood's milkvetch and foxtail cactus were observed during surveys of the project area. Harwood's milkvetch, a CNPS List 1B species, was found to be relatively common during plant surveys conducted in 2005, and was found in high numbers between the proposed Midpoint Substation and approximately MP E119, and in lower numbers between Wiley's Well Road and Graham Pass Road (Tetra Tech, 2005). The foxtail cactus, a federal species of concern and also designated as a CNPS List 4 species, was observed during surveys in 2003 and 2005 between MP E186 and the Cactus City Rest Area (Environmental Planning Group, 2003 and 2005). This species is also known to occur from near Alligator Rock west to near Red Cloud Mine Road.

Nine sensitive plant species have a high potential to occur in this segment, including:

- foxtail cactus
- Orocopia sage
- desert sand-parsley
- ayenia
- crucifixion thorn
- glandular ditaxis
- California ditaxis
- desert spike-moss
- Cove's cassia

Foxtail cactus, a federal species of concern, is known to occur approximately between MPs E156 and E164, while Orocopia sage, designated by CNPS as a List 1B species, is known to occur three miles southeast of Desert Center between MPs E149 and E155. The remaining seven sensitive plant species are designated by the CNPS as either List 2 or 3 species. See Table D.2-4 for more detail about these species and the known occurrences in the project area.

Six sensitive plant species have a moderate potential to occur along this segment, including:

- angel trumpets
- Abram's spurge
- Las Animas colubrine
- Spearleaf
- Latimer's woodland gilia
- Mecca-aster

Two species, the Latimer's woodland gilia and Mecca-aster, have been designated by CNPS as List 1B species. Latimer's woodland gilia is known to occur along Box Canyon Road between MPs E180 and E186. Mecca aster has a moderate potential to occur along the northern foothills of the Orocopia Mountains and Mecca Hills because suitable Sonoran desert scrub habitat exists in these areas. The remaining four plant species are CNPS List 2 species, and have a moderate potential to occur within this segment due to the existence of suitable habitat and elevation requirements. See Table D.2-4 for more detail about these species and the known occurrences in the project area.

Wildlife Species

Fishes and Amphibians. Sensitive fishes would not be expected to occur in this segment of the Proposed Project due to limited availability of water resources. Sensitive amphibians have a low potential to occur and are presented in more detail in Appendix 7.

Reptiles. One listed and two sensitive species of reptile have been documented within this segment. The desert tortoise is listed as a federal and State threatened species. Live tortoises as well as signs, including scattered burrows, carcasses, and scat, were found in various locations along the ROW. There are numerous desert washes present between MP E151 and MP E188.2 that makes this area more diverse than those areas farther to the east, and likely contributes to the higher numbers of tortoises in this portion of the segment. In addition, the Mojave fringe-toed lizard and Colorado Desert fringe-toed lizard, both of which are California special concern species and BLM sensitive species, have been reported within this segment. The Mojave fringe-toed lizard was found in areas with sandy soils and in the well-developed sand dunes that occur along the ROW, including from the proposed Midpoint Substation to approximately MP E126 (Tetra Tech, 2005). The Colorado Desert fringe-toed lizard was observed west of Wiley's Well Road in 2003 (Environmental Planning Group, 2003).

Three BLM sensitive reptile species, including the banded gila monster and flat-tailed horned lizard, which are also California special concern species, and rosy boa (*Charina trivirgata*), have a moderate potential to occur along the ROW because the habitat is suitable. There are no reported occurrences of these species within five miles of the ROW, nor did previous surveys document their presence along the ROW.

Birds. Three California special concern species of birds, including Le Conte's Thrasher, which is also a BLM sensitive species, loggerhead shrike, and prairie falcon, have been documented in desert scrub habitat within this segment (Tetra Tech and Environmental Planning Group, 2005). Le Conte's thrasher was observed at several locations between the proposed Midpoint Substation and Wiley's Well Road. The loggerhead shrike was reported at numerous locations throughout this segment. The prairie falcon was sighted just south of the Cottonwood Mountains and north of the Mecca Hills.

An additional three California special concern bird species, including ferruginous hawk and Bendire's thrasher, which are also BLM sensitive species, and Crissal thrasher, have a high potential to occur in or adjacent to the ROW. The ferruginous hawk would be expected to winter and forage in the proposed ROW. Both thrasher species frequent desert habitats and their ranges overlap the ROW within this segment.

Two sensitive bird species, both of which are California special concern species, have a moderate potential to occur along this segment. They include mountain plover, which is known to frequent desert habitats, and vermillion flycatcher, which may be found in desert wash habitat.

In 2005, 13 red-tailed hawk nests were reported on existing towers in the ROW (Tetra Tech, 2005). In addition, four locations of raptor nests of unknown species were observed, and 28 additional locations of stick nests of unknown species were documented (Tetra Tech, 2005).

Mammals. Three California special concern species of bats, including pallid bat, western mastiff bat, and pocketed free-tailed bat, have a high potential to occur along the proposed ROW. The pallid bat and western mastiff bat are also BLM sensitive species. All of these bat species may roost in the caves and rock crevices in the hills and mountains adjacent to the ROW, and they may forage in the desert scrub and desert washes. In addition, the San Diego pocket mouse, a California special concern species, may also occur in the desert scrub and desert washes in this segment.

The following seven species of sensitive bats have a moderate potential to occur along the ROW:

- Townsend's big-eared bat
- spotted bat
- cave myotis
- California leaf-nosed bat
- Arizona myotis
- big free-tailed bat
- fringed myotis

The desert scrub and desert washes within this segment represent suitable foraging habitat for these species, and the surrounding hills and mountains likely contain suitable roosting habitat. These species have not been reported within five miles of the ROW, but the habitat within this segment is considered suitable.

The Palm Springs round-tailed ground squirrel, a California special concern species, may potentially occur in the far western portion of this segment. The American badger, a California special concern species, also has a moderate potential to occur because suitable habitat is present.

Special Habitat Management Areas Overview

This segment of the Proposed Project traverses areas covered by both the CDCA and NECO Plans. In addition, the Draft CVMSHCP addresses the portion of the route west of the community of Desert Center to the Cactus City Rest Area. Management areas identified in these plans and other areas designated as Reserves, Natural Areas, Conservation Areas, or Critical Habitat located within or adjacent to this segment are described below.

Chocolate/Mule Mountains Herd Management Area

The Chocolate/Mule Mountains Herd Management Area (HMA) is located to the south-southwest and west of the City of Blythe, and generally encompasses the portions of the Mule Mountains and Little Chuckwalla Mountains that lie west of the proposed Midpoint Substation. The proposed ROW runs just north of the Chocolate/Mule Mountains HMA.

Chuckwalla Valley Dune Thicket ACEC

The Chuckwalla Valley Dune Thicket ACEC is located just west of Wiley's Well Road between MPs 124.9 and 126.2. The proposed ROW bisects the center of this ACEC. Five existing DPV1 towers appear to be within the boundaries of this ACEC, and five proposed DPV2 tower may fall within this ACEC.

Chuckwalla DWMA ACEC

The Chuckwalla DWMA ACEC encompasses the Chuckwalla Mountains and portions of the Chuckwalla Valley and Orocopia Mountains. This DWMA encompasses the areas located south of I-10 from Wiley's Well Road and the Chuckwalla Valley Dune Thicket ACEC to near the Cactus City Rest Area. In addition, a portion of the DWMA in this segment lies north of I-10 from just west of the community of Desert Center to near the Cactus City Rest Area. The existing DPV1 transmission line and the route of the Proposed Project both traverse through portions of this DWMA.

Eagle Mountains HMP

The Eagle Mountains are located just west of the community of Desert Center and north of I-10, from approximately MP E160 to MP E169.5. HMPs prescribe management for species and habitats, but primarily focus on the management actions for burro deer and bighorn sheep. An HMP has yet to be developed for this area. The Eagle Mountains were identified as bighorn sheep habitat in the CDCA.

McCoy Wash

McCoy Wash is located in the McCoy Mountains are located north of I-10 and northwest of the City of Blythe, approximately three to six miles north of the route of the Proposed Project (between MPs E107.2 to E124.7). This area was identified as an HMP in the CDCA Plan.

Orocopia Mountains and Chuckwalla Mountains Native Ungulate HMPs

The Orocopia and Chuckwalla Mountains Native Ungulate HMPs, which were identified in the CDCA Plan, cover the portions of the Chuckwalla Mountains and Orocopia Mountains between the Little Chuckwalla Mountains to near the Cactus City Rest Area (MPs E138 to E188.2). A majority of these areas were incorporated into the Chuckwalla DWMA as part of the NECO Plan, and are managed for the bighorn sheep.

Mecca Hills

The Mecca Hills, which have been identified as a Riverside County Natural Area, are located south of I-10 and the Cactus City Rest Area, between approximately MPs E185 to E188.2. The area is considered unique for its geological features, but bighorn sheep are also known to occur in the area.

Draft Coachella Valley MSHCP

The area within this segment that is addressed by the Draft CVMSHCP extends from just west of the community of Desert Center (at MP E155.8) to the Cactus City Rest Area. This area includes three Conservation Areas, including the Mecca Hills/Orocopia Mountains, Desert Tortoise and Linkage, and Joshua Tree National Park, that have been proposed under the Draft CVMSHCP.

The existing DPV1 transmission line and the Proposed Project are both located within the proposed Desert Tortoise and Linkage Conservation Area, which is located between approximately MPs E154 and E197). This Conservation Area consists of 90,000 acres, and encompasses most of the lands between the Mecca Hills, Orocopia Mountains Wildernesses, and Joshua Tree National Park in the eastern portion of the CVMSHCP area. Core Habitat is present for the desert tortoise and the habitat for the Mecca aster and Orocopia sage is contiguous with that in the Mecca Hills/Orocopia Mountains Conservation Area located to the south. This area contains Other Conserved Habitat for Le Conte's thrasher, desert tortoise, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse.

The Mecca Hills/Orocopia Mountains Conservation Area is located south of the Proposed Project from approximately MPs E154 to E197. This Conservation Area contains 112,480 acres and consists predominantly of the Mecca Hills Wilderness and the Orocopia Mountains Wilderness. Core Habitat for both the Mecca aster and Orocopia sage occurs in this Conservation Area. The desert tortoise habitat in this area, a portion of which has been designated as Critical Habitat, is contiguous with the habitat in the Desert Tortoise and Linkage Conservation Area located immediately to the north. This Conservation Area contains suitable migration and breeding habitat for riparian bird species covered by the CVMSHCP. This area contains Other Conserved Habitat for Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and southern yellow bat.

The Joshua Tree National Park Conservation Area contains 161,290 acres, and is located from less than one mile to almost three miles north of I-10 from MPs E200 to E211. It encompasses those parts of Joshua Tree National Park that provide habitat for the desert tortoise (a portion of which has been designated as Critical Habitat), riparian bird species, southern yellow bat, and potential habitat for the gray vireo, and includes most of the National Park land in the CVMSHCP area. A portion of this Conservation Area is also in the NECO Plan Area. This Conservation Area provides Core Habitat for the desert tortoise, contains suitable migration and breeding habitat for riparian bird species covered by the CVMSHCP, and contains Other Conserved Habitat for the southern yellow bat. Potential habitat for the gray vireo and Other Conserved Habitat for Coachella Valley milkvetch, desert tortoise, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel and Palm Springs pocket mouse occur in this area.

Joshua Tree National Park

Joshua Tree National Park is located north of I-10 and encompasses portions of the Eagle, Cottonwood, and Little San Bernardino Mountains. The boundary of the Park ranges from less than one mile to three miles north of the existing DPV1 transmission lines and the Proposed Project and/or I-10 between MPs E159 and E211. Desert tortoise and bighorn sheep are actively managed within the Park under the direction of the GMP.

Desert Tortoise Critical Habitat

Designated Critical Habitat for the desert tortoise extends from just east of Wiley's Well Road (at MP E121.7) to just east of the Cactus City Rest Area. The existing DPV1 transmission line and the Proposed Project traverse Critical Habitat from MPs E121.7 to E188.

D.2.2.7 Cactus City Rest Area to Devers Substation

As discussed in Section D.2.1, sensitive plant surveys were conducted in this segment of the ROW in 2005 during a high rainfall year when growth conditions for sensitive plants were good. Those species that were observed during the 2005 surveys, as well as the species with a high or moderate potential to occur are described below. Over 20 plants were documented along the proposed route between MPs E188 and E228 (Greystone, 2005). However, the species with a high or moderate potential to occur were not observed during the 2005 surveys. Additional details about the following species are presented in Table D.2-4 and D.2-5.

Plant Communities and Sensitive Habitats

The vegetation communities in Cactus City Rest Area to Devers Substation segment of the Proposed Project occur as a mosaic of undisturbed habitats, agricultural lands, and developed areas. Much of the Coachella Valley between the City of Indio and the Devers Substation has been developed or is in the

process of being developed. This development has removed native plant communities and altered the transport of aeolian (blow) sands across portions of the valley. The dominant vegetation community across much of this segment is Sonoran creosote bush scrub, but the Proposed Project also would cross numerous desert washes containing dry desert wash woodlands. Along the base of the Indio Hills, the Proposed Project traverses patches of stabilized desert sand fields, mesquite hummocks, stabilized sand fields, stabilized desert dunes, ephemeral sand fields, and Sonoran mixed woody and succulent scrub that are interspersed with areas of creosote bush scrub. Most of the proposed ROW between the City of Indio and Devers Substation are considered important sand source and transport areas. A desert fan palm oasis is present north of the Proposed Project near Thousand Palms Canyon. Between MPs E205.5 and E206.4 and in areas just east of Devers Substation, the Proposed Project would traverse areas that are either developed or disturbed by human activities. Agricultural areas are present between MPs E208.1 and E208.7.

Three sensitive plant communities occur in areas within or in the vicinity of the proposed ROW; however none of these communities would be traversed by this segment of the Proposed Project. The Indio Hills support approximately 20 locations of the Desert Fan Palm Oasis Woodland communities (CNDDB, 2005). These communities generally occur along the San Andreas Fault as it passes along the southern border of the Indio Hills; however this community can also be found in some drainages and seeps occurring throughout the Indio Hills. The other two sensitive communities, mesquite bosque and Mojave Riparian Forest, are both threatened and located northwest of the Devers Substation. The mesquite bosque community occurs approximately six miles north of the Highway 62 and I-10 interchange, and the Mojave Riparian Forest community occurs approximately nine miles north of interchange (CNDDB, 2005).

Special Status Plant and Wildlife Species

Plant Species

One listed plant species and eight sensitive plant species, including the following species, have a high potential to occur along this segment of the ROW:

- Coachella Valley milkvetch
- flat-seeded spurge
- little San Bernardino Mountains gilia
- creamy blazing star
- foxtail cactus
- Arizona spurge
- California ditaxis
- cliff spurge
- slender woolly-heads

Coachella Valley milkvetch, a federally endangered and CNPS List 1B species, was observed between Cactus City Rest Area and the Devers Substation in 2005 (Environmental Planning Group and Greystone, 2005). There is a high potential that this species may occur at other locations along this segment, and because it typically grows in areas that have been disturbed, it is likely that the Coachella Valley milkvetch could appear in other areas following future disturbances. Flat-seeded spurge, little San Bernardino Mountains gilia, and creamy blazing star are all designated as CNPS List 1B species, and foxtail cactus is a federal special concern species. Flat-seeded spurge has a high potential to occur in the dune fields between MPs E193 and E200. Foxtail cactus has been documented east of Cactus City Rest Area in similar habitat to that occurring in this segment; however it was not observed in this segment in 2005. The other four sensitive plant species have been included on either List 2 or 3 by the CNPS. See Table D.2-4 for more detail about these species and the known occurrences in the project area.

The following seven sensitive plants have a moderate potential to occur in this segment:

- chaparral sand-verbena
- angel trumpets
- desert sand-parsley
- Parish's brittlescale
- Latimer's woodland gilia
- purple stemodia
- Mecca-aster

None of these species were observed in this segment during the 2005 sensitive plant surveys. Four of these plants, including chaparral san-verbena, Parish's brittlescale, Latimer's woodland gilia, and Mecca aster, are CNPS List 1B species and are known to occur between approximately five to seven miles from the Proposed Project. Although Parish's brittlescale is also known to occur within a mile of the City of Palm Springs along Highway 111 it was not observed during the surveys. Mecca aster has a moderate potential to occur along the northern foothills of the Orocopia mountains and Mecca Hills because suitable Sonoran desert scrub habitat is present. The other three sensitive plants are designated as List 2 species by the CNPS.

Wildlife Species

Invertebrates. The Coachella Valley giant sand-treader cricket and Coachella Valley Jerusalem cricket both have high potential to occur in this segment of the ROW. Neither species is considered a special status species; however both are proposed covered species under the CVMSHCP. Both of these crickets utilize active sand dunes and ephemeral sand fields, which are scattered throughout this segment from near Dillon Road (MP E200) to the Devers Substation.

Fishes and Amphibians. This segment of the ROW is not expected to include any sensitive species of fishes due to the lack of suitable aquatic habitat. However, the arroyo toad, a federally endangered species and California special concern species, has moderate potential for occurrence. The arroyo toad is known to occur in desert riparian and desert wash habitat but this species has very specialized habitat requirements. The habitat requirements include low turbidity, absence of predatory fishes, exposed sidebar pool complexes, and stable sandy terraces with dampened banks possessing some emergent vegetation or algal mats. Suitable habitat for the arroyo toad is not located in this segment, but it has been reported in drainages to the west of this segment.

Reptiles. Two listed species of reptiles, the desert tortoise and Coachella Valley fringe-toed lizard, are present in this segment. The desert tortoise, a federal and State listed threatened species, was observed from near the Cactus City Rest Area (MP E188.2) west to approximately MP E196, and near MP E198.6 (Environmental Planning Group, 2003 and Alice Karl and Associates, 2005). Although this latter location appears to be isolated because it is greater than 2.5 miles from the other documented locations (Alice Karl and Associates, 2005). The Coachella Valley fringe-toed lizard, a federally threatened and State endangered species, is present within the Coachella Valley Preserve, and it is likely present in other suitable habitat areas that occur within and adjacent to the ROW. Surveys identified suitable blow sand habitat for Coachella Valley fringe-toed lizard at various locations along the ROW, including between MPs E219.2 and E220 and MPs E224.5 and E225.2 (Greystone, 2005).

Four sensitive reptile species, including three lizards, the flat-tailed horned lizard, Mojave fringe-toed lizard, rosy boa, and one snake, the northern red-diamond rattlesnake, have a high potential to occur in this segment. These species are all California special concern species, except the rosy boa, which is a BLM sensitive species. The flat-tailed horned lizard and the Mojave Fringe-toed lizard are also both BLM sensitive species. Flat-tailed horned lizard has a high potential to occur in fine sand habitat, and the Mojave fringe-toed lizard in sandy soils near the eastern portion of this segment, especially east of

the Cactus City Rest Area. The rosy boa likely occurs in the rockier areas within this segment, while the northern red-diamond rattlesnake is most likely to occur in the westernmost portion of this segment. The two-striped garter snake has been reported within 5 miles west of the Devers Substation. Suitable habitat for this species is not present within the ROW between the Cactus City Rest Area and Devers Substation.

Birds. Two California special concern species of birds, the burrowing owl and California horned lark, have been documented in this segment. Four known locations for burrowing owl, which is also a BLM sensitive species, have been documented in the proposed Willow Hole Conservation Area (Coachella Valley Mountains Conservancy, 2004). This species likely occurs in other suitable habitat areas within this segment. The California horned lark was documented within the Coachella Valley Preserve in 2003, but it typically inhabits grasslands and open habitats so it may potentially occur along most of this segment (Environmental Planning Group, 2003).

Three sensitive bird species have high potential to occur within this segment. These species, all of which are California special concern and BLM sensitive species, include golden eagle, ferruginous hawk, and Le Conte's thrasher. The golden eagle, also a CDFG fully protected species, likely forages within and adjacent to the ROW, and it may nest in the rocky areas located adjacent to the ROW. The ferruginous hawk likely does not nest within or adjacent to the ROW, but it likely forages in this area. Le Conte's thrasher has a high potential for occurrence in those portions of the ROW that support desert scrub habitat.

Two California special concern bird species, mountain plover and loggerhead shrike, have a moderate potential to occur within this segment. The desert scrub habitat in this portion of the ROW is considered potential habitat for the mountain plover, while the desert scrub habitat between Cactus City Rest Area and Devers Substation is suitable for the loggerhead shrike.

The biological surveys conducted during 2003 reported numerous stick nests on existing tower structures between the Cactus City Rest Area and Devers Substation. The most common inhabitants of nests on transmission towers are ravens or red-tailed hawks; however, it is unknown if one of these nests belonged to individuals of one of these species.

Mammals. Two California special concern mammal species, Palm Springs round-tailed ground squirrel and Palm Springs pocket mouse, have a high potential to occur within this segment. The Palm Springs round-tailed ground squirrel, also a federal candidate species, is known to occur north of I-10 in the vicinity of the proposed route along Dillon Road, and in the vicinity of Jefferson Street northwest of the City of Indio (Environmental Planning Group, December 2003). Other populations are scattered around the valley. The Palm Springs pocket mouse is known from several dozen locations throughout the Coachella Valley. Suitable habitat for this subspecies occurs along the ROW from the City of Coachella, continuously to the Devers Substation (Environmental Planning Group, 2003).

Twelve sensitive species, including eight bat species and four mammal species, have a moderate potential to occur along this segment of the ROW, including:

- pallid bat
- Townsend's big-eared bat
- spotted bat
- western mastiff bat
- California leaf-nosed bat
- pocketed free-tailed bat
- big free-tailed bat
- fringed myotis
- San Diego black-tailed jackrabbit
- pallid San Diego pocket mouse
- Los Angeles pocket mouse
- American badger

All bats, except for the fringed myotis, which is a BLM sensitive species, are California special concern species. The pallid bat, Townsend's big-eared bat, spotted bat, and western mastiff bat are also BLM sensitive species. The desert scrub and desert washes represent suitable foraging habitat for the bat species, and the surrounding hills and mountains likely contain suitable roosting habitat. Although these eight bat species have not been reported within five miles of this segment, the habitat is considered suitable. All four mammals are California special concern species, and are typically found in desert scrub habitats. Most likely these species occur in the undisturbed portions of this segment.

Special Habitat Management Areas Overview

The portion of the proposed route between the Cactus City Rest Area and Devers Substation lies within the areas covered by the CDCA and NECO Plans, as well as the Draft CVMSHCP. Management areas identified in these plans and other areas designated as Reserves, Natural Areas, or Critical Habitat located within or adjacent to this segment are described below.

CDCA Plan. The management areas identified in the CDCA Plan include the HMP for CVFTL and the Coachella Valley Preserve ACEC, which is discussed below and under the Draft CVMSHCP Thousand Palms Conservation Area. The HMP for CVFTL encompassed a checkerboard pattern of BLM lands located north of I-10 between MPs E209.3 to E215. The HMP was directed at the protection and management of the blow sands areas and known habitat for the CVFTL that were present on BLM lands. Much of this area has been incorporated into the Coachella Valley Preserve, which includes portions of the Willow Hole, Edom Hill, and Thousand Palms Conservation Areas.

Coachella Valley Preserve. The Proposed Project would traverse the Coachella Valley Preserve between MPs E209.3 and E215. As described under the Thousand Palms Conservation Area below, the Thousand Palms portion of the Preserve is located in this Conservation Area.

Draft Coachella Valley MSHCP. The area within this segment that is covered by the Draft CVMSHCP extends from the Cactus City Rest Area (MP 188.2) to Devers Substation (MP E228). The proposed Conservation Areas that are located within or adjacent to this segment include East Indio Hills, Indio Hills Palms, Thousand Palms, Edom Hill, and Willow Hole. These Conservation Areas are described below.

The East Indio Hills Conservation Area consists of 4,230 acres, and includes portions of the Indio Hills east of the Indio Hills Palms Conservation Area and the alluvial fan area between the toe of the slope on the south side of the hills and the flood control berm north of the Coachella Canal. The portion of this Conservation Area located east of Dillon Road is also in the NECO Plan Area. This Conservation Area provides Core Habitat for the Mecca aster and contains Other Conserved Habitat for Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, desert tortoise, flat-tailed horned lizard, crissal thrasher, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. In addition, this area contains suitable migration and breeding habitat for riparian bird species. The southern boundary of this Conservation Area borders the northern boundaries of the Cities of Coachella and Indio. MP E198.8 to E208.4 of the Proposed Project would traverse the southern portion of this Conservation Area. The native habitats present in and adjacent to the proposed ROW include Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, mesquite hummocks, stabilized shielded sand fields, stabilized desert sand fields, active desert dunes, desert saltbush scrub, and desert dry wash woodland.

The Indio Hills Palms Conservation Area consists of 6,230 acres, and includes portions of the Indio Hills east of the existing CVFTL Preserve, as well as desert fan palm oases and mesquite hummock areas along the base of the Indio Hills that are associated with the San Andreas Fault. It is bounded on

the west and northwest by the Thousand Palms Conservation Area and on the south and southeast by the East Indio Hills Conservation Area. The southern boundary of this Conservation Area lies approximately three-quarters of a mile north of the borders of the City of Indio between MPs E202.5 and E207.4. The Proposed Project would traverse this Conservation Area between MPs E203.8 and E207.4. This Conservation Area also contains Other Conserved Habitat for crissal thrasher, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and southern yellow bat. The area also contains suitable migration and breeding habitat for all riparian species covered by the Draft CVMSHCP. The native habitats present in and adjacent to the ROW include Sonoran creosote bush scrub, desert fan palm oasis woodland, Sonoran mixed woody and succulent scrub, mesquite hummocks, and desert dry wash woodland.

The Thousand Palms Conservation Area (25,890 acres) includes the existing CVFTL Preserve and the sand source/transport area to the west of it. Several hundred acres immediately east of the existing preserve, below Pushawalla Canyon, are also included in this Conservation Area as additional habitat for some of the species found on the preserve. The southeastern portion of this Conservation Area is located within a half mile north of the I-10 freeway near MP E211 and the Conservation Area generally lies between MPs E207.4 and E213.3. The Proposed Project would traverse this Conservation Area between MPs E209.5 and E213.3. This Conservation Area constitutes the largest un-fragmented habitat area on the Coachella Valley floor. Core Habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket (easternmost viable populations for both of these species), Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and Mecca aster is included in this Conservation Area. Le Conte's thrasher and burrowing owl occur in this Conservation Area. The mesquite hummocks, desert dry wash woodland, and desert fan palm oasis woodland areas contain suitable migration and breeding habitat for the riparian bird species covered by the Draft CVMSHCP. The desert fan palm oasis woodlands provide the largest amount of natural habitat for the southern yellow bat in the CVMSHCP Area. The existing preserve contains a refugium for the desert pupfish. The native habitats present in and adjacent to the ROW include active desert dunes, active sand fields, Sonoran creosote bush scrub, desert fan palm oasis woodland, Sonoran cottonwood-willow riparian forest, Sonoran mixed woody and succulent scrub, mesquite hummocks, and desert dry wash woodland.

The Edom Hill Conservation Area (4,070 acres) extends northward from the Indio Hills to encompass an unnamed wash that flows out of the Indio Hills in a southwesterly direction to the existing Willow Hole Preserve. This Conservation Area does not provide Core Habitat for any of the species covered under the Draft CVMSHCP. But, it does contain Other Conserved Habitat for Coachella Valley milkvetch, Mecca aster, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. In addition, it also provides habitat for Le Conte's thrasher and burrowing owl. The patches of habitat in the Edom Hill Conservation Area are important for maintaining connectivity between the Willow Hole Conservation Area and the Thousand Palms Conservation Area. The proposed ROW would be located approximately one-half mile south of the southern boundary of this Conservation Area between MPs E213.3 and E221.3. The native habitats that occur in this Conservation Area include active desert sand fields, stabilized and partially stabilized desert sand fields, Sonoran creosote bush scrub, and Sonoran mixed woody and succulent scrub.

The Willow Hole Conservation Area consists of 5,770 acres, and includes portions of the Mission Creek flood control channel and Morongo Wash. This conservation area also includes the Mission Creek and Morongo Wash sand depositional areas and Aeolian sand transport areas between Mission Creek and Flattop Mountain. The blow sand habitat areas along San Andreas Fault and the Willow Hole Preserve

are also included in this Conservation Area. It lies between the Upper Mission Creek/Big Morongo Canyon Conservation Area, the Long Canyon Conservation Area, and the Edom Hill Conservation Area. It is connected to the Whitewater Floodplain Conservation Area by culverts under the I-10 freeway. The ROW crosses the Willow Hole Conservation Area between MPs E218.6 and E223.6. This Conservation Area contains Core Habitat for the Coachella Valley milkvetch, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. In addition, the area also contains suitable migration and breeding habitat for riparian species covered by the CVMSHCP. Other Conserved Habitat for Coachella Valley milkvetch, desert tortoise, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, crissal thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, southern yellow bat, and little San Bernardino mountains linanthus. Four known locations for burrowing owl have been documented in this Conservation Area. The native habitats that occur in this Conservation Area include active desert sand fields, stabilized and partially stabilized desert dunes and desert sand fields, ephemeral desert sand fields, mesquite hummocks, Sonoran creosote bush scrub, desert saltbush scrub, desert fan palm oasis woodland, and Sonoran mixed woody and succulent scrub. This Conservation Area contains 93 percent of the occurrence of stabilized and partially stabilized desert dunes in the CVMSHCP Area.

Coachella Valley Fringe-Toed Lizard Critical Habitat. Designated Critical Habitat for the CVFTL is present in a portion of the Coachella Valley Preserve and Thousand Palms Conservation Area. The Proposed Project would traverse Critical Habitat for the CVFTL between MPs E209.3 and E215.

D.2.3 Environmental Setting for the Proposed Project – West of Devers

D.2.3.1 Devers Substation to East Border of Banning

Plant Communities and Sensitive Habitats

Plant communities within this segment include Sonoran of creosote bush scrub, Sonoran mixed woody and succulent scrub, and brittlebush scrub, saltbush scrub, catclaw acacia, and catclaw acacia/grassland. Windfarms and scattered residential properties between the Devers Substation and Whitewater River have resulted in disturbances to the creosote bush scrub, and mixed woody and succulent scrub habitats in this area. Whitewater River, at the location where the Proposed Project would cross (between MPs W3.2 and W3.5), is a deep, cobble-bottomed gorge with steep banks. Sandbar willow is present but sparse, and water is present most of the year. The floodplain of Whitewater River is considered a sand source and transport area to other areas downstream. It is also considered an important linkage to other habitat areas located south of I-10. The Proposed Project would also traverse large desert washes flowing from Cottonwood and Stubbe Canyons between MPs W6.2 and W6.3 and MPs W6.9 and W7.1, respectively. Additional desert washes are crossed near MPs W9.0, W9.4, W10.3, W11.2, and W12.0. Between Whitewater River and the City of Cabazon, the Proposed Project would traverse creosote bush scrub, mixed woody and succulent scrub, and dry desert wash woodlands. These areas are also considered important sand transport and source areas located south of I-10.

Developed areas, consisting of scattered residences and/or commercial areas, are present between MPs W6.3 and W6.8, MPs W8.0 and W8.3, and MPs W13.7 and W14.2. The native vegetation communities in these areas have been removed or disturbed. Disturbed vegetation, consisting of ruderal and non-native grasslands, is present between MPs W13.2 and W13.7 and MPs W14.2 and W14.3.

Special Status Plant and Wildlife Species

Plant Species

One sensitive plant species, the white-bracted spineflower, a CNPS List 1B species, was documented within the segment in three occurrences at the eastern end of the segment between the Community of Cabazon and Whitewater River (between MPs W11 and W14) (BioResource, 2003).

One listed plant species, Mojave tarplant, has a high potential to occur in this segment. Mojave tarplant, a federal species of concern, State endangered species, and CNPS List 1B species, is typically found in chaparral, coastal scrub, and mesic riparian scrub habitats at elevations ranging from 640 to 1,600 meters. This species is known to occur on the north-facing slopes of the San Jacinto Mountains near the Community of Cabazon and from the San Gorgonio River near the City of Banning.

The following seven sensitive plant species have a high potential to occur in or adjacent to the ROW this segment:

- chaparral sand-verbena
- Yucaipa onion
- Jaeger's milkvetch
- little San Bernardino Mountains gilia
- Parry's spineflower
- cliff spurge
- slender woolly-heads

Four of these species, including the chaparral sand-verbena, Yucaipa onion, Jaeger's milkvetch, and little San Bernardino Mountains gilia, are designated as CNPS List 1B species. Chaparral sand verbena is known to occur between MPs W2 and W4 and may also occur in the desert dunes in the eastern part of the segment, whereas Yucaipa onion and Jaeger's milkvetch have a high potential to occur within suitable chaparral habitat in the western portion of this segment. Little San Bernardino Mountains gilia, also a BLM sensitive species and a covered species under the CVMSHCP, is also known to occur in the eastern portion of this segment. The other three sensitive plant species have been designated List 2 or 3 species by the CNPS.

Three plant species that are federally listed endangered and CNPS List 1B species have a moderate potential in this segment. These species include Munz's onion, which is also State listed threatened, San Diego ambrosia, also a BLM sensitive species, and Coachella Valley milkvetch. Munz's onion and San Diego ambrosia both have a moderate potential to occur in the chaparral and grassland habitats that are present in the western portion of this section. More than 20 Coachella Valley milkvetch plants were documented along the proposed ROW just west of Devers Substation (Environmental Planning Group and Greystone, 2005).

Fourteen sensitive plant species also have a moderate potential to occur in this segment, including:

- Parish's brittlescale
- long-spined spineflower
- Southern California black walnut
- Robinson's pepper-grass
- ocellated Humboldt lily
- California muhly
- Fish's milkwort
- Engelmann oak
- Coulter's matilija poppy
- Latimer's woodland gilia
- San Miguel savory
- purple stemodia
- San Bernardino aster
- Sonoran maiden fern

Six of these plant species, including Parish's brittlescale, long-spined spineflower, Robinson's pepper-grass, Latimer's woodland gilia, San Miguel savory, and San Bernardino aster, are designated as List 1B species by the CNPS. These species occur in a variety of habitats including chaparral, grassland, and stream habitats. The other eight sensitive plant species that have a moderate potential to occur within this segment are all CNPS List 4 species, except purple stemodia, which is designated as a List 2 species by the CNPS. Robinson's pepper-grass, ocellated Humboldt lily, California muhly, Fish's milkwort, Engelmann's oak, San Miguel savory, and Coulter's matilija poppy are typically found in chaparral and/or riparian habitats, which can be found in the western portion of this segment. See Table D.2-4 for more detail about these species and the known occurrences in the project area.

Wildlife Species

Invertebrates. Similar to the Cactus City Rest Area to Devers Substation segment to the east, two species of invertebrates, Coachella Valley giant sand-treader cricket and Coachella Valley Jerusalem cricket, have a high potential to occur within this segment. Both of these species utilize active sand dunes and ephemeral sand fields. These types of habitat are present in a patchy distribution between Devers Substation and the Community of Cabazon (MPs W0 to MP W13). While neither of these species are special status species, both are covered under the CVMSHCP.

Fishes and Amphibians. This segment of the ROW is not expected to include any sensitive species of fishes.

Two listed species of amphibians, arroyo toad and mountain yellow-legged frog, have a high potential to occur within this segment. Both species are federally listed endangered species and California special concern species. The arroyo toad was reported as occurring in Whitewater Canyon in 1992; however, it is unknown if this species still occurs there, although the habitat is intact. There is speculation that Snow Creek, which is located southwest of Whitewater Canyon, may also provide appropriate habitat for the arroyo toad. The mountain yellow-legged frog has a historical record in Whitewater wash, located approximately three miles north of I-10. However, the habitat where the proposed ROW crosses Whitewater Canyon is not typical of habitat where this species is usually found.

The coast range newt, a California special concern species, has a moderate potential to occur north of the proposed ROW in Whitewater Canyon. This species inhabits drier habitats adjacent to water sources that are suitable for breeding, therefore the habitat located where the proposed ROW would cross Whitewater Canyon may not be suitable for the coast range newt.

Reptiles. One listed species, the desert tortoise, and two sensitive species, the San Diego horned lizard and northern red diamond rattlesnake, have been observed within this segment. The desert tortoise, which is a federal and State listed threatened species that is also covered by the CVMSHCP, has been documented within the ROW. However, if this species occurs within this segment, it likely occurs in low numbers. The San Diego horned lizard and northern red diamond rattlesnake, both of which are California special concern species, have also been observed in this segment at various locations, including adjacent to the Whitewater River.

Two sensitive reptile species have a high potential to occur in this segment. Whitewater Canyon would be expected to support suitable habitat for the two-striped garter snake, a California special concern species and BLM sensitive species, because of the presence of the river. This species has been reported in Whitewater Creek approximately within the ROW (CNDDB, 2005). The rosy boa has a high potential to occur in this segment because it has been observed on Whitewater Canyon Road and it would be expected to occur in other natural areas of this segment.

Three California special concern reptile species, including flat-tailed horned lizard, Belding's orange-throated whiptail, and silvery legless lizard, have a moderate potential to occur within this segment. The orange-throated whiptail potentially occurs in the western portions of this segment, and typically inhabits scrub communities with sandy soils. The flat-tailed horned lizard, which is also a BLM sensitive species, may occur in the eastern portion of this segment, between Devers Substation and the community of Cabazon. It is typically found in desert washes and flats with fine sandy soils. The silvery legless lizard is likely found throughout this segment; however the western extent of its range falls within the proposed ROW.

Birds. The Le Conte's thrasher, a California special concern species and BLM sensitive species, was observed within the ROW of this segment (ECORP Consulting, Inc., 2005). This species would be expected to occur in the desert scrub of this segment.

The least Bell's vireo, a federal and State listed endangered species that is also covered under the CVMSHCP, has a high potential to occur in the vicinity of this segment. Potentially suitable habitat is present in Whitewater Canyon, located north of the ROW, and low quality habitat is located in Snow Creek, south of the I-10. However, the habitat located where the Proposed Project would cross Whitewater Canyon would not be considered suitable for this species.

In addition, the following seven sensitive bird species, which are all California special concern species, have a high potential to occur within or adjacent to the proposed ROW of this segment:

- Cooper's hawk
- ferruginous hawk
- golden eagle
- prairie falcon
- burrowing owl
- vermillion flycatcher
- loggerhead shrike

The ferruginous hawk, which is also a BLM sensitive species, golden eagle, and prairie falcon likely forage in the habitats in this segment of the ROW. Both the golden eagle, which is also a CDFG fully protected species, and prairie falcon utilize cliffs and steep rocky hillsides for breeding, and could potentially nest within this segment. The Cooper's hawk may potentially utilize the riparian habitat north of the ROW in Whitewater Canyon; however, this species also frequents neighborhoods with large trees and it is relatively common in developed areas. The burrowing owl, also a BLM sensitive species, could potentially be found in the flat, undeveloped areas along this entire segment. This species has been observed southwest of Devers Substation, in the area between I-10 and Highway 111. The vermillion flycatcher is known to occur in the riparian habitat in Morongo Canyon and it potentially occurs in the riparian habitat in Whitewater Canyon.

Three California special concern species of birds, including the mountain plover, long-eared owl, and yellow warbler, have a moderate potential to occur within or adjacent to the ROW of this segment. The mountain plover occurs in desert and agricultural areas and its range overlaps this segment. The long-eared owl is known to occur in desert oases and it may occur in the riparian habitat in Whitewater Canyon. The yellow warbler, which is covered under the CVMSHCP, also inhabits riparian habitat, and potentially occurs in the riparian habitat in Whitewater Canyon.

Raptor nests, likely belonging to red-tailed hawks or ravens, have been observed on some of the existing towers within this segment.

Mammals. One federal Candidate species, the Palm Springs round-tailed ground squirrel, is known to occur in the vicinity of the western portion of this segment. Suitable habitat for this species, which is also a California special concern species, occurs in a patchy distribution between Devers Substation and the community of Cabazon.

Four sensitive mammal species have a high potential to occur in or adjacent to this segment of the ROW, including spotted bat, northwestern San Diego pocket mouse, Palm Springs pocket mouse, and Los Angeles pocket mouse. The Palm Springs pocket mouse is known from several dozen locations in the Coachella Valley. Suitable habitat for this subspecies occurs from Devers Substation west to near the east border of Banning. The spotted bat has a high potential to occur in this section because suitable roosting and foraging habitat is present in the surrounding desert areas. The spotted bat may forage in this segment and it could potentially roost in rock crevices and caves in the hilly portions of this segment. The northwestern San Diego pocket mouse and Los Angeles pocket mouse both potentially occur in the desert habitats with sandy soils.

The following 12 sensitive mammal species, including eight bat species and four other mammal species, have a moderate potential to occur along this segment:

- California leaf-nosed bat
- pallid bat
- Townsend's big-eared bat
- western yellow bat
- fringed myotis
- Yuma myotis
- western mastiff bat
- pocketed free-tailed bat
- big free-tailed bat
- San Diego black-tailed jackrabbit
- pallid San Diego pocket mouse
- American badgers

The desert scrub and desert washes represent suitable foraging habitat for the bat species and the surrounding hills and mountains likely contain suitable roosting habitat for these species. The sensitive non-bat species are typically found in desert scrub habitats and likely occur in the grasslands and undisturbed portions of this segment.

Special Habitat Management Areas Overview

In this segment, only the portion of the ROW between Devers Substation and Whitewater Canyon is included in the CDCA Plan. Two areas identified in the CDCA Plan are located in this segment. They include the HMP for CVFTL and the Whitewater Canyon ACEC. The entire segment between Devers and Banning is included in the Draft CVMSHCP Area. The proposed CVMSHCP Conservation Areas that are located within or adjacent to the ROW include Upper Mission Creek/Big Morongo Canyon, Whitewater Canyon, Stubbe and Cottonwood Canyons, and Cabazon. These four Conservation Areas are located north of the I-10 freeway. Two Conservation Areas, Snow Creek/Windy Point and Santa Rosa and San Jacinto Mountains, and a portion of the Cabazon Conservation Area are located south of the I-10 in the western portion of the Draft CVMSHCP area. Management areas identified in these plans and other areas designated as Reserves, Natural Areas, or Critical Habitat located within or adjacent to this section of the route are described below.

CDCA Plan. The management areas within this segment that were identified in the CDCA Plan are the HMP for CVFTL and the Whitewater Canyon ACEC. The HMP for CVFTL encompasses two small areas of habitat for the CVFTL on BLM lands. One area is located south of I-10, northeast of Highway 111, and just southwest of the junction of I-10 and Highway 62 (MP W1.2 to W6.3). A portion of this area falls within the CVMSHCP Whitewater Floodplain Conservation Area. The second area is located

right along the I-10 freeway west of the Highway 111/I-10 junction, at the extreme western end of the CDCA Plan Area (MP W6.3 to W8.8). The HMP was directed at the protection and management of the blow sands areas and known habitat for the CVFTL that were present on BLM lands. These areas are included within the Draft CVMSHCP Area.

Draft Coachella Valley MSHCP. This entire segment is located within the area covered by the Draft CVMSHCP. The proposed Conservation Areas that are located within or adjacent to this segment of the ROW are described below.

The Upper Mission Creek/Big Morongo Canyon Conservation Area (29,875 acres) encompasses the Mission Creek and Big Morongo Canyon watersheds and the portions of the Mission Creek flood control channel and Morongo Wash within the City of Desert Hot Springs. The ROW crosses this Conservation Area between MPs W1.5 to W3.5. On the east side of Highway 62 in this Conservation Area is the largest habitat area in the CVMSHCP for little San Bernardino linanthus. The linanthus habitat is located in the meandering braided channels in Mission Creek east of the highway and in both Dry Morongo Wash and Big Morongo Wash. Additional habitat occurs where the two washes meet to become the Morongo Wash area. Significant Core Habitat is present for the triple-ribbed milkvetch. Core Habitat for Palm Springs pocket mouse is present on both sides of Highway 62 and where the highway bridges Mission Creek. The population of desert tortoise within this Conservation Area is considered to be connected to a larger viable population stretching southwest into the Whitewater Canyon Conservation Area and eastward through the Little San Bernardino Mountains into Joshua Tree National Park Conservation Area. The riparian areas along Mission Creek contain suitable migration and breeding habitat for riparian species covered by the CVMSHCP. Potential habitat for the arroyo toad and Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, flat-tailed horned lizard, gray vireo, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse are present in this Conservation Area. The native habitats crossed by the ROW include dry desert wash woodland and Sonoran mixed woody and succulent scrub. In addition, the ROW also crosses an area that is considered a sand source that provides blow sand to the Willow Hole Preserve and to some extent, to the Whitewater Floodplain Preserve.

The Whitewater Canyon Conservation Area (14,170 acres) encompasses the Whitewater River and its watershed north of the I-10 freeway. This Conservation Area lies between the Stubbe and Cottonwood Canyons Conservation Area to the west and southwest and the Upper Mission Creek/Big Morongo Canyon Conservation Area to the east and northeast. The I-10 freeway borders this Conservation Area on the south. The ROW crosses this Conservation Area between MPs W3.5 and W4.0. The Conservation Area contains the only confirmed historic habitat for the arroyo toad in the CVMSHCP Area. Habitat for riparian birds and desert tortoise is present in this Conservation Area. This Conservation Area also contains Core Habitat for triple-ribbed milkvetch and Other Conserved Habitat for Coachella Valley milkvetch, Little San Bernardino Mountains linanthus, Coachella Valley Jerusalem cricket, desert tortoise, gray vireo, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, southern yellow bat, and Palm Springs pocket mouse. The native habitats crossed by the ROW include Sonoran creosote bush scrub and Sonoran mixed woody and succulent scrub. In addition, the ROW also crosses an area that is considered a sand source and sand transport area. The Whitewater River is a fluvial sand transport system for the Whitewater Floodplain Preserve Conservation Area located south of the I-10 freeway. Whitewater Canyon serves as part of a Linkage and Biological Corridor linking the San Bernardino Mountains portion of the Transverse Ranges with the Peninsular Ranges (San Jacinto and Santa Rosa Mountains) through the Snow Creek/Windy Point Conservation Area.

The Stubbe and Cottonwood Canyons Conservation Area (9,840 acres) encompasses the area north of the I-10 freeway and west of Whitewater Canyon, including Stubbe and Cottonwood Canyons and portions of their alluvial fans down to the I-10 freeway. This Conservation Area is bounded on the east by the Whitewater Canyon Conservation Area and on the west by the Cabazon Conservation Area. The desert tortoise population in this Conservation Area centers on the mesas to the west of the Whitewater River and this population may be the most dense tortoise population in the CVMSHCP Area. These canyons contain suitable migration and breeding habitat for least Bell's vireo, southwestern willow flycatcher, summer tanager, yellow-breasted chat, and yellow warbler. The Conservation Area contains Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, desert tortoise, gray vireo, Le Conte's thrasher, burrowing owl, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. The native habitats present in this Conservation Area include Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, Sonoran cottonwood-willow riparian forest, desert dry wash woodland, semi-desert chaparral, interior live oak chaparral, and chamise chaparral. The ROW crosses Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, and desert dry wash woodland between MPs W4 and W10.4.

The Cabazon Conservation Area (12,470 acres) consists of the San Gorgonio River and several tributaries in the westernmost part of the CVMSHCP Area and portions of the San Jacinto Mountains and the San Bernardino Mountains. Portions of this Conservation Area are within the Morongo Indian Reservation, which is not part of the CVMSHCP. The primary importance of this Conservation Area is that the San Gorgonio River and various tributaries function as a fluvial sand transport system for the Snow Creek/Windy Point Conservation Area and the Whitewater Floodplain Conservation Area. The portions of the San Bernardino Mountains and San Jacinto Mountains included in this Conservation Area are sand sources for this fluvial sand transport system. The San Gorgonio River and associated tributaries also serve as a corridor between the San Bernardino Mountains and the San Jacinto Mountains through the Fornat Wash culvert that goes under the I-10 freeway. The Cabazon Conservation Area does not provide Core Habitat for any of the Covered Species in the CVMSHCP Area but it does contain Essential Habitat for the Peninsular bighorn sheep. Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, desert tortoise, gray vireo, least Bell's vireo, Le Conte's thrasher, southwestern willow flycatcher, summer tanager, yellow-breasted chat, yellow warbler, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse is present. This Conservation Area supports seven different native habitats but the only habitat located in or adjacent to the existing ROW is Sonoran creosote bush scrub. The ROW crosses this Conservation Area between MPs W14.1 and W14.4 and between W16.1and W16.6.

The Whitewater Floodplain Conservation Area (7,370 acres) encompasses portions of the Whitewater River floodplain south of I-10 eastward to the existing Whitewater Floodplain Preserve, which was established by the CVFTL HCP. This Conservation Area is located east of the Highway 111/I-10 Conservation Area. Core Habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse is present in this area. In addition, Other Conserved Habitat for triple-ribbed milkvetch, desert tortoise, flat-tailed horned lizard, burrowing owl, and Le Conte's thrasher is also present. The native habitats in this Conservation Area include active desert sand fields, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, stabilized shielded desert sand fields, Sonoran creosote bush scrub, and Sonoran mixed woody and succulent scrub.

The Highway 111/I-10 Conservation Area (390 acres) encompasses portions of the non-developed and non-Indian owned land between Highway 111 and I-10 west of the Whitewater River. This area does not provide Core Habitat for any species but there is a probable connection between the habitat in this

Conservation Area, the Snow Creek/Windy Point Conservation Area located to the south, and the Whitewater Canyon Conservation Area located to the north. The only habitat in this Conservation Area is Sonoran creosote bush scrub. This habitat is considered Other Conserved Habitat for Coachella Valley milkvetch, triple-ribbed milkvetch, Coachella Valley Jerusalem cricket, desert tortoise, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse.

The Snow Creek/Windy Point Conservation Area (2,940 acres) encompasses the area between the toe-of-slope of the San Jacinto Mountains and Highway 111 and extends westward to the range line separating Range 2 East and Range 3 East, and eastward to Windy Point. This Conservation Area is located immediately south of the I-10 freeway and the northern boundary of this Conservation Area is approximately one mile south of the existing ROW. This area protects a significant blow sand ecosystem at the western edge of the CVMSHCP Area. It provides Core Habitat for the Coachella Valley milkvetch, Coachella Valley fringe-toed lizard, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Burrowing owls have been documented in this Conservation Area and the area also provides some Essential Habitat for Peninsular bighorn sheep. In addition, the area is important for neotropical migrants (birds that breed in the United States and winter to the south of the United States) moving through the San Gorgonio Pass. Some of these, including least Bell's vireo, southwestern willow flycatcher, yellow warbler, yellow-breasted chat, and summer tanager, may nest in the adjacent canyons in the Santa Rosa and San Jacinto Mountains Conservation Area. Other Conserved Habitat for the gray vireo and Le Conte's thrasher is also present in this area. The native habitats in this Conservation Area include active desert dunes, ephemeral sand fields, semi-desert chaparral, Sonoran creosote bush scrub, and stabilized sand fields.

The Santa Rosa and San Jacinto Mountains Conservation Area (212,200 acres) encompasses virtually all of the desert slopes of the Santa Rosa and San Jacinto Mountains below the upper elevation limit of Peninsular bighorn sheep habitat, as well as much of the higher elevation areas of the Santa Rosa Mountains where there is known and potential habitat for the gray vireo. To the north, this Conservation Area is contiguous with the Snow Creek/Windy Point Conservation Area. To the south it is linked to Anza Borrego Desert State Park and to the west it is linked with the San Bernardino National Forest areas and Mt. San Jacinto State Park. This Conservation Area provides Essential Habitat for the Peninsular bighorn sheep and contains nearly 70,000 acres of potential habitat for the gray vireo. Low-density desert tortoise habitat is spread throughout the mountains, but it is not known whether the population density is such that this Conservation Area can be considered Core Habitat for the tortoise. Suitable migration and breeding habitat for the riparian species covered by the CVMSHCP is present in this area. The desert fan palm oasis woodlands provide nearly 1,000 acres of habitat for the southern yellow bat. One known occurrence of the triple-ribbed milkvetch has been documented in the Santa Rosa Mountains. The area also contains a small amount of habitat for Coachella Valley milkvetch, Coachella Valley fringe-toed lizard, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. This Conservation Area supports a diverse array of native habitats considering the broad range of elevation that it covers. The only native habitats present in the northern portion of this Conservation Area, which is closest to the existing ROW and project alternatives are Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, semi-desert chaparral, and mesquite hummocks.

D.2.3.2 Banning and Beaumont

Plant Communities and Sensitive Habitats

The vegetation communities in this segment of the ROW primarily consist of non-native grasslands, Riversidean sage scrub/chaparral, and disturbed areas. The drainages that would be traversed by this segment of the Proposed Project support either a sparse distribution of mixed scalebroom and desert willow or a narrow patch of riparian habitat. The eastern portion of this segment is primarily dominated by a mixture of catclaw scrub. The Proposed Project would parallel and cross a tributary to the San Gorgonio River between MPs W11.9 and W12.1 and it would cross the San Gorgonio River between MPs W17.6 and W18.1.

The vegetation in the San Gorgonio River and the adjacent tributary primarily consists of sparse scalebroom with scattered desert willows. Some coast live oak, sycamore (*Platanus racemosa*), and cottonwood trees also occur within the San Gorgonio River; however, very few of these species occur within the ROW at the river crossing. No new towers are planned within the tributary, but two tower locations, T149A and T150, located within or immediately adjacent to the River would be removed or replaced. From west of the San Gorgonio River to MP W19, the vegetation community consists of a Riversidean sage scrub/chaparral mix. This community is found on the undisturbed foothills located north of the Cities of Banning and Beaumont. A patch of Riversidean sage scrub/chaparral is also crossed between MPs W19.9 and MP 20.3.

Well-vegetated drainages that likely support a dense riparian community, are crossed between MPs W18.6 and W18.7, as well as MP W19.9 through MP W20.0. Most of the area west of the San Gorgonio River, between MPs W19.0 and W23.0, is dominated by non-native grasslands and areas that have been disturbed by human activities. The ROW would also traverse a mining operation between MPs W16.5 and W17.1 and developed areas in the City of Beaumont between MPs W23.0 and the western boundary of this segment. These developed and disturbed areas include a patchy distribution of non-native grasslands and ruderal areas where the native vegetation has been removed and has been replaced with non-native and weedy plant species.

Special Status Plant and Wildlife Species

Plants Species

Five sensitive species of plants, including Yucaipa onion, Jaeger's milkvetch, Plummer's mariposa lily, Parry's spineflower, and white-bracted spineflower, have a high potential to occur within or adjacent to the ROW of this segment. Each of these plants, except for the Parry's spineflower, has been designated a List 1B species by the CNPS. In addition, Yucaipa onion, Jaeger's milkvetch, Plummer's mariposa lily, and Parry's spineflower are covered in the WRMSHCP. While white-bracted spineflower is known from three occurrences east of this segment, potential desert scrub habitat in this segment. See Table D.2-4 for more detail about these species and the known occurrences in the project area.

Three federally listed endangered and CNPS List 1B plant species, Munz's onion, San Diego ambrosia, and San Jacinto Valley crownscale, have a moderate potential to occur in this segment. Munz's onion, also a State listed threatened species, is typically found in chaparral, coastal sage scrub, and mesic riparian scrub habitats at elevations ranging from 640 to 1,600 meters. San Diego ambrosia, also a BLM sensitive species, has a moderate potential to occur in the chaparral and grassland habitats that are present in the western portion of this section. The San Jacinto Valley crownscale is known to occur near the ROW; however, the habitat in this segment is only marginally suitable for this species, as all formerly suitable habitat is now developed or urbanized

The following 14 sensitive plant species have a moderate potential to occur in or adjacent to the ROW of this segment:

- chaparral sand-verbena
- smooth tarplant
- long-spined spineflower
- Southern California black walnut
- Robinson's pepper-grass
- ocellated Humboldt lily
- Parish's bush mallow
- Hall's monardella
- California muhly
- Fish's milkwort
- Engelmann oak
- Coulter's matilija poppy
- San Miguel savory
- San Bernardino aster

Seven of these plant species, including the chaparral sand-verbena, smooth tarplant, long-spined spineflower, Robinson's pepper-grass, Hall's monardella, San Miguel savory, and San Bernardino aster, are CNPS List 1B species. Chaparral sand-verbena potentially occurs in chaparral habitat and although this species has been recorded in the vicinity of the ROW from San Gorgonio Pass west to San Bernardino, it has not been recorded within 5 miles of the ROW (BioResource, 2003). San Jacinto Valley crownscale is known to occur 5 miles south of the ROW and 7 miles southwest of Beaumont and the 60/I-10 junction (BioResource, 2005). The ROW in this segment is judged to be only marginally suitable for this species, as all formerly suitable habitat is now developed or urbanized (BioResource, 2003). Smooth tarplant has a moderate potential to occur in riparian habitats in this segment of the ROW. This species is known to occur in San Timoteo Canyon located to the west of this segment. Long-spined spineflower, which occurs in chaparral and grasslands, was reported by BioResource Consultants (2003) approximately 12 miles southwest of the ROW; however, no location information was supplied. Southern California black walnut has a moderate potential to occur in the chaparral habitat in this segment of the ROW. Robinson's pepper-grass, ocellated Humboldt lily, and Parish's bush mallow have a moderate potential to occur in the chaparral habitat in the section. Hall's monardella also has a moderate potential to occur in chaparral and it is known to occur north of the adjacent segment to the west (CNDDB, 2005). California muhly, Fish's milkwort, and Coulter's matilija poppy have a moderate potential to occur in the chaparral habitat in this segment. Engelmann's oak has a moderate potential to occur in the chaparral and riparian habitats in this segment. San Bernardino aster, which occurs in grasslands, is known to occur 4 miles southeast of Banning, approximately 5 miles south of this segment of the ROW, between MPs W15 and W18.

Wildlife Species

Invertebrates. This segment likely does not contain suitable habitat areas for sensitive or listed species of invertebrates. No invertebrate species were determined to have a high or moderate potential to occur within this segment of the Proposed Project.

Fishes and Amphibians. This segment of the ROW does not contain suitable habitat areas for sensitive or listed species of fishes. No fish species were determined to have a high or moderate potential to occur in this segment of the ROW.

The mountain yellow-legged frog, a federally endangered, California special concern species, and BLM sensitive species, has been observed within this segment. It has been documented in the San Jacinto Mountains, near the gravel pit northeast of the City of Banning (MP W16.5), and adjacent to the San Gorgonio River near Banning Peak (approximate MP W17.4). This species is highly aquatic and inhabits ponds, dams, lakes, and streams at moderate to high elevations.

One sensitive species of amphibian, the western spadefoot toad, has a high potential to occur in this segment. This species is a California special concern species and BLM sensitive species. The western spadefoot toad frequents grasslands and scrub habitats where temporary breeding pools may be available.

Reptiles. Two sensitive species of reptiles, the San Diego horned lizard and northern red diamond rattlesnake, have been observed in this segment. Both species are California special concern species and are covered in the WERMSHCP. The San Diego horned lizard, also a BLM sensitive species, was documented at a single location just east of the San Gorgonio River. This species likely occurs in the sage scrub and chaparral habitats with sandy soils that occur in portions of this segment. The northern red-diamond rattlesnake has been observed at two locations within this segment, and likely occurs in the scrub and chaparral habitats throughout this segment.

Three sensitive reptile species have a moderate potential to occur in this segment, including silvery legless lizard, southern rubber boa, and Belding's orange-throated whiptail. Suitable habitat for the silvery legless lizard and orange-throated whiptail, both of which are California special concern species, is present within the chaparral and scrub habitats that also support sandy soils. The southern rubber boa, a California listed threatened species, inhabits grasslands, mountain meadows, deciduous and coniferous forest chaparral, woodlands, and generally occurs along stream sides (CNDDB, 2005). The chaparral habitat within this segment, particularly near the riparian habitats in the larger drainages, potentially supports this species.

Birds. Five California special concern bird species, including the following species, have a high potential to occur within this segment:

- ferruginous hawk
- golden eagle
- burrowing owl
- mountain plover
- loggerhead shrike

All of these bird species are covered in the WRMSHCP. As stated for the previous segments, the raptor species are wide ranging and would be expected to forage in the natural habitats within this segment. The ferruginous hawk, also a BLM sensitive species, has been observed flying over the Beaumont area, but would not be expected to nest in this segment. The golden eagle, which is also a CDFG fully protected species and BLM sensitive species, may nest in the steep rocky cliff areas within this segment. The loggerhead shrike would be expected to forage and/or nest in the natural habitat areas within this segment. The mountain plover is known to utilize desert habitats, and may occur in the western portion of this segment. The burrowing owl, also a BLM sensitive species, may utilize the open grassland and wash areas within this segment of the ROW.

Four sensitive bird species, including the peregrine falcon, California horned lark, southern California rufous-crowned sparrow, and Bells' sage sparrow, have a moderate potential to occur within or adjacent to ROW of this segment. The peregrine falcon, which is a State listed endangered species and CDFG fully protected species, has been federally delisted. It likely forages in the ROW of this segment and it may nest in the rocky cliffs located in the adjacent foothills and mountains. The other three birds are California special concern species. The California horned lark potentially utilizes the open grasslands and other open areas with low vegetation that may provide suitable foraging and nesting habitat. The southern California rufous-crowned sparrow may utilize the scrub covered hillsides in this section, while the Bell's sage sparrow typically occurs in chaparral. All of these species are covered in the WRMSHCP.

Mammals. The Stephens' kangaroo rat, a federally listed endangered and State listed threatened species, has a high potential for occurrence in open grasslands or sparse shrublands within and adjacent to the ROW of this segment. This species has been documented in the Potrero area, approximately 2.5 miles south of the ROW.

The following seven sensitive mammal species have a high potential to occur in or adjacent to the ROW of this segment:

- western yellow bat
- San Diego black-tailed jackrabbit
- Dulzura pocket mouse
- northwestern San Diego pocket mouse
- Los Angeles pocket mouse
- San Diego desert woodrat
- American badger

All of these mammals are California special concern species, except for the western yellow bat. These mammal species have been documented in various locations in the vicinity of this segment, except for the American badger. However, suitable habitat for the American badger is present in the open, sparsely vegetated areas that area located away from developed areas.

Six sensitive mammal species, including the following, have moderate potential to occur along the ROW of this segment:

- pallid bat
- Townsend's big-eared bat
- spotted bat
- fringed myotis
- western mastiff bat
- San Bernardino white-eared pocket mouse

All of these mammal species are California special concern species, except for the fringed myotis. The bat species, all of which are also BLM sensitive species, could potentially forage and/or roost within this segment. The rocky hillsides likely provide suitable crevices and/or caves for roosting. In addition, the San Bernardino white-eared pocket mouse may occur in the shrubland and woodland habitats in this segment.

Special Habitat Management Areas Overview

Western Riverside MSHCP

The Pass Area Plan. The entire ROW between Banning and Beaumont lies within the Pass Area Plan of the Western Riverside MSHCP. Suitable habitat areas within criteria areas in the Pass Area Plan are subject to focused surveys for narrow endemic plants, burrowing owl, and sensitive mammals (including Los Angeles pocket mouse and San Bernardino kangaroo rat). Criteria areas are located just west of the western portion this segment, near the junction of the I-10 and the 60 Freeway. Because the ROW does not cross through any criteria areas in this segment, no focused surveys for endemic plants, burrowing owl, or sensitive mammals are required. A special linkage area, which includes a portion of the San Gorgonio River/San Bernardino–San Jacinto Mountains Linkage, encompasses the areas on the eastern side of Banning.

D.2.3.3 Calimesa and San Timoteo Canyon

Plant Communities and Sensitive Habitats

A wildfire occurred in summer 2005 that burned a majority of the sage scrub, chaparral, and grassland habitats in the foothills south of San Timoteo Canyon Road, including within this segment. Prior to being burned, most of this segment was dominated by a mosaic of dense patches of chaparral, sage scrub/ chaparral/grassland mixed communities, and non-native grasslands. The pre-fire plant communities will likely return to those areas that did not experience intense burning; however, the heavily burned areas may convert to non-native grasslands if the seed bank of chaparral and sage scrub plant species was eliminated or if the non-native grasses out compete the native plants.

A few areas within this segment support scattered oak woodlands and the San Timoteo Creek supports a well developed riparian community. The area immediately west of I-10, between MPs W26.5 to W27.1, is developed and supports little or no native vegetation. From the developed area to just northeast of San Timoteo Canyon Road (between MPs W27.1 and W29.4), the ROW is dominated by a mosaic of non-native grasslands, chaparral/grassland mixed communities, and patches of oak woodlands. Just east of San Timoteo Canyon Road, the ROW is dominated by agricultural activities. Prior to the 2005 fires, the native plant communities between San Timoteo Canyon Road and San Bernardino Junction were also dominated by a mosaic of non-native grasslands, mixed communities of sage scrub and chaparral and non-native grasses. Currently most of this area is recovering from the wildfire. The Proposed Project would cross numerous small drainages that do not support riparian habitat, but do carry water after rainfall events. Scattered residences, small developments, and agricultural areas also occur between San Timoteo Canyon Road and San Bernardino Junction.

Patches of oak woodland are present within the ROW west of I-10, between approximately MPs W26.9 and W27.1, and east of San Timoteo Canyon Road (at MP W28.9). Between MPs W29.6 and W29.7, the ROW crosses the riparian habitat in San Timoteo Creek. San Timoteo Canyon supports three types of riparian habitats that are considered sensitive by the CNDDB. These include Southern Cottonwood Willow Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Southern Coast Live Oak Riparian Forest (CNDDB, 2005).

Special Status Plant and Wildlife Species

Plant Species

Two listed and two sensitive plant species have been documented within or adjacent to this segment of the Proposed Project. The Nevin's barberry and slender-horned spineflower are both federally and State listed endangered species and designated List 1B species by the CNPS. Suitable habitat and elevation requirements are present for these species, which are known to occur along the ROW at approximately MPs W38 and between MPs W39 to W41, respectively (BioResource, 2003). Jeager's milkvetch and Plummer's mariposa lily are both CNPS List 1B species. Jaeger's milkvetch has been documented at several locations near the western end of this segment, and Plummer's mariposa lily has been documented in chaparral habitat at two locations in this segment (BioResource, 2003). All of these plant species are covered by the WRMSHCP.

Four sensitive plant species, including Yucaipa onion, Parry's spineflower, California bedstraw, and Hall's monardella, have a high potential to occur in or adjacent to this segment. The last three of these species have been designated List 1B by the CNPS, and Parry's spineflower is designated a List 3 species. California bedstraw, which is also a BLM sensitive species, and Hall's monardella are known to occur near the western portion of this segment (CNDDB, 2005).

Four listed species of plants, including Munz's onion, San Diego ambrosia, San Jacinto Valley crownscale, and Santa Ana River woollystar, have a moderate potential to occur in this segment. All four plants are federally listed endangered species and designated List 1B species by the CNPS. The chaparral and grassland habitat within this segment could potentially support Munz's onion and San Diego ambrosia, which are also a State listed threatened species and BLM sensitive species, respectively. San Jacinto Valley crownscale is known to occur five miles south of the Proposed Project, and the habitats within the ROW would be considered marginally suitable. The Santa Ana River woollystar, also a State listed endangered species, has a moderate potential to occur along the western end of this segment where suitable habitat is limited to portions of San Timoteo Creek.

Seventeen sensitive plants have a moderate potential to occur along the ROW, including:

- chaparral sand-verbena
- smooth tarplant
- long-spined spineflower
- Many-stemmed dudleya
- round-leaved filaree
- Southern California black walnut
- Robinson's pepper-grass
- ocellated Humboldt lily
- Parish's bush mallow
- California muhly
- little mousetail
- Fish's milkwort
- Engelmann oak
- Parish's gooseberry
- Coulter's matilija poppy
- San Miguel savory
- San Bernardino aster

Eight of these sensitive plants species, as indicated above, are designated as List 1B species by the CNPS. In addition, many-stemmed dudleya is also a BLM sensitive species, and little mousetail is a federal species of concern. Chaparral sand-verbena may occur in the chaparral habitat in this segment. It has been documented east of this segment, but not within five miles of the proposed ROW. Smooth tarplant has been reported in San Timoteo Canyon and is known to occur at MP W35.2 (BioResource, 2003; CNDDB, 2005). Many-stemmed dudleya, Robinson's pepper-grass, Parish's bush mallow, and San Miguel savory all potentially occur because suitable chaparral or riparian habitat is present and the elevational requirements for these species are met. Little mousetail is known to occur in valley and foothill grasslands and vernal pools within western Riverside County only, and suitable grassland habitat for this species is present. Parish's gooseberry potentially occurs in the riparian woodland habitat in this segment. San Bernardino aster potentially occurs in the grassland and in San Timoteo creek. The other nine sensitive plant species have been designated as List 2, 3, or 4 species by the CNPS. All of these plant species, except for chaparral sand-verbena, Robinson's pepper-grass, Parish's gooseberry, and San Bernardino aster, are covered in the WRMSHCP.

Wildlife Species

Invertebrates. This segment does not support vernal pools or seasonally wet areas that would support fairy shrimp. In addition, this segment also does not support suitable habitat for any sensitive or listed species of insects.

Fishes and Amphibians. The intermittent nature of San Timoteo Creek is not conducive to supporting any listed or sensitive species of fishes. There have been no reported occurrences of listed or sensitive fish species within this segment, however, one sensitive amphibian, the western spadefoot toad may potentially occur there. The western spadefoot toad, a California special concern species and BLM sensitive species, is typically associated with grasslands and scrub habitats and it utilizes seasonal pools for breeding. This segment of the Proposed Project does not support seasonal pools; however the western spadefoot toad could potentially occur in the grasslands and or scrub habitats. This species has been observed in the Badlands area located approximately six miles south of this segment.

Reptiles. The following six sensitive reptile species have a moderate potential within or adjacent to the ROW of this segment:

- northern red-diamond rattlesnake
- San Diego horned lizard
- Belding's orange-throated whiptail
- silvery legless lizard
- rosy boa
- two-striped garter snake

All of these reptile species are California special concern species, except for the rosy boa, which is a BLM sensitive species. These reptiles are typically found in chaparral, coastal sage scrub, or grassland habitats and generally have been found within the region surrounding this segment of the ROW. The two-striped garter snake, also a BLM sensitive species, may occur in the riparian habitat in San Timoteo Creek. In addition, the northern red-diamond rattlesnake, San Diego horned lizard, and Belding's orange-throated whiptail are covered species in the WRMSHCP.

Birds. Two listed species of birds, the least Bell's vireo and southwestern willow flycatcher, both have a high potential to occur in or adjacent to the ROW of this segment. The least Bell's vireo, a federal and State listed endangered species, potentially occurs in the riparian habitat in San Timoteo Canyon. The most suitable habitat consists of those areas with a dense understory of willows and mulefat under a canopy of larger trees and shrubs. This species has been documented near Fisherman's Retreat Resort, which is located less than one mile to the north of the ROW (CNDDB, 2005), and could potentially occupy habitat where the ROW would cross San Timoteo Creek. The southwestern willow flycatcher, also a federal and State listed endangered species, has been documented in San Timoteo Canyon, directly south of Redlands (CNDDB, 2005). The riparian habitat located where the ROW would cross the San Timoteo Creek could potentially support this species.

Six bird species have a high potential to occur in the ROW including:

- Cooper's hawk
- ferruginous hawk
- golden eagle
- loggerhead shrike
- California horned lark
- southern California rufous-crowned sparrow

All of these birds are California special concern species, and the golden eagle is also a CDFG fully protected species. Cooper's hawk, loggerhead shrike, and southern California rufous-crowned sparrow have been documented in San Timoteo Canyon, north of the border between San Bernardino and Riverside Counties and south of the City of Redlands (CNDDB, 2005). The loggerhead shrike would be expected to occur along much of this segment. The ferruginous hawk and golden eagle, which are both BLM sensitive species, likely forage over this segment of the Proposed Project, and the golden eagle may nest in the hilly areas. The grassland and open scrub habitats in this segment of the ROW could potentially support the foraging and nesting activities of the California horned lark. All of these bird species are covered in the WRCMSHCP.

The western yellow-billed cuckoo, which is a federal candidate species and State listed endangered species, and the following six sensitive bird species have a moderate potential to occur along this segment:

- white-tailed kite
- long-eared owl
- burrowing owl
- Bells' sage sparrow
- yellow warbler
- yellow-breasted chat

All of the sensitive bird species are California special concern species, except for the white-tailed kite, which is a CDFG fully protected species. The white-tailed kite and the burrowing owl, also a BLM sensitive species, may utilize the grasslands and open scrub habitats in this segment. In addition, the kite could potentially nest in the riparian habitat in San Timoteo Canyon. The long-eared owl may also utilize the riparian habitat and oaks trees in San Timoteo Canyon. The yellow warbler and yellow-breasted chat have both been documented in San Timoteo Canyon, and would be expected to utilize the riparian habitat within and adjacent to the proposed ROW (CNDDB, 2005). Bells' sage sparrow may potentially utilize the chaparral habitat in this segment.

Mammals. Three sensitive mammal species, including western yellow bat, northwestern San Diego pocket mouse, and Los Angeles pocket mouse, have a high potential to occur in or adjacent to the ROW in this segment. The mouse species are both California special concern species that are covered in the WRCMSHCP. The northwestern San Diego pocket mouse has been documented less than one mile north of the proposed ROW, and the Los Angeles pocket mouse has been documented at Norton Air Force Base, located approximately four miles northeast of the ROW (CNDDB, 2005).

Two federally listed endangered mammal species, the San Bernardino kangaroo rat and Stephens' kangaroo rat, have a moderate potential to occur in this segment. The primary San Bernardino kangaroo rat populations in western Riverside County are located in the San Jacinto River and Bautista Creek; however, smaller populations are historically known from Reche Canyon and the Bloomington area, which are slightly north and west of the Proposed Project, respectively. The Stephens' kangaroo rat, which is also a State listed threatened species, could occur in open grasslands or sparse shrub lands within and adjacent to the ROW.

The following nine sensitive mammal species have a moderate potential to occur in or adjacent to the ROW of this segment:

- pallid bat
- Townsend's big-eared bat
- spotted bat
- fringed myotis
- western mastiff bat
- pocketed free-tailed bat
- San Diego black-tailed jackrabbit
- Dulzura pocket mouse
- San Bernardino white-eared pocket mouse

All of these sensitive mammal species are California special concern species, except for the fringed myotis, which is a BLM sensitive species. In addition, the pallid bat, Townsend's big-eared bat, western mastiff bat, and spotted bat are also BLM sensitive species. All of the bat species could potentially forage in this segment, and roost in trees or rocky outcrops that occur throughout the segment. San Diego black-tailed jackrabbit likely occurs in the grasslands and open shrub lands in this segment. The Dulzura pocket mouse potentially occurs in the softer soils in the scrub and chaparral habitats in this segment. The San Bernardino white-eared pocket mouse potentially occurs in the shrub land and woodland habitats in this segment.

Special Habitat Management Areas Overview

Western Riverside MSHCP

The Pass Area Plan. The portion of this segment of the ROW that falls within the Pass Area Plan is from the western boundary of this segment to near San Timoteo Canyon Road. The ROW crosses through criteria cells in the San Timoteo Creek Subunit, which are located near San Timoteo Canyon Road. These cells fall within the areas requiring focused surveys for narrow endemic plants, burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat (in San Timoteo Creek). The ROW also crosses the Proposed Linkage 12 and lies west of Proposed Linkage 6, which are comprised of the riparian habitats

associated with San Timoteo Creek. The Planning Species that are considered to use this Proposed Linkage 12 include yellow warbler, white-tailed kite, yellow-breasted chat, least Bell's vireo, and Los Angeles pocket mouse. This linkage is also considered to provide movement of common mammals, such as the bobcat, and provides a connection to San Bernardino County and Core Areas in the Badlands. Proposed Linkage 6 is an upland linkage connecting San Timoteo Creek and Core Areas in the Badlands to San Bernardino County. It provides habitat for raptors and movement for species, such as the bobcat, and provides a connection between San Bernardino County and San Timoteo Creek.

Reche Canyon/Badlands Area Plan. The portion of this segment of the ROW that falls within the Badlands North Subunit of the Reche Canyon/Badlands Area Plan extends from approximately the western boundary of Beaumont, near San Timoteo Canyon Road, to the San Bernardino Junction. This portion of the ROW falls within criteria cells for almost its entire length. These cells fall within the areas requiring focused surveys for narrow endemic plants, burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat (in San Timoteo Creek). The ROW is located to the east of Proposed Linkage 5. Proposed Linkage 5 is comprised of the portion of San Timoteo Creek extending northwest from Redlands Boulevard to San Bernardino County. This linkage provides habitat for a number of Planning Species, including Los Angeles pocket mouse, yellow-breasted chat, least Bell's vireo, bobcat, and yellow warbler. This linkage also provides for movement of mountain lions and bobcats between San Bernardino County and Core Areas in the Badlands and Reche Canyon.

D.2.3.4 San Bernardino Junction to Vista Substation

Plant Communities and Sensitive Habitats

The dominant plant communities between the San Bernardino Junction and the Vista Substation include non-native grasslands and mixed sage scrub/non-native grasslands. These communities occur as a mosaic between San Bernardino Junction and the boundary between the Cities of Colton and Loma Linda (MP V1.9). Between MPs V1.9 and V2.7, the sage scrub becomes more dominant than the non-native grasslands. The ROW travels through residential areas between MP V2.7 and MP V3.0, and then traverses a mosaic of grassland and mixed sage scrub/grassland communities from MP V3.0 through MP V4.4. The ROW is developed from MP V4.4 to the Vista Substation.

This segment of the ROW contains patches of mixed Riversidean sage scrub/grassland and mixed coastal sage scrub/grassland communities. These communities are scattered along this segment and typically occur in small patches that correspond to a particular slope aspect. These communities would be considered somewhat disturbed due to the large amount of non-native grasses that are intermixed with the shrubs.

Special Status Plant and Wildlife Species

Plant Species

Two federal and State listed endangered plant species, Nevin's barberry and slender-horned spineflower, and one sensitive plant species, Jaeger's milkvetch, have been documented within or adjacent to the proposed ROW in this segment. Nevin's barberry is known to occur along the eastern end of this segment, with several occurrences documented between MPs V0 and V1 (BioResource, 2003). Slender-horned spineflower is known to occur on the floodplain of the Santa Ana River north of the City of Redlands, and along almost this entire segment (BioResource, 2003). Jaeger's milkvetch has been documented at several locations along this segment (BioResource, 2003). All of these documented plant species are CNPS List 1B species.

Three sensitive plant species have a high potential to occur along this segment of the ROW, including California bedstraw, Parish's desert-thorn, and Parry's spineflower. California bedstraw has been designated by CNPS as a List 1B species and is a BLM sensitive species. Parish's desert-thorn and Parry's spineflower are CNPS List 2 and 3 species, respectively.

Three federally listed endangered and CNPS List 1B species of plants, including Munz's onion, San Diego ambrosia, and Santa Ana River woollystar, have a moderate potential to occur within this segment. In addition, Munz's onion is a State listed threatened species and San Diego ambrosia is a BLM sensitive species. The chaparral and grassland habitat within this segment could potentially support Munz's onion and San Diego ambrosia. The Santa Ana River woollystar, also a State listed endangered species, has been documented within five miles of this segment; however, the area in the vicinity of the Vista Substation was determined to have unsuitable habitat for this species (BioResource, 2003).

The following 16 sensitive plants have a moderate potential to occur along the ROW:

- chaparral sand-verbena
- long-spined spineflower
- Many-stemmed dudleya
- round-leaved filaree
- Southern California black walnut
- Robinson's pepper-grass
- ocellated Humboldt lily
- Parish's bush mallow
- Pringle's monardella
- California muhly
- little mousetail
- Fish's milkwort
- Engelmann oak
- Parish's gooseberry
- Coulter's Matilija poppy
- San Miguel savory

As indicated above, six of the sensitive plant species are designated as List 1B species by the CNPS with the remainder designated as List 2, 3, or 4 species. In addition, to these CNPS designations the many-stemmed dudleya is a BLM sensitive species, and little mousetail is a federal species of concern. Chaparral sand-verbena may occur in the chaparral habitat in this segment. Many-stemmed dudleya is known to occur 10 miles west of the Vista Substation (BioResource, 2003). Robinson's pepper-grass, Parish's bush mallow, and San Miguel savory all potentially occur because suitable chaparral or riparian habitat is present within this segment. Pringle's monardella has a moderate potential to occur according to the criteria for occurrence. The habitat along this segment of the ROW was deemed as unsuitable for this species (BioResource, 2003). This species is presumed to be extinct according to the CNDDB but it is has been historically reported 4 miles northwest of Grand Terrace (CNDDB, 2005). Little mousetail is known to occur in valley and foothill grasslands and vernal pools within western Riverside County only, and suitable grassland habitat is present within this segment. Parish's gooseberry potentially occurs in the riparian woodland habitat in this segment. San Bernardino aster potentially occurs in the grassland and in San Timoteo creek. The closest known occurrence is 4 miles southeast of Banning (CNDDB, 2005).

Wildlife Species

Invertebrates. This segment of the ROW is not known to support any listed or sensitive invertebrates. Vernal pools were not documented during any of the project surveys; however, fairy shrimp were found in seasonally wet road ruts near Reche Canyon (ECORP Consulting, Inc. 2005). The fairy shrimp species found in these road ruts was determined to be the common, non-sensitive species. There are no known occurrences of the listed fairy shrimp within five miles of this segment of the ROW.

Fishes and Amphibians. There have been no reported occurrences of listed or sensitive fish or amphibian species within this segment of the ROW. However, the western spadefoot toad, a California special concern species and BLM sensitive species, may potentially occur in this segment. This species is typically associated with grasslands and scrub habitats and it utilizes seasonal pools for breeding. Seasonally wet road ruts could potentially support the breeding activities of the western spadefoot toad.

Reptiles. Five sensitive reptile species, including northern red-diamond rattlesnake, San Diego horned lizard, Belding's orange-throated whiptail, silvery legless lizard, and rosy boa, have a moderate potential within or adjacent to the ROW of this segment. All of these species are California special concern species, except for the rosy boa, which is a BLM sensitive species. All of these species are typically found in chaparral, coastal sage scrub, or grassland habitats and generally have been found within the region surrounding this segment of the ROW.

Birds. The coastal California gnatcatcher, a federally listed threatened species and California special concern species, has a high potential to occur in this segment. The habitat between Barton Road near Reche Canyon, east to the San Bernardino Substation may be considered somewhat suitable for this species (BioResource, 2003). Much of the habitat in this segment is disturbed due to the presence of non-native grasses or it is monotypic and dominated by California buckwheat. The coastal sage scrub in this segment lacks some of the plant species diversity that is found in typical habitat for the California gnatcatcher.

Four California special concern bird species, including Cooper's hawk, burrowing owl, loggerhead shrike, and southern California rufous-crowned sparrow, have a high potential to occur in this segment. The Cooper's hawk likely forages within this segment of the ROW. Both the burrowing owl, which is also a BLM sensitive species, and loggerhead shrike have been documented at March Air Force Base, located approximately 10 miles south of this segment (CNDDB, 2005). The southern California rufous-crowned sparrow likely occurs in the scrub habitats in the hilly areas within this segment.

Two sensitive bird species, the white-tailed kite and Bell's sage sparrow, have a moderate potential to occur along this segment of the ROW. The white-tailed kite, a CDFG fully protected species, has been documented more than five miles away; however, suitable foraging habitat is present in this segment. Bell's sage sparrow, a California special concern species, has been documented more than five miles from this segment; however, the chaparral habitat in this segment would be considered suitable habitat for this species.

Mammals. One listed and three sensitive mammal species have a high potential to occur in or adjacent to the ROW of this segment. The San Bernardino kangaroo rat, a federally listed endangered species and California special concern species, has a high potential to occur in this segment of the ROW. As stated for the Calimesa and San Timoteo Canyon segment, primary and smaller historic populations of the San Bernardino kangaroo rat exist within and in the vicinity of the ROW of this segment. The three sensitive mammal species that have a high in this segment include: western yellow bat, northwestern San Diego pocket mouse, and Los Angeles pocket mouse. The western yellow bat and northwestern San Diego pocket mouse have both been documented in the vicinity of the City of Redlands from three to seven miles from northeast of the proposed ROW (CNDDB, 2005). The Los Angeles pocket mouse has been documented south of the Santa Ana River Wash and east of the City of Colton, approximately one mile northeast of the ROW (CNDDB, 2005).

Several sensitive mammal species, including the following species, have a moderate potential to in this segment:

- pallid bat
- Townsend's big-eared bat
- spotted bat
- fringed myotis
- western mastiff bat
- big free-tailed bat
- San Diego black-tailed jackrabbit
- Dulzura pocket mouse
- southern grasshopper mouse
- American badger

All of these sensitive mammal species are California special concern species, except for the fringed myotis, which is a BLM sensitive species. All of the bat species could potentially forage in this segment of the ROW, and roost in trees or rocky outcrops that occur in this segment. San Diego black-tailed jackrabbit likely occurs in the grasslands and open shrub lands in this segment of the ROW. The Dulzura pocket mouse potentially occurs in the softer soils in the scrub and chaparral habitats in this segment. The southern grasshopper has been documented at March Air Force Base, which is less than five miles from this segment. Only limited suitable habitat for the American badger may still exist in the undisturbed portions of this segment.

Special Habitat Management Areas Overview

Western Riverside MSHCP

Reche Canyon/Badlands Area Plan. The portion of this segment of the ROW that falls within the Badlands North Subunit of the Reche Canyon/Badlands Area Plan extends from San Bernardino Junction north to the Riverside County line. This portion of the ROW falls within criteria cells for almost its entire length in Riverside County. These cells fall within the areas requiring focused surveys for narrow endemic plants, burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat (in San Timoteo Creek). The ROW is located to the east of Proposed Linkage 5. Proposed Linkage 5 is comprised of the portion of San Timoteo Creek extending northwest from Redlands Boulevard to San Bernardino County. This linkage provides habitat for a number of Planning Species, including Los Angeles pocket mouse, yellow-breasted chat, least Bell's vireo, bobcat, and yellow warbler. This linkage also provides for movement of mountain lions and bobcats between San Bernardino County and Core Areas in the Badlands and Reche Canyon.

D.2.3.5 San Bernardino Junction to San Bernardino Substation

Plant Communities and Sensitive Habitats

This segment of the ROW is primarily dominated by developed areas. Undeveloped areas are present between the San Bernardino Junction and the residential area located approximately 0.5 miles north (between MPs W40.2 and W40.7). These areas are dominated by non-native grasslands with a few patches of sage scrub communities and mixed sage scrub/grassland communities. Between MPs 40.7 and the San Bernardino Substation, the proposed ROW is dominated by residential uses, parks, and agricultural areas. The San Bernardino Substation is located approximately 0.5 miles southeast of the Santa Ana River.

This developed and disturbed portion of this segment of the ROW does not support any sensitive vegetation communities. The mixed sage scrub communities that are sparsely distributed near the San Bernardino Junction would be considered partially disturbed due to the presence of the non-native grasses.

Special Status Plant and Wildlife Species

Plant Species

The slender-horned spineflower, a federal and State listed endangered species and CNPS List 1B species, has been documented within or adjacent to this segment of the ROW. Slender-horned spineflower is known to occur on the floodplain of the Santa Ana River north of the City of Redlands, approximately two miles northeast of the ROW (CNDDB, 2005).

According to the potential for occurrence criteria, the Santa Ana River woollystar has a high potential to occur in the northern portion of this segment because this species has been documented within three miles of this segment in the Santa Ana River channel (BioResource, 2003). However, the habitat in this segment of the ROW would not be considered suitable for this species because it is primarily developed or disturbed by human activities. Therefore, this species likely has a low potential for occurrence in this segment of the ROW.

Four sensitive plants have a high potential to occur along this segment of the ROW, including Jaeger's milkvetch, Parry's spineflower, California bedstraw, and Parish's desert-thorn. Two of these species, Jaeger's milkvetch and California bedstraw, are CNPS List 1B species. Jaeger's milkvetch may be found in grasslands of scrub habitats and due to the close proximity of known locations, this species may occur in the undeveloped areas between San Bernardino Junction and San Bernardino Substation. California bedstraw, which is also a BLM sensitive species, is known to occur within one mile of this segment in Reche Canyon (CNDDB, 2005). Parish's desert-thorn and Parry's spineflower are designated as CNPS List 2 and 3 species, respectively.

Seven sensitive plants have a moderate potential to occur along the ROW, including the following:

- chaparral sand-verbena
- round-leaved filaree
- ocellated Humboldt lily
- Pringle's monardella
- California muhly
- little mousetail
- Parish's gooseberry

As indicated above, two of the sensitive plant species are designated as List 1B species by the CNPS with the remainder designated as List 2, 3, or 4 species. In addition, to these CNPS designations the little mousetail is a federal species of concern. Chaparral sand-verbena may occur in the chaparral habitat in this segment, while Parish's gooseberry potentially occurs in the southern portion of this segment.

Wildlife Species

Invertebrates. This segment of the ROW is not known to support any listed or sensitive invertebrates. Vernal pools were not documented during any of the surveys conducted for this project.

Fishes and Amphibians. There have been no reported occurrences of listed or sensitive fish or amphibian species within this segment of the ROW. Suitable aquatic habitat for sensitive and listed fish species is not present in this segment. However, the western spadefoot toad, a California special concern species and BLM sensitive species, may potentially occur in the southern portion of this segment where suitable scrub and grassland habitats exist.

Reptiles. Five sensitive reptile species, including northern red-diamond rattlesnake, San Diego horned lizard, Belding's orange-throated whiptail, silvery legless lizard, and rosy boa, have a moderate potential to occur in the native habitats in the southern portion of this segment. All of these species are California special concern species, except for the rosy boa, which is a BLM sensitive species. These species are typically found in chaparral, coastal sage scrub, or grassland habitats and generally have been found within the region surrounding this segment.

Birds. The burrowing owl, a California special concern species and BLM sensitive species, has a high potential to occur in this segment because this species has been observed less than five miles from this segment, and the agricultural areas and open disturbed areas could potentially provide habitat for this species.

Three listed species of birds, the least Bell's vireo, western yellow-billed cuckoo, and coastal California gnatcatcher have a potential to occur in portions of this segment or in adjacent areas. The vireo and the cuckoo have been documented in the Santa Ana River Wash within five miles of this segment. Both species are State listed endangered species, while the cuckoo is also a federal species of concern and the vireo is a federally listed endangered species. However, suitable habitat for these species does not occur within this segment, therefore these species would not be expected to occur. The California gnatcatcher, a federally listed threatened species and California special concern species, has a moderate potential to occur in the scrub habitat located in the southern portion of this segment. This species has also been documented in the Santa Ana River Wash in (CNDDB, 2005).

Three California special concern bird species were determined to have a moderate potential to occur within or adjacent to this segment. These species include Cooper's hawk, California horned lark, and tri-colored blackbird. The Cooper's hawk is typically found in urban areas where there are trees for roosting and nesting. This species has been documented in San Timoteo Canyon, north of the border between San Bernardino and Riverside Counties (CNDDB, 2005). The California horned lark may potentially occur in the open grasslands, agricultural areas, and open scrub habitats within portions of this segment. The tri-colored blackbird is considered unlikely to occur within this segment because its typical wetland habitat does not exist.

Mammals. Two sensitive mammal species, western yellow bat and northwestern San Diego pocket mouse, have a high potential to occur within this segment of the ROW. The northwestern San Diego pocket mouse is a California special concern species.

One listed mammal species, the San Bernardino kangaroo rat, has a moderate potential to occur in this segment because it has been documented approximately a 0.5 miles northeast of this segment (CNDDB, 2005). Marginally suitable habitat is present in this segment of the ROW.

Five sensitive mammal species have a moderate potential to occur in or adjacent to this segment, including Townsend's big-eared bat, fringed myotis, Dulzura pocket mouse, pallid San Diego pocket mouse, and American badger. All of these sensitive mammal species are California special concern species, except for the fringed myotis, which is a BLM sensitive species. The bat species could potentially forage in this segment of the ROW, and roost in trees or rocky outcrops that occur in the southern portion of this segment. The Dulzura pocket mouse potentially occurs in the softer soils in the scrub and chaparral habitats in the southern portion of this segment. The pallid San Diego pocket mouse may occur near the northern portion of this segment, because the soft soils in the Santa Ana River Wash provide suitable soils for burrow construction. Only limited suitable habitat for the American badger may still exist in the undisturbed portions of this segment.

Special Habitat Management Areas Overview

This segment of the ROW does not fall within any special habitat management areas.

D.2.4 Applicable Regulations, Plans, and Standards

Federal

National Environmental Policy Act

NEPA (42 U.S.C. 4321 et seq.) declares a continuing federal policy that directs "a systematic, interdisciplinary approach" to planning and decision-making and requires environmental statements for "major Federal actions significantly affecting the quality of the human environment." Implementing regulations by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500-1508) requires federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. Federal agencies are further directed to emphasize significant environmental issues in project planning and to integrate impact studies required by other environmental laws and Executive Orders into the NEPA process. The NEPA process should therefore be seen as an overall framework for the environmental evaluation of federal actions.

Federal Land Policy Management Act

The designation of ACECs was authorized in Section 202 (c)(3) of the Federal Land Policy Management Act (FLPMA) of 1976, and was designed to be used as a process for determining the special management required by certain environmental resources or hazards (BLM, 1999). Specific information regarding the Federal Land Policy Management Act is contained in Section D.5.4 Wilderness and recreation of this document.

Endangered Species Act of 1973

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

- **Section 7** requires federal agencies, in consultation with, and with the assistance of the Secretary of the Interior or the Secretary of Commerce, as appropriate, to insure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) share responsibilities for administering the Act. Regulations governing interagency cooperation under Section 7 are found at 50 CFR Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing a take that may occur incidental to an otherwise legal activity.
- **Section 9** lists those actions that are prohibited under the Act. Take of a species listed in accordance with the Act is prohibited. There are two processes whereby a take is allowed when it is incidental to an otherwise legal activity. Section 9 of the Act prohibits (i.e., to harass, harm, pursue, hunt, wound, kill, etc.) of listed species of fish, wildlife, and plants without special exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or

injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or shelter. "Harass" is further defined as actions that create the likelihood of injury to listed species to an extent as significantly disrupt normal behavior patterns which include, but not limited to, breeding, feeding, and shelter.

- **Section 10** provides a means whereby a non-federal action with a potential to result in the take of a listed species could be allowed under an incidental take permit. Application procedures are found at 50 CFR Parts 13 and 17 for species under the jurisdiction of USFWS and 50 CFR Parts 217, 220, and 222 for species under the jurisdiction of NMFS.

Bureau of Land Management

BLM Sensitive Species are species designated by the State Director that are not already federally listed, proposed, or candidate species, or State listed because of potential endangerment. BLM's policy is to "ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered."

Under the federal administration of the Department of Interior, the BLM maintains a list of special status plant and wildlife species for each Field Office management area within Arizona. The November 4, 2005 *BLM Instructional Memorandum No. AZ-2006-002, Change 1 Concerning Updated BLM Sensitive Species for Arizona* contains a list of protected plant and wildlife species for each Field Office of the BLM in Arizona.

> **Sensitive (S):** Species of native plants and wildlife species that are considered Sensitive by the BLM when occurring on BLM-administered lands.

The BLM-administered lands within the Arizona segments of the Proposed Project are within territory of the Phoenix District Office and Yuma Field Office (YFO). This includes a total of 32 Sensitive status plant and wildlife species which were considered for the Proposed Project. The list for the Phoenix District Office includes seven plant species, seven mammal species, one bird species, three reptile species, no amphibian species, five fish species, and two invertebrate species for a total of 25 species. The list for the Yuma Field Office includes six plant species, seven mammal species, one bird species, three reptile species, no amphibian species, one fish species, and two invertebrate species for a total of 20 species. The BLM Yuma Field Office (YFO) is in the process of preparing a Resource Management Plan (RMP) and EIS to manage pubic lands within its planning area. The process was initiated March 30, 2004, with the publication of a Notice of Intent in the Federal Register.

The BLM-administered lands within the California segments of the Proposed Project are within territory of the Palm Springs Office. The Palm Springs South Coast Field Office manages approximately 1.7 million acres of public land in five geographic segments of southern California. The Palm Springs South Coast Field Office manages some of the most accessible desert recreation and wilderness areas available to the public and the area sup[ports a diverse array of sensitive plants and wildlife (http://www.blm.gov/ca/palmsprings). The list for the Palm Springs office contains over 20 sensitive wildlife species that may occur in the Proposed Project area.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-711) is a treaty signed by the United States, Canada, Mexico, and Japan that makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow

nests on bridges) occupied by migratory birds during the breeding season. The Act ~~states~~ makes~~that~~ it ~~is~~ unlawful to take, pursue, molest, or disturb these species ~~including bald (American) and golden eagles~~, their nests, or their eggs anywhere in the United States.

Wild and Free-Roaming Horses and Burros Act

Wild horses and burros are protected by the Wild and Free-Roaming Horses and Burros Act of 1971 (Public Law 92-195). The Wild Free-Roaming Horses and Burros Act of 1971 gave BLM and USFS the authority to manage, protect, and control wild horses on the nation's public rangelands to ensure healthy herds and healthy rangelands. The act states that "wild free-roaming horses and burros are living symbols of the historic and pioneer spirit of the West." Wild free-roaming horses and burros are protected from capture, branding, harassment, or death.

A wild free-roaming horse or burro, as defined by federal law, is an unbranded, unclaimed, free-roaming horse or burro found on Western public rangelands administered by BLM and USFS. Wild horses and burros are descendants of animals released by or escaped from Spanish explorers, ranchers, miners, U.S. Cavalry, or Native Americans. Within most herd areas, wild horses and burros graze with domestic livestock and a variety of indigenous wildlife species. Because they are generalist species, wild horses and burros inhabit a variety of habitats and vegetative communities.

Spreading across the border of Arizona and California, the Cibola-Trigo Herd Management Area (HMA) extends from Imperial Dam, west of the Colorado River, to Walters Camp in California. Located primarily between U.S. 95 and the Colorado River and I-8 and I-10, the HMA is about 20 miles north of Yuma, Arizona. The wild burros and horses of Cibola-Trigo HMA are managed in an ecological balance within their habitat to protect the forage plants. This ensures that there is plenty of feed for the burros, as well as for wildlife species. When the population exceeds the Appropriate Management Level, as determined through vegetative monitoring studies, BLM will remove some of the animals and offer them to the public through BLM's Adopt a Wild Horse or Burro Program (http://www.blm.gov/az/whb/mapcibola.html).

Clean Water Act

The Clean Water Act (CWA) (33 U.S.C. 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

- **Section 401** requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the United States must obtain a State certification that the discharge complies with other provisions of CWA. The Regional Water Quality Boards administer the certification program in California.
- **Section 402** establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into waters of the United States.
- **Section 404** establishes a permit program administered by the Army Corps of Engineers (ACOE) regulating the discharge of dredged or fill material into waters of the United States, including wetlands. Implementing regulations by ACOE are found at 33 CFR Parts 320-330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines and were developed by the Environmental Protection Agency (EPA) in conjunction with ACOE (40 CFR Parts 230). The Guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Section 10 of the Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act (33 U.S.C. 401 et seq.) is administered by ACOE. This section requires permits in navigable waters of the U.S. for all structures such as riprap and activities such as dredging. Navigable waters are defined as those subject to the ebb and flow of the tide and susceptible to use in their natural condition or by reasonable improvements as means to transport interstate or foreign commerce. The ACOE grants or denies permits based on the effects on navigation. Most activities covered under this act are also covered under Section 404 of CWA.

Bald Eagle Protection Act of 1940

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

Fish and Wildlife Coordination Act

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

National Wild and Scenic Rivers Act

The National Wild and Scenic Act (16 U.S.C. 1271-1287) is administered by a variety of State and federal agencies. Designated river segments flowing through federally managed lands are administered by the land managing agency, such as U.S. Forest Service, BLM, and the National Park Service. River segments flowing through private lands are administered by the Resources Agency in conjunction with local government agencies. The Act prohibits federal agencies from activities that would adversely affect the values for which the river was designated.

National Wildlife Refuge System Administration Act of 1966

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

Executive Order 11988 Floodplain Management

This order directs all federal agencies to avoid the long-term and short-term adverse impacts associated with floodplain modification, and to avoid direct or indirect support of floodplain development whenever there is a practicable alternative.

Executive Order 11990 Protection of Wetlands

This order establishes a National policy to avoid adverse impacts on wetlands whenever there is a practicable alternative.

State

Arizona

- Arizona Native Plant Law (Arizona Revised Statute §3-904)
- The 1996 Arizona Game and Fish Department Publication *Wildlife of special concern in Arizona*.
- December 2004, Lower Colorado River Multi-Species Conservation Program (Bureau of Reclamation)

Arizona Game and Fish Department

The Arizona Game and Fish Department (AGFD) proposed a list of special status plant and wildlife species, as presented under State authority in the 1996 document entitled *Wildlife of special concern in Arizona*. Although this document is still in preparation and has not been approved by the AGFD Commission, it is widely used by agencies and land managers for guidance and information. This list of Wildlife of Special Concern in Arizona (WSCA) includes 116 plant and wildlife species or subspecies. Most are listed because of significant habitat losses and threats, and in addition, many are also federally listed under the ESA. Additionally, the AGFD maintains a statewide database, known as the Heritage Data Management System (HDMS), which tracks records of occurrence for federally listed species or other species of special concern within Arizona and also sensitive areas, such as bat colonies and areas of designated critical habitat.

> **Wildlife of Special Concern in Arizona (WSCA)**: Species of wildlife with habitats and/or populations that are threatened, and with a high probability of extinction and/or extirpation in Arizona. There are four categories within the WSCA list: (1) extinct and/or extirpated species, such as those species or subspecies that are no longer extant in the wild or in captivity, anywhere in Arizona, (2) endangered species, such as those species or subspecies either extirpated from Arizona since the mid-1800s and/or for which extinction or extirpation is highly probable unless conservation efforts are undertaken soon, (3) threatened species, such as those species or subspecies whose continued presence in Arizona could be in jeopardy in the near future. Serious threats have been identified and populations are either lower than they were historically or extremely local and small, and (4) candidate species, such as those species or subspecies for which threats are known or suspected, but for which substantial population declines from historical levels have not been documented (though they appear likely to have occurred).

A total of 36 WSCA species were considered for the Proposed Project; these were species for which the AGFD has records of occurrence within Maricopa and/or La Paz Counties. For the Proposed Project, the AGFD was contacted in order to obtain a list of all records within the HDMS for any special status species, including WSCA species. This search revealed recorded locations of seven special status species within a 3-mile buffer of the Proposed Project alignment.

Arizona Department of Agriculture

The Arizona Native Plant Law (ANPL) as outlined in Arizona Revised Statute §3-904 provides protection to nearly 200 native plant species known to occur in Arizona. This Law does not prevent the clearing of land, but requires that the Arizona Department of Agriculture (ADA) is notified prior to the commencement of any land clearing activities. Additionally, a permit is necessary in certain circumstances in order to remove these native plants. The State of Arizona has four categories for special status plants and below are the definitions for the categories as provided under Arizona Revised Statute §3-904.

> **Highly Safeguarded (HS).** This category includes those species of native plants and parts of plants, including the seeds and fruit, whose prospects for survival in this State are in jeopardy or which are in danger of extinction throughout all or a significant portion of their ranges, and those native plants which are likely within the foreseeable future to become jeopardized or in danger of extinction throughout all or a significant portion of their ranges. This category also includes those plants resident to this State and listed under the ESA and/or other special protection statuses.
>
> **Salvage Restricted (SR).** This category includes those species of native plants to be afforded the exclusive protections involving the use of salvage permits, tags, and seals. This category includes those native plants that are not included in the highly safeguarded category, but are nevertheless subject to a high potential for damage by theft or vandalism.
>
> **Salvage Assessed (SA).** This category includes those species of native plants to be afforded the exclusive protections, involving the use of salvage tags and seals and annual salvage permits. This category includes those native plants that are not included in either the highly safeguarded or salvage restricted categories, but nevertheless have a sufficient value if salvaged to support the cost of salvage tags and seals.
>
> **Harvest Restricted (HR).** This category includes those species of native plants to be afforded the exclusive protections involving the use of harvest permits and wood receipts. This category includes those native plants that are not included in the highly safeguarded category, but are subject to excessive harvesting or over-cutting because of the intrinsic value of their by-products, fiber, or woody parts.

There are over 200 plant species in the above-listed categories, and all were considered for the Proposed Project, including all Highly Safeguarded plant species, Salvage Restricted plant species, Salvage Assessed plant species, and Harvest Restricted plant species. A complete list of the plant species as protected by this law can be obtained from the ADA's website (http://www.azda.gov/ESD/protplantlst.htm).

California

California Environmental Quality Act

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

California Endangered Species Act

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

Native Plant Protection Act

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

California Desert Plant Protection Act

The California Desert Protection Act was signed into law in 1994 and designated nearly 3.5 million acres of BLM land in the California desert as new wilderness areas. The Act also established protection for critical habitat for desert tortoise and bighorn sheep.

California Wild and Scenic Rivers Act

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

Streambed Alteration Agreements, California Fish and Game Code Sections 1601 1603

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

D.2.5 Significance Criteria and Approach to Impact Assessment

This section explains how impacts are assessed in Section D.2, and in Section D.2.5.1 presents the significance criteria on which impact determinations are based. In addition, Section D.2.5.2 lists the Applicant Proposed Measures relevant to Section D.2, and Section D.2.5.3 lists all impacts identified for the Proposed Project and alternatives.

D.2.5.1 Significance Criteria

The Proposed Project would have a significant impact to biological resources, if it would:

- Have a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG, AGFD, BLM, or USFWS.
- Have an adverse effect, either directly, through habitat modifications, or through introduction of non-native species, on any species listed as endangered, threatened, or proposed or critical habitat for these species.
- Have a substantial adverse effect, either directly, through habitat modification, or through introduction of non-native species, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG, AGFD, BLM or, USFWS.
- Have a substantial adverse effect on federally protected water quality or wetlands as defined by Sections 401 and 404 of the Clean Water Act, respectively (including, but not limited to riparian, marsh, vernal pool, and desert wash) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with local policies or ordinances protecting biological resources, such as a tree or cactus preservation policy or ordinance.
- Conflict with the provisions of a National Wildlife Refuge (Kofa) or an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or State HCP.

D.2.5.2 Applicant Proposed Measures

Applicant Proposed Measures (APMs) were identified by SCE in its CPCN Application to the CPUC. Table D.2-6 presents the APMs that are relevant to this section. Impact analysis assumes that all APMs will be implemented as defined in the table; additional mitigation measures are recommended in this section if it is determined that APMs do not fully mitigate the impacts for which they are presented.

Table D.2-6. Applicant Proposed Measures – Biological Resources

APM No.	Description
APM B-1 Vegetation	Avoid direct disturbance of highly sensitive features (as identified in E. Linwood Smith's (1985) Impact Assessment/Mitigation Planning Chart; see Appendix E) with spanning and careful local adjustment in tower footing placement. (BLM B-5.1 Vegetation) [Note: The reference to Appendix E is unknown. There is no Appendix E as part of the BLM right-of-way grant (provided from PEA Appendix A). However, the Smith report itself is found in FSEIS (1988) as Appendix B, Study of Desert Bighorn Sheep.]
APM B-2 Vegetation	Avoid the introduction of noxious weeds and/or other invasive species through standard noxious weed measures. This will benefit most of the species covered by the [Coachella Valley Multiple Species Habitat Conservation] plan.
APM B-3 Vegetation	Vehicular travel must be on established roads to the maximum extent practicable. Any off-road vehicle use should be strongly discouraged. This will benefit many of the species covered by the [Coachella Valley Multiple Species Habitat Conservation] plan.
APM B-4 Vegetation/ Wildlife	Avoid sand compaction at all sites in the Coachella Valley. This will benefit such species as the giant sand treader cricket, Coachella Valley Jerusalem cricket, and Coachella Valley milkvetch.
APM B-5 Vegetation/ Wildlife	Copper Bottom Pass: • Maintenance of low speed limit on right of way ROW to protect desert animals and reduce dust • Continuous application of water to ROW roads to reduce dust • Requirement that stopped vehicles stop engines if stationary for a determined period of time • Requirement that operators of vehicles, if stopped for longer than a determined period of time, inspect under their vehicles to ensure that no animals have taken shelter from the sun; this requirement has been implemented before by requiring that vehicles with stopped engines have their keys placed under the vehicle thus forcing the operator to inspect • Flagging of all disturbed areas if needed to clarify drive-able or walk-able areas • Tight control of the Copper Bottom Pass area to ensure that only planned construction traffic is allowed in the area and that minimal trips are planned • Restricted use of the area to periods outside of any animal breeding seasons • Tight control on electrical workers for approved hours of access • Ensure that all workers accessing this area have completed environmental awareness training for biological and cultural sensitivities; all trained workers would be equipped with stickers for their hardhats to provide for easy-to-spot inspection • Removal of all construction debris from the area at the conclusion of the work
APM B-6 Vegetation	Avoid vehicular travel in washes to protect triple-ridged milkvetch.
APM B-7 Vegetation/ Wildlife	No activities whatever should occur in wetland areas.
APM B-8 Vegetation	Provide additional detailed surveys and tower-specific adjustments as needed prior to construction for major sensitive feature sites (e.g., concentrations of sensitive plants, individual palm trees, woody dune or wash communities) which cannot be easily avoided by spanning. (See Appendix B of the Devers–Palo Verde No. 2 EIR [1987] and Appendix E of the SEIS [1988].) The methodologies and results of these surveys must be submitted to and approved in writing by the BLM Authorized Officer.
APM B-9 Vegetation	Initiate transplant efforts for *Ferocactus* and *Coryphantha* as soon as probable losses can be determined. Any plans for transplanting must be developed in consultation with a BLM botanist and approved in writing by the BLM Authorized Officer.
APM B-10 Vegetation	The right-of-way Holder[4] will have the Arizona State Department of Agriculture and Horticulture identify native plants that would otherwise be destroyed by construction and sell them to the Holder.
APM B-11 Vegetation	The Authorized Officer may require vegetation in certain areas to be cleared by hand tools. Scalping of top soil and removal of low growing vegetation will not be allowed unless authorized by the Authorized Officer.
APM B-12 Vegetation	Where possible, towers or access roads will be located so as to avoid sensitive plants or plant communities. Where this is not feasible, affected individual plants will be transplanted. Towers will also be placed so that lines will span critical wildlife habitat.

Table D.2-6. Applicant Proposed Measures – Biological Resources

APM No.	Description
APM B-13 Vegetation	Tower sites will be selected to allow maximum spacing of sensitive features.
APM B-14 Vegetation	Minimize the area needed for equipment operation and material storage and assembly.
APM B-15 Wildlife	In the vicinity of the Colorado River, existing tower spacings and conductor heights will be matched to the greatest extent practical. This would reduce the potential for bird collisions with the power line.
APM B-16 Wildlife	Surveys - When access along the utility corridor already exists, pre-construction surveys for transmission lines should provide 100 percent coverage for any areas to be disturbed and within a 100-foot buffer around the areas of disturbance. When access along the utility corridor does not already exist, pre-construction surveys for transmission lines should follow standard protocol for linear projects.
APM B-17 Wildlife	Access - To the maximum extent possible, access for transmission line construction and maintenance should occur from public roads and designated routes.
APM B-18 Wildlife	Disturbed areas - To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites should be sited in a manner that avoids desert tortoise burrows.
APM B-19 Wildlife	Restoration - Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored.
APM B-20 Wildlife	Ravens - All transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS's Division of ~~Law Enforcement~~ Migratory Birds to take common ravens or their nests.
APM B-21 Wildlife	No clearing of or other disturbance to riparian habitats. If unavoidable, riparian habitats must be replaced or restored. This action will benefit several riparian bird species including summer tanager, yellow warbler, yellow breasted chat, least Bell's vireo, and southwestern willow flycatcher.
APM B-22 Wildlife	Avoid impact to mesquite-dominated habitats to protect crissal thrasher.
APM B-23 Wildlife	Minimize impact to or removal of creosote bush to benefit Le Conte's thrasher.
APM B-24 Wildlife	Avoid any alterations to the vegetation structure of Washington fan palm oases to benefit southern yellow bat.
APM B-25 Wildlife	Avoid any alterations of mesquite hummock habitat to benefit Coachella Valley round-tailed squirrel.
APM B-26 Wildlife	Wash communities along the entire route and sand dune communities in the Coachella Valley (see Map 10-AZ in the Draft SEIS and Figure 4.5-1 in the CPUC Draft EIR, 1987) will be spanned to the extent possible.
APM B-27 Wildlife	Prior to construction activities, the Holder shall have a qualified tortoise biologist present a class or briefing to construction workers. Subjects addressed shall include tortoise sensitivity to human disturbance, daily and seasonal activity patterns, and proper handling for removal from roadways.
APM B-28 Wildlife	The Holder shall hire a qualified tortoise biologist to conduct daily inspections of roads and work areas within tortoise habitat during the tortoise season of activity (February 15 to June 15, July 15 to October 15). Tortoises found to be in jeopardy will be removed to a nearby site. Tortoises may be held for short periods, if judged necessary, to allow construction crews to pass through an area. The Holder will provide proper facilities for such temporary holding.
APM B-29 Wildlife	The Holder shall restrict the speed on all roads within tortoise habitat to a maximum of 25 miles per hour. The Holder is responsible for ensuring compliance with this limit by its employees.
APM B-30 Wildlife	Within tortoise habitat in California, spur roads shall not be bladed except where necessary to allow access for construction vehicles. Required vehicles shall enter on one pathway which is flagged and developed only by the passage of vehicles crushing vegetation. The spur shall be flagged by a qualified tortoise biologist prior to use. The spur shall avoid tortoise burrows and large perennial plants, yet be as short as possible within these requirements. Due to the presence of silty soils in Arizona, blading may occur.
APM B-31 Wildlife	Any desert tortoise observed on access roads or work areas will be moved immediately ~~100 yards~~ away from the roadway into safe areas.

Table D.2-6. Applicant Proposed Measures – Biological Resources

APM No.	Description
APM B-32 Wildlife	In areas considered to comprise suitable tortoise habitat, or other areas where tortoise are observed, all access roads and tower construction sites will be surveyed by a qualified biologist to delineate burrows or individuals for protection. Burrows near construction sites will be clearly delineated on the ground. Road, footing, and work area alignments should be modified to the extent possible to avoid aversely affecting any tortoise burrows encountered during these surveys. Where tortoise burrows will be unavoidably destroyed, they should be excavated carefully using hand tools, under the supervision of a field biologist with demonstrated prior experience with this species. See Map 11-AZ in Appendix F in the Draft EIS (1988) and Figure 4.5-2 in the Devers–Palo Verde No. 2 EIR (1987). Also see Appendix E for link and milepost descriptions and mitigation measures.
APM B-33 Wildlife	If possible, no new roads, tower sitings, or spur roads will be built in blow sand areas. However, if new spur roads are required through wind-blown sand habitat, the road will be returned to natural conditions and effectively closed (gated or bermed) following construction. Pre-construction surveys will identify wind-blown sand dune habitats.
APM B-34 Wildlife	Where the project crosses through the Coachella Valley Preserve, the Holder will cooperate with the Preserve in closing (gating) existing access roads. (a) A qualified biologist will also be present with work crews to survey and clear work areas daily for Coachella Valley fringe-toed lizard (CVFTL), flat-tailed horned lizard (FTHL), and other sensitive species in the Preserve and sand dune communities from Link 14 (Milepost 7.6) to Link 16 (Milepost 5.0) to identify if ay additional areas of occupied CVFTL and FTHL habitat are present along the route or at construction staging areas. (b) This survey will be conducted during appropriate seasons (March 15 to May 15) and conditions for species identification. For any areas of suitable habitat, this measure will apply. In the Coachella Valley, compacted soils should be scarified and seeded with a mix of native plant seeds, including bugseed (*Dicoria canescens*), to promote revegetation of plant species valuable to the lizard. Construction activity and surface disturbance will be prohibited during the period from January 1 to March 31 for the protection of the bighorn sheep lambing areas. These areas along the proposed route include Link 2 (Milepost 29.0 to 34.0) and Link 6 (Milepost 0.0 to 6.0).
APM B-35 Wildlife	Avoid upland areas where desert tortoises might occur and/or have a biologist present during construction activities that involve earth moving in order to move any tortoises (in burrows or cover-sites, or on the surface) that would likely be impacted.
APM B-36 Wildlife	Avoid construction activities that would tend to create wind barriers that might result in sand stabilization in order to minimize impacts to populations of the Coachella Valley fringe-toed lizard.
APM B-37 Wildlife	Mitigation for the coastal California gnatcatcher should include protocol-driven pre-construction surveys. If gnat-catchers are found to be present, suitable habitat should be avoided, including relocating towers and access. If habitat cannot be avoided, SCE should either restore damaged habitat, as at the Weapons Support Facility, Fallbrook Detachment, San Diego County (Soil Ecology and Research Group, 2004), or participate in land set-aside programs such as the Natural Community Conservation Planning program (NCCP). Another potential mitigation action would be that of assisting in the provision of funding for monitoring programs that may be under-taken through the Western Riverside County Multiple Species Habitat Conservation Plan.
APM B-38 Wildlife	For least Bell's vireo, suitable habitat would be completely avoided by relocating tower sites and/or associated access roads. There would be approximately 0.8 acres of suitable habitat potentially affected by the proposed west of Devers 230 kV upgrade; this small area should be entirely avoided. If avoidance is not possible and the habitat is damaged or lost, SCE should participate in habitat banking programs or provide funding through the Western Riverside County Multiple Species Habitat Conservation Plan for plan-related monitoring of this species.
APM B-39 Wildlife	Stephens' kangaroo rat habitat would be avoided, where possible.
APM W-2	Construction equipment will be kept out of flowing stream channels except when absolutely necessary to construct crossings.
APM W-3	Erosion control and hazardous material plans will be incorporated into the construction bidding specifications to ensure compliance.
APM W-6	Diversion dikes will be required to divert runoff around a tower structure if (a) the location in an active channel cannot be avoided; and (b) where there is a very significant flood scour/deposition threat, unless specifically by the BLM Authorized Officer.

Source: SCE, 2005a.
1 APM refers to Applicant Proposed Measure. If there is a measure in the 1989 BLM ROW Grant that is not specified in the PEA as an APM, this FLM Grant measure is listed in shaded rows at the end of the table and is labeled BLM followed by its reference in the ROW Grant.
2 Refers to the Devers-Harquahala 500 kV transmission line.
3 Refers to the West of Devers 230 kV transmission line upgrade.
4 Holder is BLM's reference to the ROW Grant holder. Holder is SCE, the project proponent.

D.2.5.3 Impacts Identified

The Proposed Project could result in temporary disturbance and/or permanent loss of sensitive vegetation communities and listed and sensitive plant and animal species. Temporary disturbance includes short-term impacts (i.e., less than 6 months) associated with construction, such as placement of new transmission towers and removal of existing towers, construction of new access roads and improvements to existing access roads, and work at conductor tensioning/splicing and staging/laydown areas. Permanent loss involves long-term impacts associated with permanent project features (e.g., new transmission towers and substations) that would remain throughout the life of the project. Examples of activities that may result in temporary impacts to sensitive vegetation communities and wildlife include:

- Installation of new 500 kV circuit steel lattice tower structures
- Construction of substation facilities
- Construction of series capacitor banks
- Removal of existing 230 kV single-circuit transmission lines
- Construction of a new 230 kV double-circuit transmission line
- Upgrade of 230 kV transmission lines
- Establishment of construction staging and laydown areas
- Construction of access and spur roads.

Each of these activities would cause some removal of existing vegetation and disturbance of surface soils. In addition, permanent loss of habitat would occur where new tower or pole foundations are installed, where substations and series capacitor banks are constructed, and where access and spur roads are constructed.

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

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

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

Impacts to listed and sensitive wildlife and plant species may occur as a result of removal of habitat and direct mortality resulting from construction and operational activities.

Table D.2-7 lists the impacts identified for the Proposed Project and alternatives, along with the significance of each impact. Detailed discussions of each impact and the specific locations where each is identified are identified below. Impacts are classified as Class I (significant, cannot be mitigated to a level that is less than significant), Class II (significant, can be mitigated to a level that is less than significant), Class III (adverse, but less than significant), and Class IV (beneficial).

Table D.2-7. Impacts Identified – Biological Resources

Impact No.	Description	Impact Significance
Proposed Project		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class II
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class III
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II, III
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact, Class II,III
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact, Class III
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	No Impact, Class II, III
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
SCE Harquahala-West Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class II
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class III
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact

Table D.2-7. Impacts Identified – Biological Resources

Impact No.	Description	Impact Significance
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	No Impact
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
SCE Palo Verde Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class II
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class III
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	No Impact
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
Harquahala Junction Switchyard Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class II
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III

Table D.2-7. Impacts Identified – Biological Resources

Impact No.	Description	Impact Significance
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class III
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	No Impact
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
Desert Southwest Transmission Project Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class II
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class II
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	Class II
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
Alligator Rock–North of Desert Center Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III

Table D.2-7. Impacts Identified – Biological Resources

Impact No.	Description	Impact Significance
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class III
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class II
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	No Impact
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
Alligator Rock–Blythe Energy Transmission Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class III
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class II
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	No Impact
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III

Table D.2-7. Impacts Identified – Biological Resources

Impact No.	Description	Impact Significance
Alligator Rock–South of I 10 Frontage Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class III
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class II
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	No Impact
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
Devers-Valley No. 2 Alternative		
B-1	Construction activities would result in temporary and permanent loss of native vegetation	Class II
B-2	Construction activities would result in the introduction of invasive non-native or noxious plant species	Class II
B-3	Construction activities would create dust that may result in degradation to vegetation	Class III
B-4	Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species	Class III
B-5	Construction activities during the breeding season would result in a potential loss of nesting birds	Class II
B-6	Construction activities would result in indirect or direct loss of listed plants	Class II
B-7	Construction activities would result in indirect or direct loss of listed wildlife or habitat	Class II, III
B-8	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants	Class II
B-9	Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife	Class II, III
B-10	Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands	Class II
B-11	Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites	No Impact
B-12	Construction activities would result in adverse effects to linkages and wildlife movement corridors	No Impact
B-13	Construction activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, State, or federal conservation plans	Class II

Table D.2-7. Impacts Identified – Biological Resources

Impact No.	Description	Impact Significance
B-14	Operation of the transmission line may result in electrocution of listed and/or protected bird species	Class III
B-15	Operation of the transmission line may result in collisions by listed bird species	Class II
B-16	Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers	Class II
B-17	Wildlife mortality resulting from traffic on access roads	Class III
B-18	The Project would result in impacts to Management Indicator Species.	Class II

D.2.6 Environmental Impacts and Mitigation Measures for the Proposed Project – Devers-Harquahala

This section presents a discussion of impacts and mitigation measures for the 500 kV portion of the DPV2 Project. The discussion characterizes the types of impacts that may occur to each resource for the Proposed Project for Arizona and California. Specific impacts and mitigation measures within each segment are identified in Table D.2-8.

Table D.2-8. Summary of Impacts by Segment

Proposed Project Segment	Impacts																	Mitigation Measures[1]
	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	
Harquahala to Kofa National Wildlife Refuge	Class II	Class II	Class III	Class III	Class II	Class II	Class II	Class III	Class II	Class II	No Impact	No Impact	No Impact	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-7b, B-7c, B-9a, B-9b, B-9c, B-9d, B-9f B-9e, B-15a, B-16a
Kofa National Wildlife Refuge	Class II	Class II	Class III	Class III	Class II	Class II	Class II	Class III	Class II	Class II	Class III ~~No Impact~~	Class III ~~No Impact~~	Class III	Class III	Class II	Class II	Class III	B-1a, B-1b, B-2a, B-2b, B-5a, B-6a, B-7b, B-7c, B-9a, B-9b, B-9c, B-9d, B-9f, B-15a, B-16a
Kofa National Wildlife Refuge to Colorado River	Class II	Class II	Class III	Class III	Class II	Class II	Class II	Class III	Class II	Class II	No Impact	Class III	No Impact	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-7a, B-7b, B-7c, B-9c, B-9d, B-9e, B-15a, B-16a
Colorado River to Midpoint Substation	Class II	Class II	Class III	Class III	Class II	Class II	Class II	Class II	Class II	Class II	No Impact	Class III	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-7b, B-7c, B-8a, B-9b, B-9c, B-9d, B-9e, B-9g, B-15a, B-16a
Midpoint Substation	Class II	Class II	Class III	Class III	Class II	Class II	Class II	Class II	Class II	Class III	No Impact	No Impact	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-7b, B-7c, B-8a, B-9a, B-9d, B-9e, B-9g, B-9h
Midpoint Substation to Cactus City Rest Area	Class II	Class II	Class III	Class III	Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class III	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-7b, B-7c, B-8a, B-9b, B-9d, B-9e, B-9g, B-9h, B-15a, B-16a,

Table D.2-8. Summary of Impacts by Segment

Proposed Project Segment	Impacts																	Mitigation Measures[1]
	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	
Cactus City Rest Area to Devers Substation	Class II	Class II	Class III	Class III	Class II	Class II	Class II, III	Class III	Class II	Class II	Class II	Class III	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-7b, B-7c, B-7d, B-8a, B-9a, B-9b, B-9d, B-9e, B-9h, B-9i, B-15a, B-16a
Devers Substation to East Border of Banning	Class II	Class II	Class III	Class III	Class II	Class II	Class II, III	Class III	Class II	Class II	Class II	Class III	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-7b, B-7c, B-8a, B-9a, B-9b, B-9d, B-9e, B-9g, B-9h, B-9i, B-13a, B-13b, B-15a, B-16a,
Banning and Beaumont	Class II	Class II	Class III	Class III	Class II	Class II	Class II, IIII	Class III	Class II	Class II	Class II	Class III	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-8a, B-9a, B-9b, B-9d, B-9e, B-9g, B-9h, B-9i, B-13a, B-13b, B-15a, B-16a
Calimesa and San Timoteo Canyon	Class II	Class II	Class III	Class III	Class II	Class II	Class II, III	Class III	Class II	Class II	Class III	Class III	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-7c, B-7d, B-7f, B-8a, B-9a, B-9b, B-9d, B-9e, B-9g, B-9h, B-13a, B-13b, B-15a, B-16a
San Bernardino Junction to Vista Substation	Class II	Class II	Class III	Class III	Class II	Class II	Class II, III	Class III	Class II	Class II	No Impact	No Impact	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-7c, B-7d, B-7e, B-7f, B-8a, B-9a, B-9b, B-9d, B-9e, B-9h, B-13a, B-13b, B-15a, B-16a

Table D.2-8. Summary of Impacts by Segment

Proposed Project Segment	Impacts																	Mitigation Measures[1]
	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	
San Bernardino Junction to San Bernardino Substation	Class II	Class II	Class III	Class III	Class II	Class II	Class II, III	Class III	Class II	Class II	Class II	No Impact	Class II	Class III	Class II	Class II	Class III	B-1a, B-2a, B-2b, B-5a, B-6a, B-7c, B-7d, B-7e, B-7f, B-8a, B-9a, B-9b, B-9d, B-9e, B-9h, B-13a, B-13b, B-15a, B-16a

1 Following is a list of the mitigation measures that apply to the Proposed Project:

B-1a Prepare and implement a Habitat Restoration/Compensation Plan
B-1b Coordinate tower placement with USFWS/BLM
B-2a Conduct invasive and noxious weed inventory
B-2b Implement control measures for invasive and noxious weeds
B-5a Conduct pre-construction surveys and monitoring for breeding birds
B-6a Develop a transplanting plan
B-7a Avoid Colorado River
B-7b Conduct pre-construction tortoise surveys
B-7c Purchase mitigation lands for impacts to tortoise habitat
B-7d Purchase mitigation lands for impacts to fringe-toed lizard habitat
B-7e Conduct focused surveys for California gnatcatchers
B-7f Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat
B-8a Conduct surveys for listed plant species
B-9a Conduct pre-construction surveys
B-9b Conduct biological monitoring
B-9c Implement a Worker Environmental Awareness Program
B-9d Conduct pre-construction reptile surveys
B-9e Conduct pre-construction surveys and owl relocation
B-9f Perform construction outside of breeding and lambing period
B-9g Conduct pre-construction surveys and relocation for American badger
B-9h Conduct pre-construction surveys for roosting bats
B-9i Schedule construction when the Coachella Valley round-tailed squirrel is dormant
B-13a Demonstrate compliance with the Western Riverside MSHCP
B-13b Implement the Best Management Practices required by the Western Riverside MSHCP
B-15a Utilize collision-reducing techniques in installation of transmission lines
B-16a Prepare and implement a raven control plan

D.2.6.1 Impacts of Transmission Line Construction

D.2.6.1.1 Vegetation

Construction impacts to vegetation may occur in a variety of ways, including the direct removal of plants during the course of construction. As these impacts are generally localized and are primarily temporary in nature they are not usually considered significant unless the habitat type is regionally unique or is known to support sensitive species. Clearing and grading may also result in the alteration of soil conditions, including the loss of native seed banks and change the topography and drainage of a site such that the capability of the habitat to support native vegetation is impaired. Desert ecosystems subject to ground disturbance can take decades to recover, if at all, and are subject to changes in vegetation communities in disturbed areas. In total these activities may also result in the creation of conditions that are favorable for the invasion of weedy exotic species that prevent the establishment of desirable vegetation and may adversely affect wildlife.

Depending on the site specific topography, these impacts may extend beyond the ROW unless precautions are taken. The removal of native vegetation types, such as desert scrub, coastal sage, or chaparral, creates possibilities for erosion or weed invasion that can affect adjacent and downslope habitats. As such, it is the indirect, off-ROW impacts associated with the removal of native vegetation that may be significant. Removal or incidental loss of sensitive species or individual native specimen trees would also be considered a significant impact. There are several general items to be addressed for the Proposed Project as a whole, each of which contributes to the project's impacts and requires specific mitigation needs.

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

Depending on the location of the segment, the Proposed Project would result in both temporary and permanent impacts to a variety of regionally unique habitats. In Arizona and the eastern portion of the California alignment, construction would primarily result in impacts to Sonoran desert scrub, dry desert wash woodland, and disturbed communities. In the Palo Verde Valley several transmission poles are located in or adjacent to agricultural fields.

Construction of the Proposed Project would also have the potential to impact stabilized desert sand fields, mesquite hummocks, stabilized desert dunes, ephemeral sand fields, and Sonoran mixed woody and succulent scrub communities that are interspersed with the Sonoran desert scrub and dry desert wash woodland communities. These important transitional plant communities occur between the Cactus Rest Area and the Devers Substation portion of the alignment. Scattered desert fan palm oases are also present along the base of the Indio Hills north of the proposed alignment in the Coachella Valley.

Construction activities would result in potential impacts to Sonoran desert scrub habitat and Sonoran mixed woody and succulent scrub at tower locations between the Devers Substation and Banning. The Proposed Project may also impact small populations of brittlebush scrub, saltbush scrub, and catclaw acacia/grassland in this segment. West of Banning construction would result in potential impacts to catclaw scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, coastal sage scrub, and chaparral communities that occur in the foothills below the San Bernardino National Forest. This segment also includes developed and disturbed areas that support little or no native vegetation. Vegetated drainages characterized by riparian scrub also occur in this segment of the Proposed Project.

Habitat in the Calimesa and San Timoteo Canyon segment of the alignment supports populations of chaparral, sage scrub, alluvial sage scrub, chaparral/grassland mixed communities, and non-native grass-

lands. This area was subject to a wildfire in 2005 and many plant communities in the segment were burned. Scattered oak woodlands occur in some areas and San Timoteo Creek supports a well developed riparian community. As the Proposed Project moves into developed areas near the Vista Substation site would result in potential impacts to patches of mixed Riversidean sage scrub/non-native grasslands and mixed coastal sage scrub/non-native grasslands. Coastal sage scrub and chaparral communities are also present in the Calimesa and San Timoteo Canyon and the San Bernardino Junction to Vista Substation segments of the Proposed Project. Table D.2-9 contains a description of the plant communities that occur in each segment.

Ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, transportation, maintenance of construction equipment and supplies, staging area and material yard preparation and use, and use or improvement of existing access roads has the potential to disturb the vegetation communities identified in Table D.2-9. With the exception of disturbed and landscaped areas, the permanent loss and temporary disturbance of native vegetation communities (Sonoran desert scrub, dry desert wash woodland, stabilized desert sand fields, mesquite hummocks, stabilized desert dunes, ephemeral sand fields, Sonoran mixed woody and succulent scrub, fan palm oasis, riparian, Riversidean sage scrub and chaparral) resulting from the construction of the Proposed Project would result in significant impacts to native vegetation communities (Class II) without mitigation.

SCE has developed specific APMs to address potential impacts to sensitive plant communities that occur in the Proposed Project area. For example, APM B-1 is intended to avoid disturbance to highly sensitive features that occur in BLM ROW. SCE has also developed APMs including conducting detailed surveys of the tower locations for sensitive plants or plant communities (APM B-8) and to locate towers outside of sensitive plant communities where possible (APM B-12). To reduce potential impacts to vegetation communities in this SCE would also implement a series of other APMs including B-3, B-4, B-6, B-13, B-16, B-17, B-19, B-25, B-26, B-33, B-34, and B-36. A complete description of APMs is located in Table D.2-6. The measures are designed to minimize impacts to vegetation communities, sand dunes, blow sands areas, and sensitive plants in the Coachella Valley and in other habitats that occur in the Proposed Project area. In addition to the APMs proposed by SCE, potential impacts to native vegetation would be reduced to a less than significant level through implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Coordinate tower placement with USFWS/BLM).

Table D.2-9. Habitat Type per Segment

Segment	Habitat Type
Harquahala to Kofa National Wildlife Refuge	Sonoran desert scrub
Harquahala Mountain Telecommunication Site	Sonoran desert scrub and Arizona Chaparral Series
Kofa National Wildlife Refuge	Sonoran desert scrub
Kofa National Wildlife Refuge to Colorado River	Sonoran desert scrub, Sonoran riparian deciduous woodland
Palo Verde Valley (Colorado River to Midpoint Substation)	~~Cottonwood and willow riparian,~~ Sonoran desert scrub, Saltcedar riparian scrub
Midpoint Substation	Creosote bush scrub
Midpoint Substation to Cactus City Rest Area	Creosote bush scrub, Dry desert wash, Sonoran desert scrub, Desert fan palm oasis woodland
Cactus City Rest Area to Devers Substation	Sonoran creosote bush scrub, Dry desert wash woodland, Desert sand field, Mesquite hummock, Stabilized sand field, Stabilized desert dune, Ephemeral sand field, Sonoran mixed woody and succulent scrub, Creosote bush scrub, Desert fan palm oasis woodland, Mesquite bosque, Mojave Riparian Forest
Devers Substation to East Border of Banning	Sonoran of creosote bush scrub, Sonoran mixed woody and succulent scrub, Brittlebush scrub, Saltbush scrub, Catclaw acacia, Catclaw acacia/grassland

Table D.2-9. Habitat Type per Segment

Segment	Habitat Type
Banning and Beaumont	Non-native grassland, Riversidean sage scrub/chaparral, Riversidean alluvial fan sage scrub, catclaw scrub, coastal sage scrub, and chaparral
Calimesa and San Timoteo Canyon	Chaparral, Sage scrub/chaparral/grassland, Riversidean alluvial fan sage scrub, Non-native grassland, Oak woodland, Riparian
San Bernardino Junction to Vista Substation	Non-native grasslands, Mixed sage scrub/non-native grassland
San Bernardino Junction to San Bernardino Substation	Non-native grasslands, Sage scrub, Mixed sage scrub/grassland

Mitigation Measures for Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.** SCE shall restore all areas disturbed by project construction, including temporary disturbance areas around tower construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations that are removed during construction of the Proposed Project. Where onsite restoration is planned for mitigation of temporary impacts to sensitive vegetation communities, SCE shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC/BLM. Hydroseeding, drill seeding, or an otherwise proved restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC/CDFG/AGFD/FWS and BLM ~~(on BLM lands)~~. SCE shall flag the limits of disturbance at each construction site. The Plan shall incorporate the measures identified in the June 2006 Memorandum of Understanding regarding vegetation management along rights-of-way for electrical transmission and distribution facilities on Federal lands. In project areas that occur in the WRCMSHCP plan area, SCE shall use the applicable Best Management Practices identified in the WRCMSHCP.

The creation or restoration of habitat shall be monitored for five years after mitigation site construction, or until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the CPUC/BLM.

B-1b **Coordinate tower placement with USFWS/BLM.** Where the proposed route crosses the Kofa National Wildlife Refuge, SCE shall coordinate with the U.S. Fish and Wildlife Service, Division of Refuges' refuge management personnel to determine specific tower site and spur road locations in order to minimize habitat disturbance and/or the loss of valuable habitat features. SCE shall demonstrate compliance with this measure prior to construction.

D.2.6.1.2 Introduction of Non-Native Plant Species

The inadvertent introduction of non-native plant species is a special concern for desert plant communities and is recognized by the BLM as a threat to native vegetation communities. Non-native plants pose a threat to the natural processes of plant community succession, fire frequency, and can affect the biological diversity and species composition of native plant communities. The survival of some populations of special status species could be adversely affected by the success of an introduced plant species.

For example the introduction of non-native plant species has radically altered the natural characteristics of plant communities in the Great Basin since the mid-19th century. Species of particular concern are the noxious weed species considered to be capable of the most harm. Some of the noxious weeds known to occur in Arizona and California include Russian knapweed (*Acroptilon repens*), globed-podded hoary cress (*Cardaria draba*), and diffuse knapweed (*Centauria diffusa*). Invasive species include common Russian thistle, and brome grasses. Both California and Arizona have laws that prohibit the introduction and willful spread of noxious weeds on private and public lands.

Impact B-2: Construction activities would result in the introduction invasive non-native or noxious plant species (Class II)

The Proposed Project would temporarily remove native vegetation communities at the construction sites located adjacent to each tower and along access roads, laydown areas or Substation sites. Introduction of non-native plant species would occur primarily during construction, but would also continue to occur during operation and maintenance phases of the Proposed Project. The introduction of non-native or noxious weeds would be related to the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed, use of straw bales or wattles that contain seeds of non-native plant species, and enhanced public access to the project corridor during and after construction. Vehicles parking along access roads that contain populations of noxious weeds can also result in the introduction of these species into areas not previously infested.

To reduce the potential for the introduction of noxious weeds SCE would implement APM B-2 (Standard Noxious Weed BMPs) and B-11, which would require hand clearing of vegetation in certain areas located along the ROW. This APM would facilitate the maintenance of existing root systems which may help to stabilize the soils against erosion and assist in the restoration of these areas if the plants resprout at the conclusion of project activities. SCE would also implement APM B-19 which would require the restoration of disturbed areas at the conclusion of construction. However, SCE has not indicated which areas would be subject to hand clearing or restoration at this time. The introduction of non-native plant species would be considered a significant impact (Class II) without mitigation. Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-2a **Conduct invasive and noxious weed inventory.** SCE shall survey the project corridor, including access roads, for populations of invasive and noxious weeds prior to the start of construction. All populations of invasive and noxious weeds within 500 feet of each tower location shall be flagged prior to construction. The Applicant shall submit a Noxious Weed Control Plan to BLM, CPUC, ADGF, CDFG, and/or USFWS at least 60 days prior to the start of construction. The weed control plan shall specify the location of existing weed populations; measures to control introduction and spread of noxious weeds in the project corridor; worker training, specifications, and inspection procedures for construction materials and equipment used in the project corridor; post-construction monitoring for noxious weeds; and eradication and control methods.

Known populations of invasive and noxious weeds in the project corridor shall be evaluated by BLM, CPUC, CDFG, and USFWS to identify candidates for eradication. Selected weed populations shall then be eradicated prior to construction.

All seeds and straw material shall be certified weed free. All gravel and fill material used during project construction and maintenance shall be certified weed free by the local County Agriculture Commissioner's Office.

B-2b **Implement control measures for invasive and noxious weeds.** SCE shall adhere to the BLM management guidelines for reducing the potential for the introduction of noxious weeds and invasive, non-native plant species ~~on the BLM lands~~ by implementation of the following standards:

- **Wash all equipment and vehicles.** Vehicles and all equipment must be washed BEFORE AND AFTER entering all project sites unless otherwise directed in writing by the BLM. This includes wheels, undercarriages, bumpers and all parts of the vehicle. In addition, all tools such as chain saws, hand clippers, pruners, etc., must also be washed BEFORE AND AFTER entering all project ~~sites~~areas. For example, vehicles traveling into contaminated areas are the main dispersal mechanism for yellow star-thistle. All washing must take place where rinse water is collected and disposed of in either a sanitary sewer or a landfill.
- **Keep written logs.** When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used and staff present. The log shall contain the signature of the responsible crewmember.
- **Written logs will be available** for CPUC/BLM inspection and shall be turned in to BLM on a weekly basis.
- **Post-construction weed abatement on the Coachella Valley Preserve.** Post-construction follow-up weed abatement will be conducted on the work areas within the Coachella Valley Preserve and Kofa National Wildlife Refuge. Weed abatement will be conducted during the spring following construction and prior to when the weeds establish flowers or produce seeds.

D.2.6.1.3 Wind Blown Dust

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. Increased levels of dust on the leaves of plants can decrease the photosynthetic capabilities of the plants. SCE would implement Title 1 measures (Air Quality) to decrease fugitive dust including reduced vehicle speeds, use of tackifiers, and periodic watering of the ROW. Watering will be done in such a way as to prevent pooling of water on the soil surface so that toad species would not be stimulated to emerge from their subsoil aestivation burrows prior to natural rain events. Because the vegetation in desert areas is typically subject to blowing winds and dust, the additional levels of dust would not be expected to significantly impact the photosynthetic capabilities of plants in the surrounding areas. Vegetation in coastal sage scrub and chaparral communities is more susceptible to wind blown dust however, implementation of standard air quality measures would reduce impact to these plant communities. With the implementation of Title 1 rules the potential impacts of increased dust settling on plants is expected to be adverse but not significant (Class III).

D.2.6.1.4 Wildlife

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

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

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

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

Local wildlife populations along the ROW are expected to temporarily decline or disperse during the construction phase of the project but are expected to return to their pre-construction levels following the restoration of the laydown areas and tower erection sites. Also, as construction is limited to relatively small areas wildlife would likely return to the ROW as work crews move to new tower locations.

Construction could also result in an increase in accidental road-killed wildlife due to increased vehicle traffic along the construction corridor. Diurnally active reptiles and mammals are the most likely to be subject to mortality from construction vehicles.

Noise, dust, visual disturbance from increased human activity, and exhaust emissions from heavy equipment during construction could result in native habitats adjacent to the construction zone being temporarily unattractive to wildlife. Construction could impact wildlife in adjacent habitats by interfering with breeding or foraging activities, altering movement patterns, or causing animals to temporarily avoid areas adjacent to the construction zone. Nocturnally active wildlife would be affected less by construction than would diurnally active species.

Wildlife species are most vulnerable to construction-related disturbances during their breeding seasons. Disturbances from construction could result in nest, roost, or territory abandonment and subsequent reproductive failure if these disturbances were to occur during an affected species' breeding season.

A large part of the proposed route would be constructed along the existing utility ROW and within or immediately adjacent to existing maintained road easements. Most of the wildlife expected to be impacted by construction in these disturbed easements are composed of common, wide-ranging species. Due to the narrow area of disturbance along this project and the short duration of disturbance, most of the more common wildlife species found along the route are expected to quickly recolonize the corridor after construction and subsequent revegetation work is completed. Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on wildlife from construction would generate potentially adverse but less than significant impacts (Class III).

D.2.6.1.5 Nesting and Migratory Birds

The Proposed Project contains a variety of plant communities along the length of the ROW that provide for the foraging and nesting for migratory birds. Some of these areas include the Sonoran desert and coastal scrub communities that occur in Arizona and California; riparian drainages including the Colorado River, San Timoteo Creek, and San Gorgonio River; and the natural rock features such as cliffs and large rock outcrops associated with Saddle Mountain, Palo Verde Hills, Big Horn Mountains, and Eagletail Mountains in Arizona or the Chuckwalla Mountains in California.

As described above, ground-disturbing activity including tower pad preparation and construction or grading of new access roads has the potential to disturb vegetation utilized by wildlife including nesting birds. With the exception of a few non-native birds an active nest is fully protected against take pursuant to the Migratory Bird Treaty Act. Nesting birds are also offered protection from the BLM and AGFD. It is unlawful to take, possess, or destroy the nest or eggs of any such bird. Impacts could occur if trees and/or shrubs were removed that contained an active nest. The removal of habitat during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. The Proposed Project has the potential to violate the Migratory Bird Treaty Act as a result of habitat removal during the breeding season.

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

Construction activities, including the construction of towers, the establishment of staging/laydown facilities, stringing of conductors, and the increased presence of humans may result in direct or indirect impacts to nesting birds that may occur in the Proposed ROW. The Proposed Project may also impact raptors that utilize the existing towers for nesting and to burrowing owls that frequent the edges of agricultural fields, existing roads, and irrigation canals for wintering or breeding habitat. These birds may abandon their nests if construction activities occur in close proximity to the nests. Displacement of raptors or burrowing owls during the breeding season would be considered a significant impact (Class II) without mitigation.

To reduce potential impacts to nesting birds and raptors SCE would implement APMs prior to construction of the project. These include APMs B-8 and B-16 that require additional detailed surveys within a 100-foot buffer of project areas and the avoidance of sensitive sites if present. These APMs, by themselves, would not sufficiently ensure that impacts to migratory birds would be less than significant. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would ensure that violation of the Migratory Bird Treaty Act does not occur and would reduce impacts to nesting birds to an adverse, but less than significant level (Class II).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.** SCE shall conduct protocol level surveys for nesting birds if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, and access road/spur road locations. SCE shall be responsible for designating a CPUC/BLM-approved qualified biologist who can conduct pre-construction surveys and monitoring for breeding birds. If State or federally listed birds ~~If breeding birds~~ with active nests are found, a biological monitor shall establish a 500-foot buffer around the nest and no activities will be allowed within the buffer until the young have fledged from the nest or the nest fails. The biological monitor shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the 500-foot buffer until the nesting cycle is complete or the nest fails. The biological monitor shall be responsible for documenting the results of the surveys and the ongoing monitoring. A 300-foot buffer shall be implemented in the event that raptors or other species protected under the MBTA are located. This buffer will be evaluated after consultation with the CPUC/BLM/CDFG/and USFWS.

D.2.6.1.6 Threatened or Endangered Species

Vegetation

Habitat that occurs along the Proposed Project ROW in both Arizona and California supports known populations of threatened or endangered plants. Ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, transportation, maintenance of construction equipment and supplies, staging area and material yard preparation and use, and use or improvement of existing access roads has the potential to disturb either individual plants or populations of these species.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II)

In Arizona, ~~construction activities would result in potential impacts to two federally listed species, Arizona agave (*Agave arizonica*), which is listed as endangered for Maricopa County but is also proposed for delisting from the ESA and the Arizona cliff rose (*Purshia subintegra*).~~ t~~T~~he project may ~~also~~ remove ~~other~~ plant species protected by the Arizona Native Plant Law, including blue palo verde, foothill palo verde, velvet mesquite, desert ironwood, ocotillo, and various cacti (saguaro, chollas, barrel, hedgehog, beavertail, prickly pear, desert Christmas, and nipple) that occur within the Proposed Project route. These species are protected from being salvaged, harvested, or otherwise removed from the environment.

SCE has indicated that APMs would be implemented to ensure that construction vehicles travel on established roads to the maximum extent practicable (APM B-3), and that spur roads, access roads, and other disturbed sites created during construction are recontoured and restored following construction activities (APM B-19). These actions would serve to minimize disturbances to protected plants and ensure that native habitat is restored to reduce the potential for invasive species. Additionally, SCE would conduct pre-construction surveys for sensitive or protected plants (APM B-8) and concentrations of sensitive plants or salvage-restricted plants are avoided (APM B-9; B-12; B-13).

In Arizona, certain native plants have been authorized for transplanting including *Ferocactus* and *Coryphantha* species. SCE would implement (APM B-9) which authorizes that these and other native plants may be transplanted (APM B-12) or sold to SCE. Because there is still potential for significant impacts to occur to native plants protected under the Arizona Native Plant Law, construction-related impacts would be potentially significant (Class II). In addition to the APMs proposed by SCE, implementation of Mitigation Measure B-6a (Develop a transplanting plan) these impacts would be reduced to a less than significant level. This mitigation measure is presented below.

In California populations of threatened or endangered plant species are also present in several locations but do not occur in every segment. Populations of threatened or endangered plant species were identified in the following segments, Cactus City Rest Area to Devers Substation, Devers to East Banning, Banning to Beaumont, Calimesa to San Timoteo, and San Timoteo to Vista Substation. Table D.2-10 contains a list of the sensitive plant species identified by segment with the potential to occur in the Proposed Project area. In segments that are not expected to support populations of threatened or endangered plant species; the area either does not contain suitable habitat for listed plants or is located outside the geographical range for any of the listed plant species that were identified in Table D.2-4 to have a high or moderate potential to occur. In addition, these species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Sections determined to have a moderate or high potential to contain listed plant species are discussed further below.

Table D.2-10. Sensitive Plants with High Potential to Occur

Harquahala to Kofa National Wildlife Refuge			
~~Federal or State listed species~~	~~•Arizona agave~~ ~~•Arizona cliffrose~~		
Arizona Native Plant Law	• blue palo verde • foothill palo verde • velvet mesquite • desert ironwood	• ocotillo • saguaro • chollas barrel • hedgehog	• beavertail • prickly pear • desert Christmas • nipple
Kofa National Wildlife Refuge			
Federal or State listed species	None		
Arizona Native Plant Law	• blue palo verde • foothill palo verde • velvet mesquite • desert ironwood • ocotillo	• saguaro • chollas • barrel • hedgehog • beavertail	• prickly pear • desert Christmas • nipple
Kofa National Wildlife Refuge to Colorado River			
Federal or State listed species	None		
Arizona Native Plant Law	• blue palo verde • foothill palo verde • velvet mesquite • desert ironwood	• ocotillo • saguaro • chollas barrel • hedgehog	• beavertail • prickly pear • desert Christmas • nipple
Palo Verde Valley (Colorado River to Midpoint Substation)			
Federal or State listed species	None		
Federal or State sensitive species	• Harwood's milkvetch • foxtail cactus • Wiggins's cholla		

Table D.2-10. Sensitive Plants with High Potential to Occur

Midpoint Substation			
Federal or State listed species	None		
Federal or State sensitive species	• Harwood's milkvetch • foxtail cactus • Orocopia sage • desert sand-parsley	• ayenia • crucifixion thorn • glandular ditaxis • California ditaxis	• desert spike-moss • Cove's cassia
Midpoint Substation to Cactus City Rest Area			
Federal or State listed species	None		
Federal or State sensitive species	• Harwood's milkvetch • foxtail cactus • Orocopia sage • desert sand-parsley	• ayenia • crucifixion thorn • glandular ditaxis • California ditaxis	• desert spike-moss • Cove's cassia
Cactus City Rest Area to Devers Substation			
Federal or State listed species	• Coachella Valley milkvetch		
Federal or State sensitive species	• flat-seeded spurge • little San Bernardino Mountains gilia	• creamy blazing star • foxtail cactus • Arizona spurge	• California ditaxis • cliff spurge • slender woolly-heads
Devers Substation to East Border of Banning			
Federal or State listed species	• Mojave tarplant		
Federal or State sensitive species	• white-bracted spineflower • chaparral sand-verbena • Yucaipa onion	• Jaeger's milk vetch • little San Bernardino Mountains gilia	• Parry's spineflower • cliff spurge • slender woolly-heads
Banning and Beaumont			
Federal or State listed species	• Mojave tarplant • slender-horned spineflower		
Federal or State sensitive species	• Yucaipa onion • Jaeger's milk vetch	• Plummer's mariposa lily • Parry's spineflower	• white-bracted spineflower
Calimesa and San Timoteo Canyon			
Federal or State listed species	• Nevin's barberry • slender-horned spineflower		
Federal or State sensitive species	• Jaeger's milkvetch • Plummer's mariposa lily • Yucaipa onion	• Parry's spineflower • California bedstraw	• Hall's monardella • California bedstraw
San Bernardino Junction to Vista Substation			
Federal or State listed species	• Nevin's barberry • slender-horned spineflower	• Munz's onion • San Diego ambrosia	• Santa Ana River woollystar
Federal or State sensitive species	• Jaeger's milkvetch • California bedstraw	• Parish's desert-thorn • Parry's spineflower	
San Bernardino Junction to San Bernardino Substation			
Federal or State listed species	• slender-horned spineflower		
Federal or State sensitive species	• Jaeger's milk-vetch • Parry's spineflower	• California bedstraw • Parish's desert-thorn	

Cactus City Rest Area to Devers Substation. Construction of this segment of the Proposed Project has the potential to result in direct impacts to the Coachella Valley milkvetch, a federally endangered and CNPS List 1B plant. Over 20 plants were observed in the ROW between MPs E188 and E228 during surveys conducted in 2005. This species is typically associated with disturbed areas covered with wind blown sand and may occur in other areas along the ROW. Because this plant recruits in recently disturbed areas it may colonize areas that are disturbed by construction activities. However, this species would be a poor competitor with invasive plants that are also disturbance following species.

Devers to East Banning. Construction of this segment of the Proposed Project may result in direct impacts to one listed plant species, the Mojave tarplant. This species potentially occurs between MPs W17.5 and W20 and is associated with chaparral, coastal scrub, and mesic riparian scrub habitats. This species has also been documented to occur south of the ROW, on the north-facing slopes of the San Jacinto Mountains near Cabazon and near the San Gorgonio River. Three additional listed plant species Munz's onion, San Diego ambrosia, and Coachella Valley milkvetch have a moderate potential to occur in this segment of the Proposed Project but were not identified during recent surveys. Suitable habitat for Munz's onion and San Diego ambrosia is present in grassland areas located in the western portion of this segment and Coachella Valley milkvetch potentially occurs in the eastern portion of this segment.

Banning to Beaumont. Two listed plant species, Munz's onion and San Diego ambrosia have the potential to occur in this section of the Proposed Project. Although these species have not been observed in this segment the presence of suitable habitat suggests there is a moderate potential for these species to occur. Munz's onion has been reported within 2 miles of the ROW. The grassland and Riversidean sage scrub/chaparral habitats in this segment are considered potential habitat for these species.

Calimesa to San Timoteo. Construction of this segment of the Proposed Project may result in direct impacts on two listed plant species, Nevin's barberry and slender-horned spineflower. These species have been documented between MPs W38 and W41. Four other listed plant species also have a moderate potential to occur in this segment, including Munz's onion, San Diego ambrosia, San Jacinto Valley crownscale, and Santa Ana River woollystar. Nevin's barberry is a conspicuous plant that could be avoided if present. Slender horned spineflower and Santa Ana River wooly star typically occur in alluvial washes and terrace habitat adjacent to historic waterways.

San Timoteo to Vista Substation. Two listed plant species, Nevin's barberry and slender-horned spineflower have been documented in this segment. Three other listed plant species have a high potential to occur in this segment, including Munz's onion, San Diego ambrosia, and Santa Ana River woollystar.

To reduce potential impacts to listed plant species SCE would implement a series of measures including APM B-4 which specifically addresses the avoidance of sand compaction at all sites in the Coachella Valley and APM B-8 (Conduct pre-construction surveys for rare plants). These APMs would benefit several species in this area including the Coachella Valley milkvetch. However, the vast scope of the construction in the Coachella Valley makes it highly unlikely that sand compaction can be avoided at all sites. Therefore, the construction of the Proposed Project could result in significant impacts to the Coachella Valley milkvetch through direct removal of plants and the degradation of potential habitat as a result of sand compaction. APM B-12 indicates that where possible, SCE would site towers or access roads would be located so as to avoid sensitive plants or plant communities and where this is not feasible, affected individual plants will be transplanted. As this species is federally endangered any activity that results in a possible "take" would be require consultation with the USFWS. With implementation of the APMs impacts to listed plants would be considered less than significant (Class II).

Mitigation Measure for Impact B-6: Construction activities would result in indirect or direct loss of listed plants

B-6a **Develop a transplanting plan.** In coordination with the BLM, SCE shall prepare a transplanting plan in compliance with both Arizona and California laws and regulations regarding native and sensitive plants, prior to project construction activities. The plan will provide details on the plants being transplanted, including which species and how many individuals of each species; where the plants will be transplanted; how the plants will be transplanted; how the plants will be maintained during the transplanting efforts; and if the plants will be

used to re-vegetate disturbed areas of the construction site. As a condition of the plan, a pre-construction survey will be conducted to mark (using bright-colored flagging) all plants that will be transplanted. Some cacti will need to be transplanted facing the same direction as they currently face (in other words, the north side of the plant must stay facing the north); these cacti will be identified in the plan and appropriately marked to identify which side faces north. For listed plant species SCE shall identify if the plants can be avoided. If avoidance is not possible, SCE shall purchase off site mitigation in coordination with the USFWS and CDFG.

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

Wildlife

The distribution, status, and habitat affinities of threatened and endangered species known or expected to occur in Arizona and California are discussed in a regional context in Section D.2.1.1.3 of this EIR/EIS. In Arizona sensitive wildlife species are known or expected to occur in the general vicinity of the Proposed Project. Sonoran desert tortoise has been identified in several locations, and riparian birds such as yellow billed cuckoo and southwestern willow flycatcher have been documented along the Colorado River. Habitat in the California portion of the Proposed Project supports a diverse assemblage of listed wildlife. Although listed species have been observed in many of the segments the location and type of habitat that occurs in each specific segment dictates the types of sensitive wildlife expected to occur. Table D.2-11 contains a list of the sensitive species expected to occur by segment for the Proposed Project.

Impacts to listed species could be caused by temporary incremental loss of habitat and accidental death of individuals during land clearing, excavation, and grading phases of the Proposed Project. In addition, individuals near the construction area may temporarily abandon their territories due to disturbance from noise and increased human activity. The following discussion highlights construction impacts that would occur to specific threatened or endangered wildlife species.

Table D.2-11. Sensitive Wildlife with High Potential to Occur

Harquahala to Kofa National Wildlife Refuge			
State protected	• Sonoran desert tortoise • osprey		
Federal or State sensitive species	• cheese-weed moth lacewing • common chuckwalla • banded Gila monster	• desert rosy boa • western burrowing owl • cave myotis	• pocketed free-tailed bat • big free-tailed bat • California leaf-nosed bat
Kofa National Wildlife Refuge			
State protected	• Sonoran desert tortoise		
Federal or State sensitive species	• cheese-weed moth lacewing • common chuckwalla • banded Gila monster	• desert rosy boa • western burrowing owl • cave myotis	• pocketed free-tailed bat • big free-tailed bat • California leaf-nosed bat
Kofa National Wildlife Refuge to Colorado River			
Federal and State protected	• razorback sucker • Mohave fringed-toed lizard • Sonoran desert tortoise	• California brown pelican • Clark's grebe • snowy egret	• great egret • osprey
Federal or State sensitive species	• cheese-weed moth lacewing • common chuckwalla • banded Gila monster	• desert rosy boa • western burrowing owl • cave myotis	• pocketed free-tailed bat • big free-tailed bat • California leaf-nosed bat

Table D.2-11. Sensitive Wildlife with High Potential to Occur

Palo Verde Valley (Colorado River to Midpoint Substation)			
Federal or State listed species	• razorback sucker • California black rail • Yuma clapper rail	• western yellow-billed cuckoo • Gila woodpecker • least Bell's vireo	• willow flycatcher • elf owl
Federal or State sensitive species	• Colorado River toad • Couch's spadefoot • Mojave fringe-toed lizard • Bendire's thrasher • Le Conte's thrasher • Crissal thrasher • Sonoran yellow warbler	• vermillion flycatcher • summer tanager • loggerhead shrike • ferruginous hawk • burrowing owl • Townsend's big-eared bat • cave myotis	• California leaf-nosed bat • Arizona myotis • Yuma myotis • spotted bat • American badger • Nelson's bighorn sheep
Midpoint Substation			
Federal or State listed species	• desert tortoise		
Federal or State sensitive species	• Mojave fringe-toed lizard • Bendire's thrasher • Le Conte's thrasher • Crissal thrasher • summer tanager	• loggerhead shrike • ferruginous hawk • burrowing owl • Townsend's big-eared bat • cave myotis	• California leaf-nosed bat • Arizona myotis • Yuma myotis • spotted bat • American badger
Midpoint Substation to Cactus City Rest Area			
Federal or State listed species	• desert tortoise		
Federal or State sensitive species	• Mojave fringe-toed lizard • Colorado Desert fringe-toed lizard • Le Conte's thrasher • Crissal thrasher	• Bendire's thrasher • loggerhead shrike • prairie falcon • ferruginous hawk • burrowing owl	• San Diego pocket mouse • pallid bat • western mastiff bat • pocketed free-tailed bat
Cactus City Rest Area to Devers Substation			
Federal or State listed species	• Coachella Valley fringe-toed lizard	• desert tortoise	• peninsular bighorn sheep
Federal or State sensitive species	• Coachella Valley giant sand-treader cricket • Coachella Valley Jerusalem cricket • flat-tailed horned lizard • Mojave fringe-toed lizard • rosy boa	• northern red-diamond rattlesnake • California horned lark • Le Conte's thrasher loggerhead shrike • prairie falcon • ferruginous hawk	• golden eagle • burrowing owl • Palm Springs pocket mouse • Palm Springs round-tailed ground squirrel • western yellow bat
Devers Substation to East Border of Banning			
Federal or State listed species	• arroyo toad • mountain yellow-legged frog	• desert tortoise • least Bell's vireo	• peninsular bighorn sheep
Federal or State sensitive species	• Coachella Valley giant sand-treader cricket • Coachella Valley Jerusalem cricket • San Diego horned lizard • northern red diamond rattlesnake • two-striped garter snake • rosy boa	• Le Conte's thrasher • vermillion flycatcher • brown-crested flycatcher • loggerhead shrike • yellow warbler prairie falcon • Cooper's hawk • ferruginous hawk • golden eagle • burrowing owl	• northwestern San Diego pocket mouse • Palm Springs pocket mouse • Los Angeles pocket mouse • Palm Springs round-tailed ground squirrel • spotted bat • western yellow bat

Table D.2-11. Sensitive Wildlife with High Potential to Occur

Banning and Beaumont			
Federal or State listed species	• mountain yellow-legged frog • least Bell's vireo	• Stephens' kangaroo rat • peninsular bighorn sheep	
Federal or State sensitive species	• western spadefoot • San Diego horned lizard • northern red diamond rattlesnake • mountain plover • loggerhead shrike	• ferruginous hawk • golden eagle • burrowing owl • Dulzura pocket mouse • northwestern San Diego pocket mouse	• Los Angeles pocket mouse • San Diego desert woodrat • San Diego black-tailed jackrabbit • western yellow bat • American badger
Calimesa and San Timoteo Canyon			
Federal or State listed species	• willow flycatcher • southwestern willow flycatcher	• least Bell's vireo • golden eagle	
Federal or State sensitive species	• western spadefoot • San Diego horned lizard • loggerhead shrike • California horned lark • southern California rufous-crowned sparrow	• yellow warbler • Cooper's hawk • ferruginous hawk • golden eagle • northwestern San Diego pocket mouse	• Los Angeles pocket mouse • San Diego desert woodrat • western yellow bat
San Bernardino Junction to Vista Substation			
Federal or State listed species	• coastal California gnatcatcher	• San Bernardino kangaroo rat	•
Federal or State sensitive species	• western spadefoot • San Diego horned lizard • loggerhead shrike	• southern California rufous-crowned sparrow • Cooper's hawk • burrowing owl	• northwestern San Diego pocket mouse • Los Angeles pocket mouse • western yellow bat
San Bernardino Junction to San Bernardino Substation			
Federal or State listed species	None		
Federal or State sensitive species	• western spadefoot • mountain plover • loggerhead shrike	• Cooper's hawk • burrowing owl • northwestern San Diego pocket mouse	• western yellow bat • American badger

Invertebrates. There is no indication that any rare or listed invertebrates occur within the Proposed Project area. Two listed species of fairy shrimp, Riverside fairy shrimp and vernal pool fairy shrimp, are known to occur in southwestern Riverside County but have not been documented in the Proposed Project area. Construction of this the Proposed Project would not result in impacts to listed species of invertebrates (Class III).

Fishes. The Proposed Project is located primarily in a desert region that contains limited habitat for fish. The desert washes that occur in this region consist of ephemeral or intermittent drainages that flow as a result of rain events and winter snowmelt. With the exception of two segments, the Kofa National Wildlife Refuge to Colorado River, and the Palo Verde Valley to Midpoint Substation, there is no indication that listed fish occur in the Proposed Project area.

One listed fish species, the razorback sucker, is known to occur in the Colorado River and various irrigation canals located in the region. Construction activities in or along the Colorado River or its tributaries may directly or indirectly affect the razorback sucker. To reduce potential impacts to this species SCE would site towers to avoid sensitive habitats (APM B-1) and allow for the maximum spacing of towers to avoid sensitive features (APM B-13). Construction equipment would be kept out of

flowing stream channels except when absolutely necessary to construct crossings (APM W-2), which would minimize direct impacts to the razorback sucker. For tower structures that require placement within an active channel, diversion dikes would be constructed to divert flows and runoff around the structure (APM W-6). This would also minimize impacts on razorback sucker by providing them alternate flows for movement around the structure. Direct impacts to the razorback sucker would be potentially significant (Class II) if construction resulted in mortality or reduction of habitat quality. Because this is a listed species "take" authorization would be addressed through the context of a Biological Opinion.

Indirect effects may occur as a result of the introduction of contaminants into the water from construction vehicles or erosion along the banks as a result of vehicles accessing the construction sites. Implementation of an erosion control plan (APM W-3) would minimize erosion along the banks during and following construction. Impacts to water quality would be potentially significant (Class II) on the fish, especially in portions of the river where the razorback sucker is known to occur, because critical habitat would be affected. Implementation of Mitigation Measure B-7a (Avoid Colorado River) would avoid impacts to razorback sucker by ensuring that construction equipment remains out of aquatic habitat

Mitigation Measure for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat

B-7a **Avoid Colorado River.** All tower pads, equipment laydown areas, and pulling sites would be located outside flowing portions of the Colorado River and flowing tributaries of the river.

Amphibians. Three listed amphibians, desert slender salamander, arroyo toad, and mountain yellow legged frog are have limited potential to occur within three project segments including Devers Substation to East Border of Banning, Banning to Beaumont, and Calimesa to San Timoteo. Even though these segments are located within the range of these species, habitat conditions or known recorded occurrences of these species do occur in or adjacent to the construction area.

Whitewater River supports suitable habitat for arroyo toad, but it is located upstream of the crossing of the Proposed Project. Because the Proposed Project would span the Whitewater River and construction activities would not occur in habitat adjacent to the river, the project is not expected to impact this species. Habitat for the desert slender salamander would not be affected as this species is known to occur at only two locations in the San Jacinto/Santa Rosa Mountains, areas outside the project footprint. Similarly, impacts to the Mountain yellow-legged frog are not expected as the habitat located near the Whitewater River crossing is not considered suitable for this species.

San Timoteo Creek also contains suitable habitat for arroyo toad, but this species has not been documented near the crossing of the Proposed Project. Focused surveys conducted by the San Bernardino County Museum did not detect the species upstream from the San Timoteo Canyon Road Bridge. Reports of vocalizing male arroyo southwestern toads have been reported for the area downstream of Alessandro Road which is approximately seven miles downstream of the Proposed Project ROW. Focused surveys conducted during the 1999 breeding season did not detect this species near Alessandro Road. In addition, the transmission line spans San Timoteo Creek and construction would not occur in habitat where toads have been located. However, arroyo toads have been known to migrate up to 1 1/2 mi. from any water source, to upland habitats for dispersal and in search of aestivation sites. Still, direct impacts to arroyo toad or suitable habitat for this species would be not be expected to occur and would be considered less than significant (Class III).

Mountain yellow legged frog has been reported in to occur in the San Gorgonio River near Banning Peak approximately 2.5 miles south of the eastern portion of the Beaumont to Banning segment. Habitat

at the San Gorgonio River where the transmission line would span the river is not suitable for this species. In addition, the Proposed Project would not impact riparian habitat and have limited impacts at one tower removal location (T150) on the western bank of the San Gorgonio River and at three tower removal locations (T166, T167, and M75-T2) in the tributary to the San Gorgonio River. Suitable habitat for sensitive amphibians does not occur any of these tower removal locations. Therefore, the construction of the Proposed Project is not expected to result in adverse impacts to Mountain yellow-legged frog or habitat utilized by this species.

With the exception of these three segments, there is no indication that listed amphibians are present in the Proposed Project area. Surveys conducted of the project area did not detect the presence of listed amphibian species in the remaining segments. Most of the segments of the Proposed Project do not fall within the range nor support the appropriate habitat requirements for any listed amphibian species that were determined to have a high or moderate potential to occur. Construction of the Proposed Project would not result in significant impacts to listed species of amphibians. In addition, the Proposed Project is not expected to impact designated Critical Habitat for listed amphibians. Although no sensitive amphibians were identified in this segment SCE would implement APM B-16 (Conduct pre-construction surveys) prior to construction. No additional mitigation is recommended at this time.

Reptiles. The Proposed Project area supports three listed reptiles including the Arizona state-listed Sonoran desert tortoise ~~(Arizona)~~ and the ~~,~~ Coachella Valley fringe-toed lizard ~~,~~ and populations of tortoise in California.

Desert Tortoise. In Arizona each of the Proposed Project segments contains Sonoran desert scrub habitat that has the potential to support desert tortoise. In addition, a juvenile desert tortoise was identified during surveys conducted in the Kofa to Palo Verde Valley segment west of the Dome Rock Mountains. Although Sonoran desert tortoise was not found during surveys of the other Arizona segments and the area has not been designated as critical habitat for this species, the habitat is still considered suitable for desert tortoise. In addition, desert tortoises are known to occasionally travel long distances of up to several miles or more.

Populations of desert tortoise have also been identified in several of the California segments including Midpoint Substation to Cactus City Rest Area, Cactus City Rest Area to Devers Substation, and Devers Substation to East Border of Banning. The Palo Verde Valley to Midpoint segment contains Sonoran desert scrub habitat that has the potential to support desert tortoise in the western portion of this segment, between the agricultural areas and the Midpoint Substation. Although this species has not been found during surveys of this segment and the area has not been designated as critical habitat for this species, the habitat is still considered suitable for desert tortoise.

Midpoint Substation to Cactus City Rest Area. This segment is located in Sonoran desert scrub habitat that is within the known geographic range of desert tortoise. Occupied habitat generally occurs from the eastern portion of this segment (MP E133) and extends to the Cactus City Rest Area (MP E188.2). Surveys conducted in this segment indicate the highest density of tortoises appears to be located between MPs E151 and E188.2. This area encompasses a section of the route near Alligator Rock (approximately MP E155) that traverses near the foothills of the Chuckwalla Mountains. Surveys in this area found a high incidence of both tortoise and tortoise sign. Desert scrub and dry desert wash communities located east of MP E133 are considered potential habitat for tortoise even though this species was not observed during previous surveys.

Critical Habitat. Construction in this segment would result in impacts to designated critical habitat for the desert tortoise. The ROW would pass through designated critical habitat commencing just east of Wiley's Well Road (MP E121.7) to east of the Cactus City Rest Area (MP 188.2).

Cactus City Rest Area to Devers Substation. Desert tortoises were observed from the Cactus City Rest Area west to MP E196 during surveys conducted in 2005. In addition, an isolated desert tortoise was reported near MP E198.6 in 2003. In this segment high densities of desert tortoises are expected to occur primarily in the desert scrub habitat located east of Indio. Limited observations of this species have occurred in the Coachella Valley and where it does occur, this species probably occurs in only limited numbers. Even though tortoises appear to be very sparsely distributed in the desert scrub habitats located west of Indio, the desert scrub and dry desert wash habitat are considered potential habitat for this species.

Critical Habitat. Designated critical habitat for the desert tortoise is located from the Cactus City Rest Area (MP E188.2) west to approximately MP E191. Impacts to designated critical habitat would include the permanent removal of habitat resulting from construction of the 11 towers and from construction of access and spur roads.

Devers Substation to East Border of Banning. Desert tortoises have been reported to occur west of Highway 62 between MPs W4.3 and W8.2. Even though tortoises appear to be very sparsely distributed in this area, the desert scrub and dry desert wash habitat are considered potential habitat for this species.

Critical Habitat. Construction of this segment of the Proposed Project would not impact designated critical habitat for the desert tortoise.

Construction activities would adversely affect the Sonoran Desert tortoise and may result in injury or mortality during surface disturbing activities. Other impacts may include nest and/or burrow destruction, alteration of their seasonal activities, and degradation of their habitat during the construction and maintenance activities associated with the transmission line. Use of construction vehicles and routine maintenance operations could result in injury or death to desert tortoises through vehicle collisions. This is especially true with juvenile desert tortoises that are difficult to see due to their small size and profile. In addition, desert tortoises seeking shade under parked vehicles or equipment could be crushed when vehicles and equipment are moved.

Construction activities also have the potential to degrade desert tortoise habitat by compacting the soil. This leads to the reduction of vegetation and promotes loss of soil and nutrients, reduces water absorption, and increases the difficulties in digging burrows. Construction activities can also introduce or increase the spread of non-native plant species, further degrading tortoise habitat.

Newly constructed transmission line towers may also provide artificial perches and nest sites for ravens, which prey on young desert tortoises. Although APM B-20 would design transmission lines to reduce the likelihood of nesting by ravens, there is still a potential that newly constructed transmission lines would provide perch sites for the raven.

Project construction would also result in the loss of suitable habitat for the Sonoran Desert tortoise. APM B-14 would serve to minimize habitat loss, and native habitat would be restored in areas disturbed during construction under APM B-19. In Arizona, habitat loss in Category II management areas would be limited to approximately one linear mile in the Eagletail Mountains, and habitat loss in Category III management areas would consist of approximately eight linear miles in the Big Horn Mountains.

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Even with the implementation of project mitigation it is possible that construction activities would result in the incidental "Take" of desert tortoise. To comply with the provisions of the Endangered Species Act (ESA), SCE would be required to complete consultation under Section 7/10 of the ESA.

In addition to the APMs described above the following mitigation measures would be implemented to reduce impacts to desert tortoise to less than significant levels (Class II).

SCE would implement construction practices that require the operator of a vehicle to inspect under each vehicle to ensure that no animals have taken shelter from the sun (APM B-5). Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to Sonoran Desert Tortoise in Arizona and desert tortoise in California would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant. Even with the implementation of APMs and mitigation measures it is possible that construction activities would result in the incidental "Take" of desert tortoise. To comply with the provisions of the Endangered Species Act (ESA), SCE would be required to complete consultation under Section 7/10 of the ESA. In addition to the APMs described above the following mitigation measure would be implemented to reduce impacts to desert tortoise.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.** Prior to construction, SCE shall survey the transmission line corridor for desert tortoise burrows and pallets within fourteen (14) days preceding construction. Tortoise burrows and pallets encountered within the construction zone (if any) will be conspicuously flagged by the surveying biologist(s) and avoided during all construction activities.

- During construction activities, SCE shall inspect under equipment and vehicles prior to moving equipment. If tortoises are encountered, the vehicle will not be moved until such animals have voluntarily moved to a safe distance away from the parked vehicle or a qualified biologist moves the tortoise.
- SCE shall monitor construction activities in all areas with the potential to support desert tortoise.
- Desert tortoises will be handled only by a FWS/CDFG permitted and authorized tortoise handler and only when necessary. New latex gloves will be used when handling each desert tortoise to avoid the transfer of infectious diseases between animals. Desert tortoises will be moved the minimum distance possible within appropriate habitat to ensure their safety. In general, desert tortoises will not be moved in excess of 1,000 feet for adults and 300 feet for hatchlings.

- Desert tortoises that are found above ground and need to be moved will be placed in the shade of a shrub. All desert tortoises removed from burrows will be placed in an unoccupied burrow of approximately the same size as the one from which it was removed. All excavation of desert tortoise burrows will be done using hand tools, either by, or under the direct supervision of, an authorized tortoise handler. If an existing burrow is unavailable, an authorized tortoise handler will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original burrow. Desert tortoises moved during inactive periods will be monitored for at least two days after placement in the new burrows to ensure their safety. An authorized tortoise handler will be allowed some judgment and discretion to ensure that survival of the desert tortoise is likely.
- If desert tortoises need to be moved at a time of the day when ambient temperatures could harm them (less than 40 degrees F or greater than 90 degrees F), they will be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of an authorized tortoise handler under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes will be appropriately discarded after one use.
- All desert tortoises moved will be marked for future identification. An identification number using the acrylic paint/epoxy covering technique should be placed on the fourth costal scute. No notching would be authorized.

B-7c **Purchase mitigation lands for impacts to tortoise habitat.** Following construction, SCE shall acquire lands to compensate for the loss of tortoise habitat within the Category II and III management areas in Arizona and California. The amount of land to be acquired will depend on the acreage of disturbance within these management areas. Acquired lands will be in a nearby area of good tortoise density and within tortoise habitat. BLM and SCE shall conduct a field inspection of the disturbed areas after completion of construction of the transmission line to determine the exact acreage required for compensation. The lands purchased will be transferred to the United States and be administered by the BLM. Land may be transferred to the BLM and/or incorporated into an existing management area.

Coachella Valley Fringe-Toed Lizard. Coachella Valley fringe-toed lizard a State endangered and federally threatened species is known to occur in blow sand areas within the Cactus City Rest Area to Devers Substation section of the Proposed Project.

Cactus City Rest Area to Devers Substation. This species occurs in the Coachella Valley Preserve and in some of the sand dunes and blow sands areas located in the undeveloped portions of Coachella Valley. Surveys conducted in 2005 identified suitable blow sand habitat areas within the ROW in this segment between MPs E219.2 and E220 and MPs E224.5 and E225.2 (Greystone, 2005). This species also likely occurs in suitable blow sand areas that occur adjacent to the ROW for the Proposed Project.

Critical Habitat. Designated critical habitat for the Coachella Valley fringe-toed lizard is located between MPs E209.3 and E215. Impacts to designated critical habitat would include the permanent removal of habitat resulting from construction of the 21 towers and from construction of access and spur roads in this segment.

Construction activities conducted in this segment could result in impacts this species. Construction in areas adjacent to blow sand habitat may also impact habitat for the Coachella Valley fringe-toed lizard by creating barriers to the movement of sands. To reduce potential impacts to this species SCE would implement APMs B-26, B-33, B-34, and B-36 which specifically address the Coachella Valley fringe-

toed lizard and its habitat. As this species is a State and federally listed any activity that results in a possible "take" would be fully addressed through consultation with the CDFG and USFWS. The ROW also contains designated critical habitat for the Coachella Valley fringe-toed lizard between MPs E209.3 and E215. Impacts to designated critical habitat would include the permanent removal of habitat resulting from construction of the 21 towers and from construction of access and spur roads. APM B-19 would provide some restoration to areas disturbed by project activities located within designated critical habitat however this measure would not fully mitigate potential loss of habitat or modifications to designated critical habitat. In addition, APM B-34 also provides for restoration of compacted soils within the Coachella Valley Preserve, which is designated critical habitat for this species. This measure would partially address impacts to critical habitat but it would not fully mitigate for the impacts. Therefore, the impacts resulting from the construction of this segment of the Proposed Project would result in significant impacts on designated critical habitat for the Coachella Valley fringe-toed lizard without mitigation. In addition to the APMs proposed by SCE implementation of Mitigation Measure B-7d (Purchase mitigation lands for impacts to fringe toed-lizard habitat) would reduce potential impacts to listed plants to less than significant levels (Class II).

Mitigation Measure for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Coachella Valley fringe-toed lizard)

B-7d **Purchase mitigation lands for impacts to fringe-toed lizard habitat.** SCE shall purchase or enhance lands for all permanent loss of habitat that are within the Coachella Valley fringe-toed lizard Critical Habitat unless otherwise directed by the USFWS Biological Opinion for the Proposed Project. Mitigation Lands shall be determined in consultation with the USFWS, CDFG, and CPUC.

Clearing work areas of CVFTL in the Coachella Valley Preserve. A temporary fence or other effective barrier that does not allow lizards to enter the work areas shall be constructed around the perimeter of each of the work areas in the refuge. Any lizards found within the barrier shall be relocated outside of the work areas.

Duration of Surveys for fringe-toed lizard and flat-tailed horned lizard. Surveys for CVFTL and FTHL shall be conducted during the appropriate seasons (May 1 through the end of summer) and conditions for species identification. The duration of the surveys shall~~l~~ coincide with the duration of construction activities in potential habitat for these species (particularly on the Coachella Valley Preserve) that occurs during the ~~the~~ summer season. For any areas of suitable habitat, this measure shall apply. Construction shall not occur on the Preserve or in other potential habitat areas outside of the detection period for FTHL.

Birds. Several listed bird species have the potential to occur in or adjacent to the Proposed Project area. Most of the listed bird species are associated with the riparian and wetlands located near the Colorado River, Whitewater River, San Gorgonio Creek, and San Timoteo Creek. Coastal sage scrub communities located in California are also known to support one listed bird species. Some of the species with a high potential to occur in or near segments identified in the Proposed Project include:

- California Black Rail
- Yuma Clapper Rail
- Western Yellow-billed Cuckoo
- Elf Owl
- Gila Woodpecker
- Least Bell's Vireo
- Willow flycatcher
- Southwestern willow flycatcher
- Gilded Flicker
- California brown pelican

Table D.2-11 identifies the sensitive bird species that have the potential to occur by segment. In segments that are not expected to support populations of threatened or endangered plant species; the area either does not contain suitable habitat for listed birds or is located outside the geographical range for any of the listed species of bird that were identified in Table D.2-5 to have a high or moderate potential to occur. In addition, these species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Sections determined to have a moderate or high potential to contain listed bird species are discussed further below.

Kofa National Wildlife Refuge to Colorado River. This Arizona segment is within the known geographical range for the California brown pelican and aquatic habitats utilized by this species are present along limited sections of the proposed route. Consequently, there is a potential for California brown pelican to be present along the route within the vicinity of the Colorado River. The Colorado River is also known to support populations of southwest willow flycatchers, black rail, and Yuma clapper rail. Detailed discussions of these species are addressed in Section D.2.6.4 Palo Verde Valley (Colorado River to Midpoint Substation). Construction activities including noise, vehicle traffic and human presence could result in impacts to nesting pelicans if project-related activities are conducted during the breeding season. Implementation of APM B-7 (No Activities Should Occur in Wetlands) and APM B-21 (No Clearing or Disturbance to Riparian Habitats) would reduce impacts to riparian and wetland vegetation that could support California brown pelican. However, even with the implementation of APMs B-7, B-21, and B-38, the Proposed Project may have significant indirect impacts on listed bird species (Class II) if present. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds), which would prohibit work within 500 feet of nesting birds would reduce impacts to nesting riparian bird species to less than significant levels.

Colorado River to Midpoint Substation. Similar to the Arizona section of the Colorado River, California Black Rail and the Yuma Clapper Rail have the potential to occur in the marsh habitat that occurs along the edge of the Colorado River and in the irrigation canals that support cattails and bulrushes. Other sensitive songbirds are either known to occur or have the potential to utilize riparian habitat including western yellow-billed cuckoo, least Bell's vireo, and southwestern willow flycatcher. Because the Proposed Project would span the Colorado River and the irrigation canals in Palo Verde Valley, the project would likely avoid direct impacts to habitat for these species. However, construction activities including noise, vehicle traffic and human presence could result in impacts to nesting birds if project related activities are conducted during the breeding season. Implementation of APM B-7 (No Activities Should Occur in Wetlands) and APM B-21 (No Clearing or Disturbance to Riparian Habitats) would reduce impacts to riparian and wetland vegetation that could support sensitive species. Even with the implementation of APMs B-7, B-21, and B-38, the Proposed Project may have significant indirect impacts on listed bird species without mitigation. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would reduce impacts to nesting riparian bird species to less than significant levels (Class II).

Devers to East of Banning. The least Bell's vireo is known to occur in riparian habitat in the San Gorgonio River, which is located to the west of this segment of the Proposed Project, and in Snow Creek, which is located to the south of this segment. No suitable habitat for least Bell's vireo or other riparian birds is present in this segment of the Proposed Project.

As these species are primarily riparian obligates who nest in close proximity to standing water and are typically limited to riparian areas that do not occur at in this segment. Construction activities associated with the Proposed Project are not expected top result in impacts to this species (Class III).

Calimesa and San Timoteo Canyon. Construction of this segment of the Proposed Project would potentially impact four listed species of birds, the least Bell's vireo, southwestern willow flycatcher, willow flycatcher, and western yellow-billed cuckoo. These species have the potential to occur in the riparian habitat located at San Timoteo Creek. Because the Proposed Project would span the San Timoteo Creek the project would likely avoid direct impacts to habitat for these species. However, construction activities including noise, vehicle traffic and human presence could result in impacts to nesting birds if project related activities are conducted during the breeding season. Implementation of APM B-7 (No Activities Should Occur in Wetlands) and APM B-21 (No Clearing or Disturbance to Riparian Habitats) would reduce impacts to riparian and wetland vegetation that could support sensitive species. Even with the implementation of APMs B-7, B-21, and B-38, the Proposed Project may have significant indirect impacts on listed bird species (Class II) without mitigation. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would reduce impacts to nesting riparian bird species to less than significant levels.

San Bernardino to Vista Substation. Construction of this segment of the Proposed Project would potentially impact the California gnatcatcher a year round resident in southern California. This species has a high potential to occur in coastal sage scrub and non-native grasslands that are present in this segment. Gnatcatchers could be directly impacted by construction activities through removal of nests and habitat and construction noise, dust, and the presence of project personnel can result in the disruption of breeding or nursery behavior such as incubating or attending the nest. Because the potential exists for this species to occur in the Proposed Project ROW, SCE would implement APM B-37 (focused surveys for coastal California gnatcatchers). In addition, this APM states that SCE should either restore damaged habitat or participate in land set-aside programs, or assist with funding for monitoring programs through the Western Riverside MSHCP. While this APM would reduce potential impacts to California gnatcatchers it is not specific enough to fully address potential impacts to this species. If gnatcatchers are present within or adjacent to the Proposed Project in this segment, then impacts to coastal sage scrub would be considered significant. Potential impacts to listed species would also have to be evaluated within the context of a Biological Opinion from the USFWS. In addition to the APM proposed by SCE the following Mitigation Measure B-7e (Conduct focused surveys for California gnatcatchers) would be implemented to reduce impacts to less than significant levels.

San Bernardino Junction to San Bernardino Substation. Three listed species of birds, including least Bell's vireo, western yellow-billed cuckoo, and California gnatcatcher, have been documented to occur in riparian habitat within 5 miles of this segment. However, no suitable habitat is present for the least Bell's vireo or western yellow-billed cuckoo. The California gnatcatcher would have a moderate potential to occur in areas supporting populations of sage scrub. No other listed species of birds would be expected to occur in this segment because of a lack of suitable habitat. Therefore, the construction of this segment of the Proposed Project would not be expected to impact any listed species of birds and no additional mitigation is required. Although no listed birds were identified in this segment SCE would implement APM B-16 (Conduct pre-construction surveys) prior to construction.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-7e **Conduct focused surveys for California gnatcatchers.** SCE shall conduct protocol level surveys for California Gnatcatchers in all areas supporting suitable coastal sage or Riversidean sage scrub habitats that may be affected by the project (San Bernardino to Vista Substation and San Bernardino Junction to San Bernardino Substation). This will include a

minimum 300-foot buffer around construction areas. Presence/absence of this species shall be determined prior to construction activities. If direct impacts to coastal California gnatcatcher occupied habitat cannot be avoided, then impacts to this species shall be addressed through either the Section 7 or Section 10(a)(1)(B) Process under the Federal Endangered Species Act of 1973, as amended and consistent with the WRCMSHCP. SCE shall complete compliance with the Federal Endangered Species Act prior to Project construction. After definition of suitable habitat, the following requirements apply:

- Construction activities shall be restricted within coastal sage scrub habitat during the gnatcatcher breeding season (March 15-July 31);
- SCE shall implement the applicable Best Management practices in the WRCMSHCP;
- SCE shall restore, create, or enhance on site coastal sage scrub habitat; and/or
- SCE shall purchase land or mitigation bank credits at an appropriate ratio to offset impacts to gnatcatchers and their habitat.

Mammals

Three State or federally listed mammal species have the potential to occur in or adjacent to the Proposed Project area including peninsular big horn sheep, San Bernardino kangaroo rat, and Stephens' kangaroo rat. These wildlife species are limited to segments located within California. There is no indication that any listed mammals occur in the segments located within the Arizona portion of the Proposed Project. Surveys conducted of the project area in Arizona did not detect the presence of listed mammal species. Although no listed mammal species were identified in Arizona SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Table D.2-11 identifies the sensitive mammals that have the potential to occur by segment. In segments that are not expected to support populations of threatened or endangered mammals; the area either does not contain suitable habitat for or is located outside the geographical range for any of the listed mammals that were identified in Table D.2-5 to have a high or moderate potential to occur. In addition, these species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Sections determined to have a moderate or high potential to contain listed mammals are discussed further below.

Midpoint Substation/Midpoint Substation to Cactus City Rest Area. Habitat in these segments of the Proposed Project does not support a broad diversity of sensitive mammals. Peninsular big horn sheep occurs in the region but this species is not typically observed in lowland areas. Because this is located outside the current range for this species, impacts from construction activities would be less than significant (Class III).

Banning and Beaumont. Construction of this segment of the Proposed Project is not expected to impact any listed species of mammals. One listed species, the Stephens' kangaroo rat, has been documented south of the I-10, approximately 2.5 miles south of this segment. This species has not been documented in or immediately adjacent to this segment of the Proposed Project.

Calimesa and San Timoteo Canyon. Two federally listed endangered mammal species, the San Bernardino kangaroo rat and Stephens' kangaroo rat, have a moderate potential to occur in this segment. These species historically occurred in southwestern San Bernardino County and in the northern portion of Western Riverside County. If these species are present, construction of this segment of the Proposed Project may result in the destruction of habitat and mortality to these species. SCE has indicated that prior to construction surveys for sensitive species would be conducted along the Proposed ROW (APM

B-8 and B-16) that habitat for Stephens' kangaroo rat habitat would be avoided, where possible (APM B-39). Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/ Compensation Plan), and B-7f (Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat) would minimize impacts to these species if present. Potential impacts to listed species would also have to be evaluated within the context of a Biological Opinion from the USFWS.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan**

B-7f **Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat.** Prior to the implementation of construction in areas that support suitable habitat for Stephens' kangaroo rat and San Bernardino kangaroo rat (Calimesa and San Timoteo Canyon). SCE shall conduct focused surveys to determine if sign (burrows, scat, and etc.) of these species is present in all areas within 100 feet that would be permanently or temporarily affected by construction activities. All surveys shall be conducted by a qualified biologist who holds the appropriate Federal FWS permits to conduct trapping surveys for these species. If sign is found to be present, then SCE shall conduct focused trapping surveys according to accepted protocols to determine presence/absence of these species. If these species are found, then SCE shall implement measure to avoid direct impacts, including the placement of exclusion fencing around work areas where impacts will occur, trapping of animals from inside impact areas, and placement of those animals outside of exclusion fencing until construction is completed. A qualified biological monitor shall be present during construction to ensure that animals are not harmed. Following completion of construction, SCE shall remove all exclusion fencing and recontour the soils to the pre-construction condition.

D.2.6.1.7 State or Federal Species of Special Concern - Vegetation

Habitat that occurs along the Proposed Project ROW in both Arizona and California has the potential to supports populations of sensitive plants. Potential impacts to sensitive plants would be the same as described for threatened or endangered plant species as described in Section D.2.6.1.6, Threatened or Endangered Species.

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class III)

The Arizona segments of the Proposed Project contains plant species protected under the Arizona Native Plant Law which are discussed above in Impact B-6 Section D.2.6.1.6 Threatened or Endangered Species, no other sensitive plant species have been identified as occurring within the Arizona portion of the Proposed Project and none are expected to occur. Kofa mountain barberry has a low potential to occur along this segment, but it is unlikely to occur along the Proposed Project route. This portion of the Proposed Project does not contain suitable habitat for sensitive plants and is located outside the geographical range for any of the sensitive plant species that were identified in Table D.2-4 to have a high or moderate potential to occur. These species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Implementation of APM B-8 (Conduct pre-construction surveys for rare plants) would reduce potential impacts to sensitive plants (Class III).

Twenty-three sensitive plant species have a high potential to occur and another 23 species have a moderate potential to occur in the California segments of the Proposed Project. Table D.2-10 contains a detailed list of sensitive plants that have a high potential to occur in each segment. The 65 sensitive plant species that are unlikely to occur, or that have a low potential to occur, are discussed in Appendix 7.

Palo Verde Valley to Midpoint Substation. This segment of the Proposed Project supports habitat where one sensitive plant species, Harwood's milkvetch, is known to occur. In addition, two sensitive plant species, foxtail cactus and Wiggins' cholla, have the potential to occur in this segment. In addition, three other sensitive plant species listed by the CNPS as list 2 and 4 have the potential to occur in this area.

Midpoint Substation. Construction of the Midpoint Substation will permanently remove 44 acres of suitable habitat for Harwood's milkvetch and potential habitat for five other sensitive plant species that may occur along this segment. Populations of Harwood's milkvetch, a CNPS List 1B species, have been found in areas adjacent to the Midpoint Substation. In addition, two sensitive plant species, foxtail cactus, a federal species of special concern, and Wiggins' cholla, a CNPS List 3 species, as well as three other sensitive species of plants have a potential to occur in this area.

Midpoint Substation to Cactus City Rest Area. Habitat in this segment supports several sensitive plant species including foxtail cactus a federal species of special concern and four CNPS List 1B plants including Harwood's milkvetch, Orocopia sage, Latimer's woodland gilia, and Mecca aster. Construction of this segment of the Proposed Project could result in direct impacts to both Harwood's milkvetch and foxtail cactus. Harwood's milkvetch occurs between the Midpoint Substation and MP E119. Populations of foxtail cactus have been documented to occur from Alligator Rock (MP E155) west to Red Cloud Mine Road (MP approximately MP E163) and between MP E186, near the I-10 crossing, and Cactus City Rest Area (MP E188.2).

Several other plants considered rare or unique by the CNPS (List 2-4) also occur in this area and may be subject to disturbance from construction activities. Some of these species include desert sand parsley, ayenia, crucifixion thorn, glandular ditaxis, and California ditaxis. Desert spike-moss and Cove's cassia may also be present.

Cactus City Rest Area to Devers Substation. The vegetation communities in Cactus City Rest Area to Devers Substation segment of the Proposed Project occur as a mosaic of undisturbed habitats, agricultural lands, and developed areas. Much of the Coachella Valley between the City of Indio and the Devers Substation has been developed or is in the process of being developed. Habitat in this segment of the Proposed Project is similar to that described in Section D.2.6.16 and supports several sensitive plant species including foxtail cactus a federal species of special concern and CNPS List 1B plants such as Latimer's woodland gilia, and Mecca aster.

Devers Substation to East Banning. Habitat in this segment supports several sensitive plant species including 22 species that have a high potential to occur in this segment of the project. Some of these species include white-bracted spineflower, chaparral sand-verbena, Yucaipa onion, Jaeger's milk vetch, Parry's spineflower, and cliff spurge. Little San Bernardino Mountains gilia, slender woolly-heads, Parish's brittlescale, and long-spined spineflower may also occur. White-bracted spineflower is known to occur within the ROW between the Whitewater River and Cabazon (MPs W11 and W14).

Banning and Beaumont. Habitat in this segment supports several sensitive plant species including 20 species that have a high or moderate potential to occur in this segment of the project. Some of these species include white-bracted spineflower, Yucaipa onion, Jaeger's milk vetch, Plummer's mariposa lily, Parry's spineflower, chaparral sand-verbena, San Jacinto Valley crownscale, and smooth tarplant.

Parry's spineflower for example is known to occur in many locations along the ROW near Cabazon, between MPs W10 and W12, which is within 5 miles of the City of Banning (BioResource, 2003).

Calimesa and San Timoteo Canyon. Two sensitive plant species, Jaeger's milkvetch and Plummer's mariposa lily have been documented within this segment of the Proposed Project. In addition, 21 sensitive plant species have a high or moderate potential to occur in this segment. Some of these include Yucaipa onion, Parry's spineflower, California bedstraw, Hall's monardella chaparral sand-verbena, smooth tarplant, long-spined spineflower, many-stemmed dudleya, and round-leaved filaree.

San Bernardino to Vista Substation. One sensitive plant species, Jaeger's milkvetch, has been documented in this segment of the Proposed Project between MPs V0 and V6. In addition 19 sensitive plant species have a high or moderate potential to occur in this segment. Some of these include, Parish's desert-thorn, chaparral sand-verbena, long-spined spineflower, many-stemmed dudleya, round-leaved filaree, Robinson's pepper-grass, and ocellated Humboldt lily.

San Bernardino Junction to San Bernardino Substation. Habitat in this segment of the ROW has the potential to support two CNPS List 1B species, Jaeger's milk-vetch and California bedstraw. Jaeger's milk-vetch is known to occur in the grassland and scrub habitats located along the ROW and may occur in the undeveloped areas between San Bernardino Junction and San Bernardino Substation. In addition nine sensitive plant species have a high or moderate potential to occur in this segment. Some of these include, Pringle's monardella, California muhly, little mousetail, and Parish's gooseberry

To reduce potential impacts to sensitive plants SCE would implement the same conditions identified for listed plant species that was addressed in Impact B-6 Section D.2.6.1.6 Threatened or Endangered Species. APM B-8 (Pre-construction Surveys) and APM B-9 (Transplant Sensitive Cactus) which provides for detailed surveys of tower locations prior to construction. If sensitive plant species are located SCE has indicated that tower locations would be adjusted to reduce impacts. As required in APM B-8 the methodologies and results of these surveys would be submitted to the BLM for approval by the BLM Authorized Officer. The transplanting treatment plan for these species would also be developed in consultation with the BLM biologist and approved in writing by a BLM Authorized Officer prior to construction. Impacts to sensitive plant species would be reduced to less than significant levels (Class II) through the implementation of APMs and Mitigation Measure B-8a (Conduct surveys for listed plant species). Impacts to listed plant species would also addressed through the context of a biological opinion.

Mitigation Measure for Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plant species

B-8a **Conduct surveys for listed plant species.** SCE shall conduct focused surveys for listed and sensitive plants prior to construction, Surveys shall be conducted during the appropriate floristic period necessary for the identification of sensitive plant species in all suitable habitat located within the project ROW and within 100' of all surface disturbing activities.

Populations of sensitive plants shall be flagged and mapped prior to construction. If listed plants are located during the focused surveys, then modification of the placement of towers, access roads, laydown areas, and other ground disturbing activities would be implemented in order to avoid listed plants. If listed plants cannot be avoided, SCE shall be responsible for the translocation of plants and/or collection of seeds from existing populations that would be impacted and the planting/seeding of these plants in adjacent suitable portions of the ROW that would not be affected by Proposed Project construction or maintenance activities.

D.2.6.1.8 State or Federal Species of Special Concern - Wildlife

Habitat in both Arizona and California has the potential to support a variety of species identified as sensitive by the AGFD, CDFG, BLM, and/or USFWS. Twelve sensitive wildlife species have been observed along the Proposed Project route, and many others have a high or moderate potential to occur due to the presence of suitable habitat or a known occurrence in the vicinity. There are 15 sensitive wildlife species as defined by the BLM and AGFD within Arizona, and 64 sensitive wildlife species in California that have been documented or have a high or moderate potential to occur. Although sensitive species have been observed in many of the segments the location and type of habitat that occurs in each specific segment dictates the types of sensitive wildlife expected to occur. Table D.2-11 contains a list of the sensitive species expected to occur by segment for the Proposed Project.

Potential impacts to sensitive wildlife species would be similar to those discussed for listed wildlife species in Section D.2.6.1.6. The following discussion highlights construction impacts that would occur to specific sensitive wildlife species.

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Sensitive invertebrate species were not observed along the project route; however, the Cheese-weed moth lacewing has a moderate potential to occur in the Arizona segments. Although APM B-23 was designed to minimize impacts to creosotebush to benefit Le Conte's thrasher, this would also serve to benefit cheese-weed moth lacewing which is associated with creosotebush communities. Additional surveys, sensitive area avoidance, and pre-cautionary construction measures are included in APMs B-1, B-3, B-8, B-10, B-12, B-13, B-14, B-16, and B-23. Although suitable habitat for the cheese-weed moth lacewing occurs along the project route, known locations of the species are more than 60 miles south of the Proposed Project. Consequently, implementation of the APMs listed above and avoidance of known locations of cheese-weed moth lacewing makes impacts to this species unlikely. Impacts to this species would be considered less than significant (Class III).

In California two sensitive invertebrates the Coachella Valley giant sand-treader cricket and the Coachella Valley Jerusalem cricket, have a high potential to occur within the Cactus City Rest Area to Devers Substation and Devers Substation to East Border of Banning segments. Although these species are not identified as sensitive by the CDFG or USFWS they are both proposed covered species under the CVMSHCP. To reduce impacts to these species SCE would implement APM B-4 to avoid compaction of sands utilized by these species. With implementation of the APM impacts to these species would be adverse but less than significant.

Fishes. As indicated in Section D.2.6.1.6, the Proposed Project is located primarily in a desert region that contains limited habitat for fish. The desert washes that occur in this region consist of ephemeral or intermittent drainages that flow as a result of rain events and winter snowmelt. With the exception of two segments, the Kofa National Wildlife Refuge to Colorado River and Palo Verde Valley to Midpoint Substation, there is now indication that sensitive fish occur in the Proposed Project area.

To reduce potential impacts to this species SCE would site towers to avoid sensitive habitats (APM B-1) and allow for the maximum spacing of towers to avoid sensitive features (APM B-13). Construction activities would also avoid impacts to water bodies as the project would span the Colorado River and irrigation canals that occur in the Palo Verde Valley. Impacts from degradation of water quality would be avoided through implementation of APM B 7 (Avoidance of Wetland Areas) and AMP B 21 (No Clearing of Riparian Habitat). In addition, SCE would implement APM B-16 (Pre-construction

Surveys) in order to identify and detect any sensitive fishes that are present. Implementation of these measures would reduce potential impacts to less than significant (Class II).

Amphibians. There is no indication that any sensitive amphibians occur in the Arizona portion of the Proposed Project. Surveys conducted of the project area did not detect the presence of sensitive amphibian species and impacts would be considered less than significant (Class III). Although no sensitive amphibians were identified in Arizona SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Four sensitive amphibians Couch's spadefoot, western spadefoot, Colorado River toad, and coast range newt have the potential to occur in the California portion of the Proposed Project. These species have a moderate and/or high potential to occur within the Colorado River to Midpoint Substation, Midpoint Substation, Cactus City Rest Area to Devers Substation, Devers Substation to East Border of Banning, Banning and Beaumont, Calimesa and San Timoteo Canyon, and San Bernardino Junction to Vista Substation segments.

Sensitive amphibian species were not identified or expected to occur within the other segments of the Proposed Project. These segments do not fall within the range nor support the appropriate habitat requirements for any sensitive amphibian species that were determined to have a high or moderate potential to occur in this area. Impacts to any sensitive amphibians in these segments would be less than significant (Class III).

Colorado River to Midpoint Substation. The Colorado River toad occurs primarily in aquatic habitat such as the Colorado River and adjacent irrigation canals. Implementation of the Proposed Project would have the potential to adversely impact Couch's spadefoot as a result of the permanent removal of desert scrub habitat and vehicle traffic. This is a highly cryptic species that breed in the ephemeral pools that form during the short but intense rainfall events that occur in this region. Because this species is rarely seen it is difficult to determine the presence of this species until after rain events. The removal of habitat and construction of the towers and laydown areas may result in the direct mortality of this species through mechanical crushing or habitat degradation. This potential impact would be considered significant without mitigation. To reduce potential impacts to this species SCE would implement pre-construction surveys of the project area and conduct routine inspections of the ROW by qualified environmental monitors. In addition to the APMs identified in this document Mitigation Measure B-9a (Conduct pre-construction surveys) and B-9b (Conduct biological monitoring) would reduce impacts to sensitive amphibians to less than significant levels (Class II).

Midpoint Substation/Cactus City Rest Area to Devers Substation. Construction of the Midpoint Substation would result in the permanent removal of 44 acres of suitable habitat for Couch's spadefoot toad, while the laydown area would temporarily remove five acres of suitable habitat. This permanent and temporary loss of habitat and the potential loss of individuals would be a potentially significant (Class II) impact. With implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/ Compensation Plan), B-9a (Conduct pre-construction surveys), and B-9b (Conduct biological monitoring) impacts to sensitive amphibians would be considered less than significant.

Devers Substation to East Border of Banning. The coast range newt has a moderate potential to occur in the Whitewater River, but suitable habitat for this species is not present at the location where the Proposed Project would cross the Whitewater River. In addition, the Whitewater River would be spanned by the Proposed Project and no activities would be conducted within the flood plain. Impacts to this species would be considered less than significant (Class III).

Banning and Beaumont/Calimesa and San Timoteo Canyon/San Bernardino Junction to Vista Substation. Construction of these segments of the Proposed Project would impact habitat that potentially supports the western Spadefoot toad. This species has been documented within five miles of the Proposed Project, and could utilize the grasslands and scrub habitats that occur in these segments. This impact would be considered significant (Class II) without mitigation. Similar to the amphibians identified in other segments SCE would implement APM B-16 (pre-construction surveys of the project area and routine inspections of the ROW by qualified environmental monitors) to reduce impacts. In addition to the APM implementation of Mitigation Measures B-9a (Conduct pre-construction surveys) and B-9b (Conduct biological monitoring) would reduce impacts to less than significant.

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-9a **Conduct pre-construction surveys.** SCE shall conduct pre-construction surveys for sensitive wildlife in any area subject to project disturbance. Surveys shall be conducted during a time of year when these species are known to be active. The location of sensitive species identified during the pre-construction surveys shall be identified on project maps.

B-9b **Conduct biological monitoring.** SCE shall conduct biological monitoring of the project area including the laydown, staging, access roads, and any area subject to project disturbance. The biological monitor shall look for sensitive wildlife species (including forest watch list animals and Forest Service Region 5 sensitive species) that may be located within or immediately adjacent to the construction areas. If sensitive species are found, the biological monitor shall move them out of harm's way (listed species require take authorization) to avoid direct impacts to these species. In the event that the wildlife species may cause harm to the biologist, the biologist shall notify the construction crews and monitor the species until it moves out of harms way. The results of all monitoring shall be recorded in daily monitoring notes that shall be included as part of the required monitoring reports for the project. The SCE shall notify the CPUC/BLM if any sensitive species are located during construction of the project. SCE shall notify the Forest Service of all sensitive species found on Forest Service land.

Reptiles. Sonoran desert scrub and coastal sage scrub communities are known to support numerous sensitive reptiles. In the Proposed Project area 12 sensitive reptile species have either been observed or have a high to moderate potential to occur within the segments. In Arizona, these include the chuckwalla, banded Gila monster, Colorado fringe toed lizard, and desert rosy boa. Four species have been observed in California portions of the Proposed Project including the San Diego horned lizard, Colorado Desert fringe-toed lizard and Mojave fringe-toed lizard, rosy boa, and northern red-diamond rattlesnake.

Table D.2-11 identifies the reptiles that have the potential to occur by segment. In segments that are not expected to support populations of sensitive reptiles; the area either does not contain suitable habitat or is located outside the geographical range for any of the listed species that were identified in Table D.2-5 to have a high or moderate potential to occur. In addition, these species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Sections determined to have a moderate or high potential to contain reptiles are discussed below for informational purposes.

Construction activities conducted for the Proposed Project could result in impacts to the sensitive reptile species listed in Table D.2-5. SCE would implement APMs B-3, B-5, B-8, B-16, and B-17 to reduce

impacts to these species. However the impacts would still be potentially significant (Class II) within all segments of the Proposed Project, except for the San Bernardino Junction to San Bernardino Substation segment where the construction impacts would be considered less than significant (Class III).

Construction impacts consist of the potential for direct and indirect mortality or injury of sensitive reptiles due to construction vehicles or equipment, and/or the temporary or permanent loss of suitable habitat. Permanent and temporary loss of habitat could occur at laydown/staging areas, along temporary access/ spur roads, and in other areas that are temporarily disturbed during construction, such as tower locations. These Class II impacts would be reduced to less than significant levels with the implementation of Mitigation Measures B-9b (Conduct Biological Monitoring), B-9c (Implement a Worker Environmental Awareness Program), and B-9d (Conduct pre-construction reptile surveys).

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-9b **Conduct biological monitoring.**

B-9c **Implement a Worker Environmental Awareness Program.** A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist(s) provided by SCE and approved by the CPUC/BLM prior to the commencement of construction activities. Training materials and briefings shall include but not be limited to, discussion of the Federal and State Endangered Species Acts, the consequences of noncompliance with these acts, identification and values of sensitive plant and wildlife species and significant natural plant community habitats, fire protection measures, sensitivities of working on forest service lands and identification of Forest Service sensitive species and MIS wildlife species, hazardous substance spill prevention and containment measures, and review of mitigation requirements. Training materials and a course outline shall be provided to the CPUC and BLM for review and approval at least 30 days prior to the start of construction. Training materials and updates of training materials shall also be provided to the Forest Service for review and comment. SCE shall provide to the CPUC and BLM a list of construction personnel who have completed training, and this list shall be updated by SCE as required when new personnel start work. No construction worker may work in the field for more than 5 days without receiving the WEAP.

B-9d **Conduct pre-construction reptile surveys.** Prior to construction, SCE shall conduct surveys in areas of suitable habitat for Sonoran desert tortoise, common chuckwalla, banded Gila monster, and desert rosy boa within 48 hours prior to the start of construction activities. If common chuckwallas, banded Gila monsters and/or desert rosy boas are found on the construction site, they will be relocated to nearby suitable habitat outside the construction area. Following the clearance surveys, exclusion fencing will be erected or a biological monitor will be onsite during construction activities.

- If potentially suitable burrows or rock piles are found, they will be checked for occupancy. Occupied burrows will be flagged and avoided (employing a 50-foot buffer) during construction. If the burrow cannot be avoided, it will be excavated and the occupant relocated to an unoccupied burrow outside the construction area and of approximately the same size as the one from which it was removed. If an existing burrow is unavailable, the biologist will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original. Trenches, holes, or other excavations will be examined for banded Gila monster prior to filling. If individuals are found, the biological monitor will relocate them to nearby suitable habitat.

- During construction, if a common chuckwalla, banded Gila monster, and/or desert rosy boa occur on the project site, construction activities adjacent to the individual's location will be halted and the animal will be allowed to move away from the construction site. If the individual is not moving, a qualified biologist will relocate it to nearby suitable habitat outside the construction area. It shall be placed in the shade of a shrub. The Forest Service will be notified of any sensitive wildlife identified on NFS lands. Also during construction, if a Sonoran desert tortoise occurs on the project site, construction activities adjacent to the individuals location will be halted and the *Guidelines for Handling Sonoran Desert Tortoises Encountered During Construction Projects* will be followed by qualified personnel.

Harquahala to Kofa National Wildlife Refuge. The common chuckwalla, banded Gila monster, and desert rosy boa have a high potential to occur on rocky slopes, foothills, and other rocky areas along this segment of the Proposed Project; however, there are no recorded occurrences of these species in the vicinity of this segment.

Kofa National Wildlife Refuge. Common chuckwalla, banded Gila monster, and desert rosy boa would have a high potential to be impacted by construction activities in this segment. While common chuckwalla has not been recorded in the vicinity of the Proposed Project, an occurrence of banded Gila monster was recorded in the Livingston Hills within three miles of the proposed ROW and the desert rosy boa was recorded in the western Kofa Mountains within five miles of the ROW.

Kofa National Wildlife Refuge to Colorado River. The common chuckwalla, banded Gila monster, desert rosy boa, and Mohave fringe-toed lizard all have a high potential to occur within this segment.

Palo Verde Valley (Colorado River to Midpoint Substation). The Mojave fringe-toed lizard has been found in the desert scrub habitat located along this segment of the ROW. The area also supports potential habitat for the Colorado Desert fringe-toed lizard.

Midpoint Substation. Construction of the Midpoint Substation would result in potential impacts to flat-tailed horned lizard, Colorado Desert fringe-toed lizard, Mojave fringe-toed lizard, banded Gila monster, and rosy boa. These species have the potential to occur in the habitat in the vicinity of the Midpoint Substation and laydown areas. The Mojave fringe-toed lizard had been observed at this site in areas with sandy soils and well-developed sand dunes.

Midpoint Substation to Cactus City Rest Area. Construction of this segment of the Proposed Project would remove habitat for Mojave fringe-toed lizard and Colorado Desert fringe-toed lizard. These species have been observed in this segment and may be subject to mortality from project activities. Flat-tailed horned lizard, banded Gila monster, and rosy boa may also occur in this area. Potential habitat for these species (areas with sandy soils and well developed sand dunes) extends from the Midpoint Substation west to approximately MM E126. The destruction of habitat and potential loss of individuals of Mojave fringe-toed lizard and Colorado Desert fringe-toed lizard would be potentially significant (Class II).

Cactus City Rest Area to Devers Substation. Construction of this segment of the Proposed Project would remove habitat for Mojave fringe-toed lizard and Colorado Desert fringe-toed lizard. These species have been observed in this segment and may be subject to mortality from project activities. Flat-tailed horned lizard, the northern red-diamond rattlesnake, and rosy boa may also occur in this area. Potential habitat for Flat-tailed horned lizard and the Mojave fringe-toed lizard (sandy soils) occurs near the eastern portion of this segment, especially east of the Cactus City Rest Area. The rosy boa likely occurs in the rockier areas within this segment, while the northern red-diamond rattlesnake is most likely to occur in the westernmost portion of this segment

Devers Substation to East Border of Banning. Construction of this segment of the Proposed Project would remove habitat for San Diego horned lizard and northern red diamond rattlesnake. These species have been observed in this segment and may be subject to mortality from project activities. Flat-tailed horned lizard, rosy boa, Belding's orange throated whiptail, and silvery legless lizard may also occur in this area. Two-striped garter snake, which potentially occurs in the Whitewater River, would not be affected by the Proposed Project as the project would span the Whitewater River.

Banning and Beaumont. Construction of this segment of the Proposed Project would remove habitat for San Diego horned lizard and northern red diamond rattlesnake. These species have been observed in this segment and may be subject to mortality from project activities. Flat-tailed horned lizard, rosy boa, Belding's orange throated whiptail, and silvery legless lizard may also occur in this area. Two-striped garter snake, which potentially occurs in the Whitewater River, would not be affected by the Proposed Project, as the project would span the Whitewater River.

Calimesa and San Timoteo Canyon. Six sensitive reptiles have the potential to occur in this segment, including San Diego horned lizard, northern red diamond rattlesnake, rosy boa, Belding's orange throated whiptail, silvery legless lizard, and two-striped garter snake.

San Bernardino Junction to Vista Substation. Construction of this segment of the Proposed Project would remove potential habitat where five sensitive reptile species These include San Diego horned lizard, northern red diamond rattlesnake, rosy boa, Belding's orange throated whiptail, and silvery legless lizard.

San Bernardino Junction to San Bernardino Substation. There is no indication that any listed reptiles occur in this segment of the Proposed Project. Construction of this segment of the Proposed Project would not result in any impacts to listed species of amphibians. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed. Although no listed amphibians were identified in this segment SCE would implement APM B-16 (Conduct pre-construction surveys) prior to construction.

Birds. Several sensitive bird species have been observed or have the potential to occur within the Proposed Project area. Similar to listed bird species, many sensitive birds are associated with the riparian and wetland habitats located near the Colorado River, Whitewater River, San Gorgonio Creek, and San Timoteo Creek. Some of the species that have been documented in or near segments identified in the Proposed Project include:

- prairie falcon
- burrowing owl
- loggerhead shrike
- California horned lark
- Le Conte's thrasher

Table D.2-11 identifies the sensitive bird species that have been documented or that have the potential to occur by segment. Similar to that discussed for listed bird species, in segments that are not expected to support populations of sensitive bird species; the area either does not contain suitable habitat for these birds or is located outside the geographical range for any of the sensitive species of bird that were identified in Table D.2-5 to have a high or moderate potential to occur. In addition, these species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Impacts to sensitive bird species would be minimized through the implementation of APMs and Mitigation Measures. In general, potential impacts to sensitive birds would be the same as identified for listed bird species. To reduce potential impacts to nesting birds and raptors SCE would implement APMs prior to construction of the project. These include APMs B-8 and B-16 that require additional

detailed surveys within a 100-foot buffer of project areas and the avoidance of sensitive sites if present. These APMs, by themselves, would not sufficiently ensure that impacts to migratory birds would be less than significant. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would reduce potential impacts to sensitive birds to less than significant levels. Additional measures that address potential impacts to specific species including burrowing owls, are addressed below.

Harquahala to Kofa National Wildlife Refuge. The Proposed Project would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, potential bird strikes on high tension wires, and disturbance of nesting activities. The burrowing owl is known to occur in this segment of the ROW and an osprey was observed north of this segment near the CAP canal and the Big Horn Mountains. However, because the preferred habitat of osprey is near water it is unlikely that this species would occur in the vicinity of the project ROW and unlikely it would be impacted by construction activities. The Proposed Project may displace burrowing owls from wintering or nesting burrows or cause disturbance to resident birds. During construction activities, owl burrows may be crushed by construction equipment. Burrowing owls may also be displaced or abandon their burrows as a result of human interference and noise during construction activities.

Preconstruction surveys, the avoidance pf sensitive areas, and pre-cautionary construction measures are included in APMs B-3, B-5, B-16, and B-17. However, there is still potential for direct and indirect mortality of the western burrowing owl, and construction-related impacts would be potentially significant (Class II). Implementation of Mitigation Measure B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to burrowing owls to less than significant levels. Mitigation Measure B-9e (Conduct pre-construction surveys and owl relocation) presents additional detail for the aforementioned APMs, and would therefore supersede these APMs.

Kofa National Wildlife Refuge. Suitable habitat for western burrowing owl also occurs within this segment. The Proposed Project would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and the disturbance of nesting activities. Project construction could displace or result in the mortality of burrowing owls. APMs B-3, B-5, B-16, and B-17 would help to reduce impacts to burrowing owls, but impacts would remain potentially significant (Class II). Implementation of Mitigation Measure B-9e (Conduct pre-construction surveys and owl relocation) and B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would reduce impacts to burrowing owls and sensitive birds to less than significant levels.

Kofa National Wildlife Refuge to Colorado River. The Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and disturbance of nesting activities. Several sensitive bird species are known to occur in this segment of the Proposed Project including Clark's grebe, snowy egret, great egret, osprey, and burrowing owl.

The Proposed Project would not result in direct removal of habitat for any sensitive bird species that utilize riparian or wetland habitats, including Clark's grebe, snowy egret, great egret or osprey. These species utilize riparian habitats and suitable habitat for these species would not be directly impacted within this segment. Implementation of APMs B-7, B-21, and B-38, which include the avoidance of riparian habitats, would result in no impact to these species as a result of the Proposed Project.

Project construction could displace or result in the mortality of burrowing owls. In addition to the APMS implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to sensitive birds to less than significant levels.

Palo Verde Valley (Colorado River to Midpoint Substation). As described above, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and disturbance of nesting activities. Several sensitive bird species are known to occur in this segment of the Proposed Project including:

- Burrowing owl
- Vermillion Flycatcher
- Crissal thrasher
- Sonoran yellow warbler
- Summer tanager
- White-faced ibis
- Brown-crested flycatcher
- Yellow breasted chat
- Le Conte's thrasher
- Bendire's thrasher
- Mountain plover
- Ferruginous hawk.
- Peregrine falcon

The Proposed Project would not result in direct removal of habitat for any sensitive bird species that utilize riparian or wetland habitats, including vermillion flycatcher, Crissal thrasher, Sonoran yellow warbler, summer tanager, white-faced ibis, brown-crested flycatcher, or yellow breasted chat. These species utilize riparian habitats and suitable habitat for these species would not be directly impacted within this segment of the ROW. Implementation of APMs B-7, B-21, and B-38, which include the avoidance of riparian habitats, would result in no impact to these species as a result of the Proposed Project.

Permanent removal of desert scrub as a result of tower construction and temporary removal of desert scrub habitat resulting from laydown/staging areas would result in a loss of potential habitat for Le Conte's thrasher, Bendire's thrasher, mountain plover, and ferruginous hawk (foraging habitat). The permanent loss of habitat for these species in this segment of the Proposed Project is relatively small and would be considered an adverse but not significant impact (Class III). Implementation of APM B-19 and Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) would further reduce potential impacts to these species.

The burrowing owl is known to occur in the agricultural lands of this segment of the ROW along access roads and irrigation canals. The Proposed Project may displace burrowing owls from wintering or nesting burrows or cause disturbance to resident birds. Construction activities, including the construction of towers, the establishment of staging/laydown facilities, stringing of conductors, and the increased presence of humans, may result in direct or indirect impacts to this species. Construction activities could result in direct displacement of breeding owls and abandonment of nesting burrows. The displacement of burrowing owls from resident burrows would be considered a significant impact. In addition to the APMs proposed by SCE, implementation of B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would be required to reduce impacts to less than significant levels (Class II).

Midpoint Substation. Construction of the Midpoint Substation and establishment of the temporary laydown area would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and disturbance related to construction activities. Construction activities and the increased presence of humans may result in direct or indirect impacts to burrowing owls and other sensitive birds that potentially occur in the vicinity. Construction activities could result in direct displacement of breeding owls and abandonment of nesting burrows. The displacement of burrowing owls from resident burrows would be considered a significant impact without mitigation.

Construction of the Midpoint Substation would result in the permanent removal of 44 acres and temporary removal of 5 acres of suitable desert scrub habitat utilized by Le Conte's thrasher, Bendire's thrasher, mountain plover, and ferruginous hawk (foraging habitat). These losses of potential habitat would be considered a significant impact. Implementation of APMs and Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), and B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to sensitive birds to less than significant levels (Class II).

Midpoint Substation to Cactus City Rest Area. Three sensitive bird species — Le Conte's thrasher, loggerhead shrike, and prairie falcon — are known to occur within this segment of the Proposed Project. In addition, ferruginous hawk, Bendire's thrasher, and Crissal thrasher have a high potential to occur in this segment. Mountain plover and vermillion flycatcher may also be present but due to habitat conditions in this segment have only a moderate potential to occur. As described in Section 2.6.1.6, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, potential bird strikes on high tension wires, and disturbance of nesting activities.

Riparian habitat that may be utilized by nesting birds would not be removed in this segment of the Proposed Project. Therefore impacts to vermillion flycatcher are not expected. Substantial impacts to foraging habitat for the ferruginous hawk would not occur as this is a wide ranging species. Impacts to other birds from displacement or noise would be reduced through APM B-22. This APM is designed to minimize impacts to Crissal thrasher and Le Conte's thrasher and their habitat by avoiding mesquite dominated areas and creosote bush scrub. Implementation of the AMPs and Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would reduce impacts to less than significant (Class II).

Cactus City Rest Area to Devers Substation. Burrowing owl and California horned lark, both California species of special concern, have been documented in this segment. In addition the California horned lark was documented within the Coachella Valley Preserve in 2003, but it may potentially occur along most of this segment (Environmental Planning Group, 2003). Several other birds including raptors may frequent the area or nest in or adjacent to the ROW. Section D.2.2.7 contains a detailed species account for this area. As described above in Section D.2.6.1.6, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, potential bird strikes on high tension wires, and disturbance of nesting activities.

Implementation of the AMPs and Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would reduce potential impacts to less than significant (Class II).

Devers Substation to East Border of Banning. Le Conte's thrasher was observed in desert scrub habitat located along this segment. Ten other sensitive birds are known or expected to occur in this segment. Some the sensitive raptors that may occur include Cooper's hawk, ferruginous hawk, golden eagle, prairie falcon, burrowing owl, and long-eared owl. Other species include riparian birds such as brown-crested flycatcher, vermillion flycatcher, and yellow warbler. Loggerhead shrike and mountain plover may occur in upland areas.

Riparian species would not be affected by the Proposed Project because they are typically found in woodland or riparian habitat (Cooper's hawk, vermillion flycatcher, yellow warbler, and long-eared owl) which would not be affected during construction in this segment. The remainder of these species is

known to forage or nest in desert scrub habitat and could be subject to project disturbance. As described above in Section D.2.6.1.6, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, and disturbance of nesting activities. Implementation of the AMPs and Mitigation Measures B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would reduce potential impacts to less than significant (Class II).

Banning and Beaumont. Habitat located in this segment is known or expected to support a variety of sensitive birds. Some the sensitive raptors that may occur include ferruginous hawk, golden eagle, peregrine falcon, and burrowing owl. Other species include Loggerhead shrike, mountain plover, and California horned lark, which may occur in upland areas. In addition, southern California rufous-crowned sparrow and Bell's sage sparrow could occur in chaparral habitat.

The golden eagle and/or peregrine falcon could potentially nest in the hilly areas in between the San Gorgonio River (MP W18) and the developed areas in Banning and Beaumont (MM W20). The other sensitive bird species could potentially utilize the open habitat areas or the denser scrub habitats in this segment.

As described above in Section D.2.6.1.6, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, and disturbance of nesting activities. Implementation of the AMPs and Mitigation Measures B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would reduce potential impacts to less than significant (Class II).

Calimesa and San Timoteo Canyon. Habitat located in this segment is known or expected to support a variety of sensitive birds Some the sensitive raptors that may occur include ferruginous hawk, golden eagle, loggerhead shrike, and burrowing owl. Other species include California horned lark, southern California rufous-crowned sparrow, Bell's sage sparrow, white-tailed kite, long-eared owl, yellow warbler, and yellow-breasted chat. Riparian birds could be subject to disturbance at San Timoteo Creek.

As described above in Section D.2.6.1.6, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, and disturbance of nesting activities. Implementation of the APMs and Mitigation Measures B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would reduce potential impacts to less than significant (Class II).

San Bernardino Junction to Vista Substation. Habitat located in this segment is known or expected to support a variety of sensitive birds including Cooper's hawk, burrowing owl, loggerhead shrike, southern California rufous-crowned sparrow, Bell's sage sparrow, and white-tailed kite. As described above in Section D.2.6.1.6, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, and disturbance of nesting activities. Implementation of the AMPs and Mitigation Measures B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would reduce potential impacts to less than significant (Class II).

San Bernardino Junction to San Bernardino Substation. Habitat located in this segment is known or expected to support a variety of sensitive birds including Cooper's hawk, burrowing owl, loggerhead shrike, southern California rufous-crowned sparrow, Bell's sage sparrow, and white-tailed kite.

Construction in this segment of the Proposed Project would impact suitable habitat for three sensitive species of birds, including Cooper's hawk, burrowing owl, and California horned lark. Tri-colored blackbird has a moderate potential for occurrence because and has been observed within five miles of this segment. However, suitable habitat for this species is not present within this segment of the ROW.

As described above in Section D.2.6.1.6, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, and disturbance of nesting activities. Implementation of the AMPs and Mitigation Measures B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-9e (Conduct pre-construction surveys and owl relocation) would reduce potential impacts to less than significant (Class II).

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9e **Conduct pre-construction surveys and owl relocation.** Prior to construction, SCE shall conduct pre-construction surveys for the western burrowing owl. Surveys shall be conducted prior to ground disturbance activities in appropriate areas within the potential impact areas of the project to determine the presence of burrowing owls and to ensure clearance of these areas. If active owl burrows are discovered during pre-construction surveys, owls would be evicted from the burrows using either active or passive techniques as recommended by the BLM and Burrowing Owl Consortium. Owl relocation, as well as discouragement of owls from returning to the site, will occur in the following manner:

- During the non-breeding season (September 1 through January 31), burrowing owls occupying the Proposed Project site will be evicted by passive relocation. Passive relocation would include installation of one-way doors on burrow entrances that would let owls out of the burrow but would not let them back in.
- If construction is to occur during the breeding season (February 1 through August 31) and prior to the relocation of the owls, 75-meter (246-foot) protective buffers would be maintained around burrows occupied by owls until a BLM approved biologist approves other action. Other actions could include passive relocation if it is determined that owls have not begun laying eggs or postponement of construction in the area until the young are fledged and no longer dependent upon the nest burrow.
- Once fledglings are capable of independent survival and adult non-breeding owls have successfully been relocated offsite, potential owl habitat (squirrel burrows) would be collapsed in order to keep the owls from returning. Ground squirrels would be removed from the site by trapping and relocation or by other approved means. Following squirrel removal, existing ground squirrel burrows would be destroyed.

Mammals. Sensitive mammal species have not been observed within the project area; however 26 sensitive mammal species have a high or moderate potential to occur to occur in or adjacent to the Proposed Project.

Table D.2-11 identifies the sensitive mammal species that have the potential to occur by segment. In segments that are not expected to support sensitive mammals; the area either does not contain suitable habitat for or is located outside the geographical range for any of the sensitive mammals that were

identified in Table D.2-5 to have a high or moderate potential to occur. In addition, these species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Sections determined to have a moderate or high potential to contain sensitive mammals are discussed further below.

Harquahala to Kofa National Wildlife Refuge. Sensitive mammal species expected to occur in the Harquahala to Kofa National Wildlife Refuge segment of the Proposed Project include pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, cave myotis, and desert bighorn sheep. While there are no recorded occurrences of pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, or cave myotis in the vicinity of this segment of the Proposed Project, suitable habitat for these species is present, and there is potential for them to occur along the route. Construction and maintenance activities are not expected to impact sensitive bat species as the habitat located in this segment of the ROW is not expected to support nesting or breeding activities for these species. Bats typically roost in trees, caves, rock crevices, or old buildings. The construction of the Proposed Project would not impact roosting habitat nor would it impact foraging habitat for these species because riparian and wetland habitats would be avoided.

Desert bighorn sheep and deer may be present at the time of construction. Bighorn sheep in the vicinity of this segment of the Proposed Project may be disturbed or scared off as a result of the construction noise, but these impacts would be temporary and limited to the construction phase of the project. To reduce potential impacts construction vehicles would remain on established roads (APMs B-3 and B-17) to the maximum extent practicable in order to avoid unnecessary disturbances to wildlife, and vehicles would be required to drive at low speeds in tortoise habitat (APM B-29), which would also reduce the potential for collisions with other wildlife. Impacts to bighorn sheep that are present near Harquahala Mountain and Burnt Mountain, south of the Big Horn Mountains Wilderness Area would be considered significant (Class II). Implementation of Mitigation Measure B-9f (Perform construction outside of breeding and lambing period) would reduce impacts to less than significant levels. The Proposed Project would also comply with the AGFD and BLM management policies for bighorn sheep.

Mitigation Measure for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-9f **Perform construction outside of breeding and lambing period.** Construction activities conducted within suitable habitat near Burnt Mountain, Harquahala Mountain, and Kofa NWR shall not occur during the period of the year when bighorn sheep are lambing (from January 1 to April 30). A pre-construction survey for bighorn sheep shall be conducted on Forest Service lands prior to construction and maintenance of the transmission lines. If bighorn sheep are found, then SCE shall consult with the Forest Service, USFWS, and Bighorn Institute to identify appropriate avoidance measures.

Kofa National Wildlife Refuge. Impacts to sensitive mammal species would be largely the same as described for the Harquahala to Kofa National Wildlife Refuge segment, although wild free-roaming horses and burros do not occur within this segment. Construction and maintenance activities are not expected to have an impact on sensitive bat species as the habitat located in this segment of the ROW would not be expected to support nesting or breeding activities of sensitive bats.

Disturbances associated with construction may result in reduced reproductive success or mortality of young desert bighorn sheep as a result of abandonment. Due to the proximity of desert bighorn sheep lambing areas within the Kofa NWR, impacts to the sheep during breeding and lambing periods would be potentially significant (Class II) without mitigation. APMs B-3, B-17, and B-29 would help to reduce

impacts associated with construction vehicles. These APMs would reduce the potential for collisions with bighorn sheep, but impacts would remain potentially significant. Implementation of Mitigation Measure B-9f (Perform construction outside of breeding and lambing period) would reduce impacts to less than significant levels. The Proposed Project would comply with AGFD and BLM management policies for the bighorn sheep.

Kofa National Wildlife Refuge to Colorado River. Impacts to sensitive mammal species would be the same as described for the Harquahala to Kofa National Wildlife Refuge segment. Sensitive mammal species expected to occur in the Harquahala to Kofa National Wildlife Refuge segment of the Proposed Project include pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, and cave myotis. Desert bighorn sheep may also occur. Construction and maintenance activities are not expected to have an impact on sensitive bat species as the habitat located in this segment of the ROW would not be expected to support nesting or breeding activities of sensitive bats. Impacts to bighorn sheep could adverse, but would be less than significant (Class III), and no additional mitigation is proposed.

Palo Verde Valley (Colorado River to Midpoint Substation). The only sensitive mammal species expected to occur in this segment of the Proposed Project include pallid bat, San Diego pocket mouse, Colorado River cotton rat, American badger, and Yuma mountain lion. Construction and maintenance activities are not expected to have an impact on sensitive bat species as the habitat located in this segment of the ROW would not be expected to support nesting or breeding activities of sensitive bats. Bats typically roost in trees, caves, rock crevices, or old buildings. The construction of the Proposed Project will not impact roosting habitat nor will it impact foraging habitat for these species because the riparian and wetland habitats will be avoided. Pallid bats are known to forage on terrestrial prey items including scorpions and could be impacted if night time construction activity was proposed.

The Proposed Project would result in permanent and temporary removal of potential burrowing and foraging habitat for the San Diego pocket mouse, Colorado River cotton rat, and American badger and it would result in the loss of potential foraging habitat for the Yuma mountain lion. Construction at tower sites and the establishment of laydown/staging areas will reduce potential habitat for these species however the footprint of the towers is relatively small and most construction impacts would be temporary. The impact resulting from the temporary removal of potential habitat for these species would be considered adverse but not significant (Class III). To further reduce potential impacts from construction activities and habitat loss SCE would implement APM B-1, B-3, B-7, and B-19. Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), would restore habitat in areas temporarily disturbed by project construction. Implementation of Mitigation Measures B-1a, B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), and B-9g (Conduct pre-construction surveys and relocation for American badger) would minimize impacts to sensitive plant and wildlife species through the avoidance of sensitive plants and through restoration of habitat following construction (Class II). To minimize potential impacts from mechanical crushing to American badgers Mitigation Measure B-9g (Conduct pre-construction surveys and relocation for American badger) would be implemented.

Midpoint Substation. Construction of the Midpoint Substation could result in potential impacts to or remove habitat for a variety of sensitive species including:

- California Leaf-Nosed Bat
- Pallid Bat
- Townsend's Big-Eared Bat
- Spotted Bat
- Yellow Bat
- Arizona Myotis
- Fringed Myotis
- Cave Myotis
- Yuma Myotis
- Western Mastiff Bat
- Pocketed Free-Tailed Bat
- Big Free-Tailed Bat
- San Diego Pocket Mouse
- American Badger
- Yuma Mountain Lion
- Nelson's Big Horn Sheep
- San Diego pocket mouse

Disturbance to habitat would be similar to that described for the previous segment. Construction activities would result in the removal of approximately 44 acres of habitat that could support populations of these species. The loss of this habitat could affect foraging opportunities for small rodents, bats, and the Yuma mountain lion. However, many of these species are wide ranging and forage across a large geographic area. The habitat in the vicinity of the Midpoint Substation is considered suitable habitat for these species, although these species have not been observed during surveys of the site.

Construction-related impacts to bat species would not likely occur in this area. There are no roosting or hibernacula sites identified in this area and construction would be limited to daylight hours. Pallid bats that forage exclusively on the ground could be impacted by night time travel on the existing access roads. These species are also very susceptible to disturbance and even hiking can result in the abandonment of roosts (Pierson and Brown, 1992). The permanent and temporary loss of habitat and potentially the loss of individuals would be considered a significant impact without mitigation. Impacts to American badger and bighorn sheep are addressed previously in Section D.2.6.1.8.

Temporary impacts of the proposed laydown area would also result in the disturbance of 5 acres of suitable habitat for pallid bat, San Diego pocket mouse and American badger. With the implementation of restoration (APM B-19), this temporary loss of potential habitat for these species would be considered adverse, but not significant (Class III).

To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), and B-9g (Conduct pre-construction surveys and relocation for American badger) would reduce the level of the impacts to sensitive wildlife species to les than significant levels (Class II).

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9b **Conduct biological monitoring.**

B-9g **Conduct pre-construction surveys and relocation for American badger.** Prior to construction, SCE shall conduct pre-construction surveys for American badger. Surveys will be conducted prior to ground disturbance activities in areas that contain habitat for this species. Badger dens located outside the project area shall be flagged for avoidance. Unoccupied dens located in the right of way shall be covered to prevent the animal from re-occupying the den

prior to construction. If ~~O~~occupied dens are identified in the area of the ROW that must be disturbed, the CDFG/BLM/Forest Service shall be consulted regarding options for action. Hand-excavation is an option if occupied dens cannot be avoided, but alternatives shall be considered due to potential danger to biologists. ~~hand excavated if avoidance is not possible.~~ Dens shall be hand–excavated only before or after the breeding season (February 1–May 30). Any relocation of badgers shall take place after consultation with the BLM, Forest Service, and CDFG.

Midpoint Substation to Cactus City Rest Area. There are a variety of sensitive mammal species that may occur in the vicinity of the Midpoint Station to Cactus City Rest Area segment of the Proposed Project. Of primary concern in this segment is the potential impact to roosting bat species. Construction activities may have an impact on the three sensitive bat species that have a high potential to occur in this area including pallid bat, western mastiff bat, and pocketed free-tailed bat. Seven other species of bat California leaf-nosed bat, Townsend's big-eared bat, spotted bat, Arizona myotis, fringed myotis, cave myotis, and big free-tailed bat have a moderate potential to occur along this segment. These species typically roost in trees, rock crevices, or caves that are common in the steeper, rockier areas along this segment of the Proposed Project. This impact would be considered significant if the bats are flushed from nursery colonies. Impacts to roosting bats could be avoided by identifying locations of possible roosting colonies and scheduling work activities to avoid work adjacent to these areas during the breeding season. While not all bats are migratory a number of species common to this area winter in warmer climates outside the project area. However, some species are year round residents and hibernate in the project area. Disruption of hibernacula would also be considered a significant impact. To reduce impacts to bat species SCE would implement APM B-8 and Mitigation Measure B-9h (Conduct pre-construction surveys for roosting bats). Implementation of these measures would reduce impacts to less than significant levels (Class II).

Construction may also affect the American badger in this segment by destroying burrows or causing disturbance as a result of construction activities.

To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), B-9g (Conduct pre-construction surveys and relocation for American badger), and B-9h (Conduct pre-construction surveys for roosting bats) would reduce the level of the impacts to sensitive wildlife species to less than significant levels (Class II).

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9b **Conduct biological monitoring.**

B-9g **Conduct pre-construction surveys and relocation for American badger.**

B-9h **Conduct pre-construction surveys for roosting bats.** SCE shall conduct surveys focused surveys for suitable roosting habitat or nursery sites for sensitive bats at the tower location, access/spur roads, and laydown/staging areas that occur in rocky areas or in areas where caves or old mines are present. If suitable roosting/nursery sites are found, then focused surveys shall be conducted to determine if the sites support sensitive bat species. If sensitive bat species occur

at these sensitive roosting/nursery sites, then tower-specific adjustments and adjustments of the locations of access/spur roads and laydown/staging areas shall be made to avoid these sites. If towers, access/spur roads, and/or laydown/staging areas cannot avoid these sites, then construction of the towers, roads, and establishment of laydown/staging areas shall be delayed until the breeding cycles for the sensitive bats are completed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the sensitive bats are completed. SCE shall document the results of the surveys and any avoidance of roosting/nursery sites for sensitive bats.

Cactus City Rest Area to Devers Substation. There are a variety of sensitive mammal species that may occur in the vicinity of the Midpoint Station to Cactus City Rest Area segment of the Proposed Project. This includes the American badger and roosting bats. Impacts to these species have been previously discussed above in Section D.2.6.1.8.

Construction of this segment of the Proposed Project would also directly impact suitable habitat for the Palm Springs round-tailed squirrel, a State species of special concern. This species is known to occur in the vicinity of the Proposed Project near Dillon Road and northwest of Indio. Other populations are scattered around the Coachella Valley. Suitable habitat occurs in the ROW from a point near Dillon Road, north of the town of Coachella, and west to the Devers Substation. Construction of 95 towers and access/spur roads between Dillon Road and Devers Substation would potentially result in permanent removal of suitable habitat for this species. In addition, temporary removal of potentially suitable habitat will also occur at the construction areas around each of the towers, the laydown/staging areas, and along temporary access/spur roads. Indirect impacts to this species may occur from the presence of humans and construction vehicles and equipment and from the increased level of traffic on the access roads. APM B-25 addresses the avoidance of mesquite hummock habitat for the purpose of benefiting the Coachella Valley round-tailed squirrel. If present, temporary and permanent impacts to habitat for the Coachella Valley round-tailed squirrel would be considered significant without mitigation. In addition to the AMPs proposed by SCE, Mitigation Measures B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce impacts to the Coachella Valley round-tailed squirrel to less than significant levels (Class II).

To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), B-9g (Conduct pre-construction surveys and relocation for American badger), B-9h (Conduct pre-construction surveys for roosting bats), and B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce the level of the impacts to sensitive wildlife species to less than significant levels (Class II).

Devers Substation to East Border of Banning. Construction of this segment of the Proposed Project would directly impact suitable habitat for the Coachella Valley round-tailed ground squirrel as a result of permanent and temporary removal of habitat. Suitable habitat for this species occurs in a patchy distribution between Devers Substation and Cabazon. The impacts for this species would be the same as those described above for the Cactus City Rest Area to Devers Substation segment. The temporary and permanent removal of habitat for the Coachella Valley round-tailed ground squirrel would be considered potentially significant (Class II).

Construction of this segment may have the potential to impact sensitive bat species at have a high or moderate potential to occur in this segment. Some of these include California leaf-nosed bat, pallid bat, spotted bat, western yellow bat, western mastiff bat, and pocketed free-tailed bat. Townsend's big-eared

bat, fringed myotis, Yuma myotis, and big free-tailed bat may also occur. Construction of this segment may also impact potential habitat for Palm Springs pocket mouse, Los Angeles pocket mouse, northwestern San Diego pocket mouse, pallid San Diego pocket mouse, Los Angeles pocket mouse, San Diego black-tailed jackrabbit, and American badger. The potential impacts to these sensitive species and habitat for these species would be the same as those described above for the Cactus City Rest Area to Devers Substation segment. To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), B-9g (Conduct pre-construction surveys and relocation for American badger), B-9h (Conduct pre-construction surveys for roosting bats), and B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce the level of the impacts to sensitive wildlife species to less than significant levels (Class II).

Banning and Beaumont. Construction of this segment may have the potential to impact sensitive bat species that have a high or moderate potential to occur in this segment. Some of these include western yellow bat, pallid bat, Townsend's big-eared bat, spotted bat, fringed myotis, and western mastiff bat. Construction of this segment may also impact potential habitat for San Diego black-tailed jackrabbit, Los Angeles pocket mouse, northwestern San Diego pocket mouse, Dulzura pocket mouse, pallid San Diego pocket mouse, Los Angeles pocket mouse, San Diego desert woodrat, and American badger. The potential impacts to these sensitive species and habitat for these species would be the same as those described above for the Cactus City Rest Area to Devers Substation segment. To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), B-9g (Conduct pre-construction surveys and relocation for American badger), B-9h (Conduct pre-construction surveys for roosting bats), and B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce the level of the impacts to sensitive wildlife species to less than significant levels (Class II).

Calimesa and San Timoteo Canyon. Construction of this segment may have the potential to impact sensitive bat species that have a high or moderate potential to occur in this segment. Some of these include western yellow bat, pallid bat, Townsend's big-eared bat, spotted bat, fringed myotis, and western mastiff bat. Construction of this segment may also impact potential habitat for Los Angeles pocket mouse, northwestern San Diego pocket mouse, Dulzura pocket mouse San Diego black-tailed jackrabbit, Los Angeles pocket mouse, northwestern San Diego pocket mouse, Dulzura pocket mouse, San Diego black-tailed jackrabbit, and San Bernardino white-eared pocket mouse.

The potential impacts to these sensitive species and habitat for these species would be the same as those described above for the Cactus City Rest Area to Devers Substation segment. To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), B-9g (Conduct pre-construction surveys and relocation for American badger), B-9h (Conduct pre-construction surveys for roosting bats), and B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce the level of the impacts to sensitive wildlife species to less than significant levels (Class II).

San Bernardino Junction to Vista Substation. Construction of this segment may have the potential to impact sensitive bat species that have a high or moderate potential to occur in this segment. Some of these include western yellow bat, pallid bat, Townsend's big-eared bat, spotted bat, fringed myotis, and western mastiff bat. Construction of this segment may also impact potential habitat for Los Angeles pocket mouse, northwestern San Diego pocket mouse, Dulzura pocket mouse San Diego black-tailed jack-rabbit, Los Angeles pocket mouse, northwestern San Diego pocket mouse, Dulzura pocket mouse, San Diego black-tailed jackrabbit, and San Bernardino white-eared pocket mouse.

The potential impacts to these sensitive species and habitat for these species would be the same as those described above for the Cactus City Rest Area to Devers Substation segment. To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), B-9g (Conduct pre-construction surveys and relocation for American badger), B-9h (Conduct pre-construction surveys for roosting bats), and B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce the level of the impacts to sensitive wildlife species to less than significant levels (Class II).

San Bernardino Junction to Vista Substation. Construction of this segment may have the potential to impact sensitive bat species that have a high or moderate potential to occur in this segment. Some of these include western yellow bat, pallid bat, Townsend's big-eared bat, spotted bat, fringed myotis, and western mastiff bat. Construction of this segment may also impact potential habitat for Los Angeles pocket mouse, northwestern San Diego pocket mouse, Dulzura pocket mouse San Diego black-tailed jackrabbit, Los Angeles pocket mouse, northwestern San Diego pocket mouse, Dulzura pocket mouse, San Diego black-tailed jackrabbit, and San Bernardino white-eared pocket mouse.

The potential impacts to these sensitive species and habitat for these species would be the same as those described above for the Cactus City Rest Area to Devers Substation segment. To reduce or avoid impacts to sensitive species SCE would implement APMs that include pre-construction surveys and the avoidance of sensitive wildlife. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), B-9b (Conduct biological monitoring), B-9g (Conduct pre-construction surveys and relocation for American badger), B-9h (Conduct pre-construction surveys for roosting bats), and B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce the level of the impacts to sensitive wildlife species to less than significant levels (Class II).

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9b **Conduct biological monitoring.**

B-9g **Conduct pre-construction surveys and relocation for American badger.**

B-9h **Conduct pre-construction surveys for roosting bats.**

B-9i **Schedule construction when the Coachella Valley round-tailed squirrel is dormant.** SCE shall conduct pre-construction surveys for Coachella Round Tailed Squirrels prior to construction to identify locations of nesting colonies. Placement of footings, roads, and laydown areas shall avoid nesting colonies of this species. If this species is identified within the ROW, construction activities shall be scheduled only during periods when this species is dormant (between August 1 and February 28).

D.2.6.1.9 State and Federal Jurisdictional Habitats

Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands (Class II and Class III)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are present in the desert portion of the Proposed Project (e.g., from Harquahala Switchyard to Midpoint Substation). In addition, jurisdictional drainages and intermittent creeks were noted throughout the western portion of the Proposed Project. Wetlands that fall under the jurisdiction of the ACOE and CDFG were noted during the biological reconnaissance surveys of this segment along the Colorado River and potentially in some of the irrigation channels located throughout the Palo Verde Valley. Prior to conducting any activities in this area, SCE would obtain authorization from the Regional Water Quality Control Board via a Clean Water Act 401 Water Quality Certification, ACOE Clean Water Act 404 permit, and CDFG Section 1602 Streambed Alteration Agreement.

The transmission line would span the Colorado River and most of the desert washes and ephemeral drainages where jurisdictional waters may occur. Construction activities would also result in removal of habitat from discharge or fill into the Whitewater River and adjacent desert washes. The Whitewater River is located between MPs W3.2 and W3.5 and large desert washes are located between MPs W6.2 and W6.3 and between MPs W6.9 and W7.1. Smaller desert washes are located near MPs W9.0, W9.4, W10.3, W11.2, and W12.0.

Along the Banning and Beaumont segment, construction activities would result in removal of habitat from, or discharge of fill into, the San Gorgonio River and various drainages that are present in this segment. The Proposed Project would cross the San Gorgonio River between MPs W17.6 and W18.1, as well as a large tributary to the San Gorgonio River between MPs W11.9 and W12.1. In addition, it would cross well-vegetated drainages between MPs W18.6 and W 18.7 and MPs W19.9 and W20.0. No new towers would be constructed within these drainages; however, Towers T149A and T150 that are located within and immediately adjacent to San Gorgonio River would be removed.

Within the Calimesa and San Timoteo Canyon segment, the Proposed Project would cross through San Timoteo Creek at approximately MP W29.6. This section of San Timoteo Creek is spanned by the existing transmission lines and no towers are proposed to be replaced or removed within the creek. Indirect impacts to San Timoteo Creek may occur during reconductoring of the transmission lines.

West of San Timoteo Canyon, the Proposed Project does not cross any large watercourses or drainages but numerous small ephemeral drainages that may fall under the jurisdiction of the ACOE and CDFG are present along the undeveloped, hilly portions of the route. Reconductoring and replacement of existing towers in this segment are not expected to directly impact these ephemeral drainages.

Construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats). However, the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Any removal of habitat in desert washes or construction impacts in desert washes, the Whitewater River, the San Gorgonio River, or their tributaries would be considered a significant but mitigable impact (Class II). Impacts to Jurisdictional Waters and Wetlands would be reduced to a less than significant level with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-10: Construction activities would result in adverse effects to Jurisdictional Waters and Wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

D.2.6.1.10 Wildlife Corridors and Nursery Sites

Impact B-11: Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites (Class II)

The desert portion of the Proposed Project (e.g., from Harquahala Switchyard to Midpoint Substation) consists of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events. Subsequently, most of the washes do not contain perennial flows and are not expected to support fish and other species that are dependent on permanent water sources.

The transmission line will span the Colorado River, the San Gorgonio River, the Whitewater River, San Timoteo Creek, and the drainage canals in the Harquahala Valley and Palo Verde Valley. The project would span these waters, and construction activities would utilize existing public access roads. Therefore, no impacts to the movement of fish within these waters would occur. In addition, native wildlife nursery sites that may be associated with these upstream and downstream areas of the Colorado River would not be affected by the project.

However, native wildlife nursery sites, primarily bat nursery colonies, may be associated with the rock crevices and caves in the Chuckwalla Mountains, Orocopia Mountains, and in the hilly, undeveloped areas near San Bernardino Junction. The construction of towers and other construction activities in and adjacent to these mountains could potentially disrupt bat nursery colonies. APMs B-8 and B-16 address conducting additional surveys and avoidance of sensitive features and vegetation. These APMs do not cover impacts to bat nursery colonies and therefore, the impacts to the sensitive bat nursery sites may be potentially significant (Class II). Implementation of Mitigation Measure B-9h (Conduct pre-construction surveys for roosting bats) would reduce the level of impacts to bat nursery colonies to less than significant levels (Class II).

Construction of the Proposed Project may also result in the temporary disturbance to breeding bighorn sheep, particularly in the Kofa NWR. Vehicle movement, equipment staging, and construction activities have the potential to temporarily disrupt breeding behavior in this species (Smith et al., 1986). Impacts to wildlife movement or nursery sites would be reduced to less than significant levels through implementation of Mitigation Measure B-9f (Perform construction outside of breeding and lambing period).

Mitigation Measures for Impact B-11: Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites

B-9f Perform construction outside of breeding and lambing period.

B-9h Conduct pre-construction surveys for roosting bats.

Impact B-12: Construction activities would result in adverse effects to linkages and wildlife movement corridors (Class III)

Linkages and corridors facilitate regional animal movement, and are generally centered around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. The Proposed Project would span the following waterways: Colorado River, San Gorgonio River, and San Timoteo Creek. The

Colorado River serves as a wildlife movement corridor and migratory corridor for birds. The San Gorgonio River serves as a primary linkage between areas in the San Bernardino Mountains and the San Gorgonio Pass. San Timoteo Creek serves as a primary linkage for wildlife species between the Badlands in Western Riverside County and the areas to the north in San Bernardino County. This corridor is utilized by bobcats and other large mammals, as well as by riparian birds, for movement between territory areas and during migration.

No permanent impacts would occur to wildlife movement corridors. Although vehicle traffic associated with construction activities would occur within the vicinity of the aforementioned waterways, these activities would be in accordance with existing roads and would not result in direct impacts to habitat in the movement corridors. The disturbance associated with project construction would result in temporary impacts to wildlife utilizing the waterways and adjacent habitat as a movement corridor. A temporary increase in traffic and activities in these areas would not impede the movement of wildlife and would not affect the nocturnal movement of wildlife. Therefore, impacts to wildlife movement corridors would be considered adverse but less than significant (Class III).

D.2.6.1.11 Plans, Policies, and Ordinances

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (Class II and Class III)

The Proposed Project would traverse the jurisdictions of the BLM, Riverside and San Bernardino Counties, and the Cities of Coachella, Cathedral City, Banning, Beaumont, Calimesa, Redlands, Loma Linda, Colton, and Grand Terrace. Plans developed by these jurisdictions were reviewed to determine if there were any biological resources policies that would apply to the construction and operation of the Proposed Project. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with the Proposed Project and identified policies that required further evaluation in this EIR/EIS. See Appendix 2 for a complete discussion of applicable biological resources policies.

The relevant biological resources that were brought forward for further analysis address issues, such as conservation of wetlands and riparian areas, protection of listed and special status wildlife and plant species, preservation of certain habitats and plant communities, and protection and enhancement of open space. Table D.2-12 lists the relevant policies that were determined to need further analysis, and presents the basis for the Proposed Project's consistency with these policies. The Proposed Project would not conflict with any of these relevant policies identified in Table D.2-12.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
Bureau of Land Management *Applicable Segments: Palo Verde Valley, Midpoint Substation, Midpoint Substation to Cactus City Rest Area, Cactus City Rest Area to Devers Substation, Devers Substation to East Border of Banning*	California Desert Conservation Area (CDCA) Plan (1980 as Amended)		
	Policy 3: Protective provisions, stipulations, or objectives for wildlife will be considered in all permits, licenses, activity plans, etc., to avoid or minimize habitat deterioration.	Yes	This EIR/EIS evaluates potential impacts to wildlife and its habitats, and identifies APMs that would reduce impacts that would result from the Proposed Project, and Mitigation Measures that would minimize any impacts to wildlife or its habitats. These APMs and Mitigation Measures are considered in the project plans, as well as permits such as APM B-20, which would require SCE to obtain a permit for taking ravens or their nests.
	Goal 2: Manage those plant species on the federal and State lists of threatened and endangered species and their habitats so that the continued existence of each is not jeopardized. Stabilize and, where possible, improve populations through management and recovery plans developed and implemented cooperatively with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.	Yes	The Proposed Project would not jeopardize the continued existence of plant species on federal and State lists of endangered and threatened species. SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive natural resources when siting the towers. In addition, the Proposed Project identifies Mitigation Measure B-8a (Conduct Surveys for Listed Plant Species), which would identify and avoid locations of listed plant species; or, if necessary, transplant certain plant individuals.
	Goal 3: Manage those plant species officially designated as sensitive by the BLM for California and their habitats so that the potential for federal or State listing is minimized. Include consideration of sensitive species habitats in all decisions such that impacts are avoided.	Yes	The Proposed Project would not increase the potential for the listing of BLM sensitive plant species on federal and State lists of endangered and threatened species. SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive natural resources when siting the towers.
	Goal 4; Manage unusual plant assemblages (UPAs) so that their continued existence is maintained. In all actions, include consideration of UPAs so that impacts are avoided, mitigated or compensated.	Yes	SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive natural resources when siting the towers.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
Riverside County	Riverside County Comprehensive General Plan (2003)		
Applicable Segments: Palo Verde Valley; Midpoint Substation, Midpoint Substation to Cactus City Rest Area; Cactus City Rest Area to Devers Substation, Devers Substation to East Border of Banning, Banning and Beaumont, Calimesa and San Timoteo Canyon	LU 8.1: Provide for permanent preservation of open space lands that contain important natural resources, hazards, watercourses, and scenic and recreational values.	Yes	The Proposed Project would not preclude the preservation of open space lands. SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive natural resources when siting the towers. SCE would also implement APMs B-19 and B-21 would minimize disturbance to riparian areas, and would provide for the restoration of any affected areas, and APM B-26, which would avoid wash areas.
	OS 5.6: Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.	Yes	The Proposed Project would not preclude the conservation of upland habitat areas. In addition, SCE would implement APM B-35, which would avoid upland areas where desert tortoises could occur.
	OS 6.1: During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.	Yes	SCE would implement APM B-7, which would prohibit project activities in any existing wetland areas. In addition, as part of the Proposed Project Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/ Compensation Plan) would be implemented in if jurisdictional waters and wetlands are impacted.
	OS 6.2: Preserve buffer zones around wetlands where feasible and biologically appropriate.	Yes	SCE would implement APM B-7, which would prohibit project activities in any existing wetland areas.
Riverside County	Riverside County Comprehensive General Plan, Reche Canyon/Badlands Area Plan (2003)		
Applicable Segments: Calimesa and San Timoteo Canyon	RCBAP 16.1: Conserve habitat that captures the diversity of the Riverside Lowlands bioregion within the Reche Canyon/Badlands area. The Reche Canyon/Badlands region includes substantial areas of remaining natural habitat within the Riverside Lowlands, including portion of the San Jacinto River, the Badlands, Reche Canyon area, and the Mystic Lake/ San Jacinto Wildlife Area.	Yes	The Proposed Project would not preclude the conservation of habitat. SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features.
	RCBAP 16.4: Conserve existing, intact upland habitat blocks between Sycamore Canyon Park area, Box Springs Mountain Reserve, and San Bernardino County to the north, focusing on sage scrub, grassland, and chaparral habitat.	Yes	The Proposed Project would not be located in the vicinity of Sycamore Canyon Park or Box Springs Mountain Reserve; however it does traverse sage scrub, grassland, and chaparral habitat to the north and northeast of these areas. The Proposed Project would not preclude the conservation of these habitats, and it would be located within an existing utility ROW. In addition, two transmission lines would be removed in this area and replaced with only one, so more habitat would be available. SCE would implement Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) in certain disturbed areas.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	RCBAP 16.7: Conserve high quality sage scrub and chamise chaparral in order to protect core population of Bell's sage sparrow in Badlands area.	Yes	The Proposed Project would not preclude the conservation of these habitats, and it would be located within an existing utility ROW. In addition, two transmission lines would be removed in this area and replaced with only one, so more habitat would be available. SCE would implement B-5a (Conduct pre-construction surveys and monitoring for breeding birds), which would require a buffer around any breeding bird in the area, including Bell's sage sparrow. In addition, SCE would implement Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) in certain disturbed areas.
	RCBAP 16.8: Conserve San Jacinto Valley crownscale, vernal barley, Davidson's saltbush, Coulter's goldfields, and spreading navarretia. Conservation should focus on the Traver–Domino-Willows soil series occurring in the San Jacinto River flood plain. Key populations of these three species are known to exist within this section of the San Jacinto River.	Yes	The Proposed Project would be not located in the vicinity of and would not traverse the San Jacinto River; however, San Jacinto Valley crownscale has a moderate potential to occur with the Calimesa and San Timoteo Canyon segment. SCE would implement APMs B-8 and B-12, which would identify and avoid sensitive plants and plant communities through modification of tower sites. In addition, the Proposed Project identifies Mitigation Measure B-8a (Conduct Surveys for Listed Plant Species), which would identify and avoid locations of listed plant species; or, if necessary, transplant certain plant individuals.
	RCBAP 16.9: Conserve vernal pool complexes supporting thread-leaved brodiaea and California Orcutt grass known to exist within the Reche Canyon/Badlands Area Plan.	Yes	The Proposed Project would not preclude the conservation of vernal pool complexes in the Reche Canyon/Badlands area. SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features.
	RCBAP 16.10: Conserve alluvial scrub and alkali vernal plain habitat supporting a key population of smooth tarplant, Wright's trichocoronis, and little mousetail within this section of the San Jacinto River system.	Yes	Smooth tarplant and little mousetail have a moderate potential to occur within the Calimesa and San Timoteo Canyon segment. SCE would implement APMs B-8 and B-12, which would identify and avoid sensitive plants and plant communities through modification of tower sites.
	RCBAP 16.11: Conserve sandy-granitic soils within chaparral and coastal sage scrub habitats capable of supporting Payson's jewel flower and prostrate spineflower known to exist within the Reche Canyon/Badlands area.	Yes	Payson's jewel flower and prostrate spineflower are not known to occur or have a moderate or high potential to occur within the Calimesa and San Timoteo Canyon segment. The Proposed Project would not preclude the conservation of these soils, and it would be located within an existing utility ROW. In addition, two transmission lines would be removed in this area and replaced with only one, so more habitat would be available.
Riverside County	Riverside County Comprehensive General Plan, Pass Area Plan (2003)		
Applicable Segments: Devers Substation to East Border of Banning; Banning and Beaumont	PAP 15.1: Protect viable oak woodlands through adherence to the Oak Tree Management Guidelines and Best Management Practices adopted by Riverside County.	Yes	Some coast live oak individuals exist within the Banning and Beaumont segment. SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	PAP 16.5: Conserve coastal sage scrub patches which support known populations of granite night lizard and granite spiny lizard.	Yes	Coastal sage scrub is not known to exist in the vicinity of the Proposed Project. However, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features.
	PAP 16.8: Maintain wetlands and wetland connections via Noble Creek to conserve wetland species and wildlife dispersal.	Yes	SCE would implement APM B-7, which would prohibit all project-related activities from occurring in wetland areas.
Riverside County	Riverside County Comprehensive General Plan, Western Coachella Valley Area Plan (2003)		
Applicable Segments: Cactus City Rest Area to Devers Substation; Devers Substation to East Border of Banning	WCVAP 21.2: Require all development activities within Fringe-toed Lizard Habitat areas be compatible with the conservation principles and provisions of the Fringe-toed Lizard Habitat Conservation Plan and the standards of the Multipurpose Open Space Element.	Yes	SCE would implement APM B-34 and BB-36, which would minimize impacts to fringe-toed lizards and its habitat.
Riverside County	Riverside County Comprehensive General Plan, Desert Center Area Plan (2003)		
Applicable Segment: Midpoint Substation to Cactus City Rest Area	DCAP 10.2: Work to limit off-road vehicle use within the Desert Center Area Plan.	Yes	SCE would implement APM B 3 and L 3, which would minimize project associated off-highway vehicle use or the creation of new roads that could be utilized for these uses.
	DCAP 10.3: Require new development to conform with Desert Tortoise Critical Habitat designation requirements.	Yes	SCE would implement APMs B-18, 28, 29, 30, 31, 32, and 35, which would minimize impacts to desert tortoise.
Riverside County	Riverside County Comprehensive General Plan, Palo Verde Area Plan (2003)		
Applicable Segment: Palo Verde Valley	PVVAP 11.1: Protect the Colorado River watershed and habitat, and provide recreational opportunities and flood protection through adherence to the Open Space, Habitat, and Natural Resource Preservation section of the General Plan Land Use Element and the Water Resources and Watershed Management sections of the Multipurpose Open Space Element, as well as through use of Best Management Practices.	Yes	SCE would implement APMs B-7, B-19, and B-21 would prohibit any project activity from wetland areas, minimize disturbance to riparian areas, and would provide for the restoration of any affected areas.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	PVVAP 12.1: Protect biological resources in the Palo Verde Valley planning area through adherence to the Sensitive Environmental Land and Watershed Management sections of the General Plan Multipurpose Open Space Element.	Yes	SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive features when siting the towers. In addition, the Proposed Project would implement Mitigation Measure B-8 (Conduct Surveys for Listed Plant Species), and B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), which would minimize the disturbance to habitats supporting special status species. Also refer to polices discussed above under Riverside County Comprehensive General Plan.
San Bernardino County *Applicable Segments: Calimesa and San Timoteo Canyon, San Bernardino Junction to Vista Substation, San Bernardino Junction to San Bernardino Substation*	San Bernardino County General Plan (2002)		
	BI-1: Because all rare, endangered, threatened, and candidate species' habitats require management for preservation, the following shall be implemented: a) Biotic Resources Overlay should be applied to areas identified as habitat for special status species b) All land use map changes and proposals for areas within the Biotic Resources Overlay or Open Space on the Resources Overlay shall be accompanied by a report identifying biotic resources that could be affected and mitigation measures. c) The conditions of approval of any land use application shall incorporate identified mitigation measures. d) All land use map changes and proposals shall include, where feasible, mitigation measures that would reduce impacts to and enhance populations and habitats.	Yes	This policy is the responsibility of San Bernardino County; however, the Proposed Project fulfills these items through this EIR/EIS, which identifies and evaluates biotic resources in the ROWs of these segments and adjacent areas. In addition, this EIR/EIS identifies mitigation measures to eliminate or reduce impacts to these identified resources.
	BI-2: Because listed and candidate species and their habitats exist throughout the County and may occur in areas not included in the Biotic Resource Overlay, all of the provisions of policy BI-1 may be applied elsewhere in the County.	Yes	This policy is the responsibility of San Bernardino County; however, the Proposed Project fulfills these items through this EIR/EIS, which identifies and evaluates biotic resources in the ROWs of these segments and adjacent areas. In addition, this EIR/EIS identifies mitigation measures to eliminate or reduce impacts to these identified resources.
	BI-3: Because species occurrences may be adversely affected by land use approvals, provisions of Policy BI-1 may be applied in areas supporting these species if it can be shown that the species is "threatened" as that term is used in the Federal Endangered Species Act.	Yes	This policy is the responsibility of San Bernardino County; however, the Proposed Project fulfills these items through this EIR/EIS, which identifies and evaluates biotic resources in the ROWs of these segments and adjacent areas. In addition, this EIR/EIS identifies mitigation measures to eliminate or reduce impacts to these identified resources.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	BI-4: Because the quality of life is related to the variety and abundance of all species, commonly occurring species shall be conserved. The following policies shall be incorporated into the conditions of approval for all proposed discretionary land use proposals: a) Regulate land clearing b) Minimize grading and cut and fill c) Limit OHV operation d) Restrict encroachment of incompatible land uses e) Encourage infilling of vacant land f) Implement abatement program for tree mortality	Yes	This policy is the responsibility of San Bernardino County, and the Proposed Project would be located within an existing utility ROW. Therefore these items would have been implemented when the original ROW was established. However the Proposed Project would address some of these items through the implementation of: • APMs B-11, which would require the use of hand tools to clear vegetation in certain areas • APM B-3 and L-3, which would minimize project associated off-highway vehicle use and the creation of new roads that could be utilized for these uses
	OR-16: Because unwanted entry by pedestrians, equestrians, bicycles, or motorized vehicles can harm the desirable attributes of some open space areas, the following policies shall apply: a) Control access to open space lands b) Limit roads into or across open space lands	Yes	SCE would implement APM B 3 and L 3, which would minimize project associated off-highway vehicle use or the creation of new roads that could be utilized for these uses.
	OR-19: Because preservation of large habitat areas can be more successful as a natural resource preservation strategy than preservation of smaller, scattered areas within individual developments, the County supports the concept of "habitat banking," and shall make this type of system available to developers.	Yes	While there is no habitat banking proposed as part of the Proposed Project, this EIR/EIS identifies Mitigation Measure B-7c (Purchase mitigation lands for impacts to tortoise habitat) and B-7d (Purchase mitigation lands for impacts to fringe-toed lizard habitat) for potential impacts to desert tortoise. The Proposed Project would be consistent with this policy.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	OR-22: Because preservation of natural resources can in many cases be achieved by providing sufficient distance between natural and developed areas, the County shall ensure that roads and buildings have an appropriate setback from riparian corridors, except where this requirement would endanger public safety. These setbacks shall be based on an engineering inundation analysis and on the wildlife and plant communities within the corridor, and shall consist of at least the following: a) Provide setback of 50 feet from intermittent flows designated as "blue lines" on USGS maps. b) Provide setback of 100 feet from perennial creeks/streams designated as "blue lines" on USGS maps. c) Provide a corridor extending to the ridgelines defining the watercourse that is sufficient to maintain wildlife use.	Yes	The Proposed Project would be within an existing utility ROW; therefore these items would have been implemented when the original ROW was established. In addition, the Proposed Project would not consist of the construction of any roads or buildings within this segment.
	OR-24: Because preservation of rare, threatened, or endangered species depends on the preservation of habitat which supports populations of these species, the County shall implement the following policies: a) Protect and conserve rare or endangered flora and fauna b) Allow no net loss of existing wetland areas. c) Require all County agencies to demonstrate that their projects meet the overall Biotic Resource and Open Space policies of the County. d) Seek to provide protection/management to maintain habitat values in unprotected areas. e) Review land use designations to ensure that planned land uses provide adequate protection for natural areas.	Yes	Some of this policy is the responsibility of San Bernardino County. However, SCE would implement APM B-7, which would prohibit all project-related activities from occurring in wetland areas, and APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, SCE would implement Mitigation Measure B-1a as part of the Proposed Project, which would require restoration of any disturbed areas.

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Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	OR-29: Because the preservation of natural resources can be achieved or assisted through the establishment of proper management practices, the County shall encourage the use of good conservation practices in the management of grading, replacement of ground cover, protection of soils, natural drainage, and the protection and replacement of indigenous trees.	Yes	Some of this policy is the responsibility of San Bernardino County. However, SCE would implement APM B-7, which would prohibit all project-related activities from occurring in wetland areas, and APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, SCE would implement Mitigation Measure B-1a as part of the Proposed Project, which would require restoration of any disturbed areas.
	OR-62 – Because retaining drainage courses in their natural condition retains habitat, allows some recharge of groundwater basins and can result in savings related to the constructing of engineered drainage facilities, the County shall apply the following policies: a) Retain all natural drainage courses. b) Prohibit the conversion of natural watercourses. c) Encourage the use of natural drainage courses as boundaries between neighborhoods. d) Allow no development in the FW District and/or Flood Plain Overlay District(s) which would alter the alignment or direction or course of any blue-line stream. e) Maintain the capacity of the existing natural drainage channels where feasible. f) Encourage the use of open space and drainage easements as stream preservation tools. g) Require naturalistic drainage improvement where modifications are necessary. h) Encourage natural channel designs. i) Do not place streams in underground structures. j) Prohibit occupation or obstruction of natural drainage courses.	Yes	Some of this policy is the responsibility of San Bernardino County. However, SCE would implement APM B-7, which would prohibit all project-related activities from occurring in wetland areas, and B-26, which would require the spanning of wash communities. SCE would also implement the following water resources APMs, APMs W-2, W-8, W-13, and W-16, which would require various construction measures that would prevent erosion and potential flood hazards.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
City of Blythe	City of Blythe Comprehensive General Plan (1989)		
Applicable Segment: Palo Verde Valley	2: To preserve the aesthetic, recreational and biological resource value of the Colorado River and desert resources areas, recognizing these areas as vital long-term open space resources for the City.	Yes	The Proposed Project would not preclude the preservation of the biological resource value of the Colorado River and desert resource areas. SCE would implement APM B-15, B-19, and B-B-21, which would minimize disturbances in the vicinity of the Colorado River and in riparian areas, and allow for the restoration of certain disturbed areas.
	5: Promote the wise and conscientious use of river back-water. Sloughs and other riparian habitat areas which will enhance the water fowl habitat and sport hunting potential.	Yes	SCE would implement APMs B-19 and B-21, which would minimize disturbance to riparian areas through avoidance of riparian areas, and the restoration of any affected areas. In addition, Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) would be implemented in this area as part of the Proposed Project.
City of Calimesa	City of Calimesa General Plan (1994)		
Applicable Segments: Banning and Beaumont	1.1: Preserve the natural character and visual quality of the hillsides through sensitive site design and grading.	Yes	SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, SCE would implement Mitigation Measure B-1a as part of the Proposed Project, which would require restoration of any disturbed areas.
	Goal 3: Conserve and protect significant standards of mature trees, native vegetation, and wildlife habitat within the planning area.	Yes	The Proposed Project would not preclude the conservation and protection of mature trees, native vegetation, and wildlife habitat. SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/ plant communities and other features. In addition, SCE would implement Mitigation Measure B-1a as part of the Proposed Project, which would require restoration of any disturbed areas.
	3.1: Conserve and protect important plant communities and wildlife habitats, such as riparian areas, wetlands, oak woodlands and other significant tree stands, and rare or endangered plant/animal species by using buffers, creative site planning, revegetation and open space easements/dedications.	Yes	SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, SCE would implement Mitigation Measure B-1a as part of the Proposed Project, which would require restoration of any disturbed areas.
	3.2: Encourage the planting of native species of trees and other drought-tolerant vegetation.	Yes	The Proposed Project would not plant vegetation, except during the restoration of disturbed areas. As part of the Proposed Project, SCE would implement Mitigation Measure B-1a, which would require restoration of disturbed areas, and would utilize a CPUC/BLM approved seed mix that most likely would consist of native plant species.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	3.3: In areas that may contain important plant and animal communities, require developments to prepare biological assessments identifying species types and locations and develop measures to preserve sensitive species to the maximum extent possible.	Yes	This EIR/EIS identifies and evaluates potential impacts to species and locations along the Proposed Project route. In addition, this document identifies Applicant Proposed Measures (APMs) that would reduce the direct/ indirect impacts that would result from project activities, and Mitigation Measures that mitigates impacts caused by the construction and/o operation of the Proposed Project.
	3.4: Allow new development to remove only the minimum natural vegetation and require the revegetation of graded areas with native plant species.	Yes	SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, SCE would implement Mitigation Measure B-1a as part of the Proposed Project, which would require restoration of disturbed areas, and would utilize a CPUC/BLM approved seed mix that most likely would consist of native plant species.
City of Cathedral City *Applicable Segment: Cactus City Rest Area to Devers Substation*	City of Cathedral City Comprehensive General Plan (2002)		
	Policy 2: As part of the development review process, projects shall be evaluated for the project's impacts on existing habitat and wildlife, and for the land's value as viable open space.	Yes	This EIR/EIS evaluates the Proposed Project's potential impacts on existing habitat and wildlife, as well as open space.
	Policy 4: Assure that sensitive habitat and wildlife areas, as well as State and federal lands, are appropriately buffered from the built environment.	Yes	SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. These APMs would require that sensitive habitats and wildlife areas are avoid during project construction and tower siting.
City of Coachella *Applicable Segment: Cactus City Rest Area to Devers Substation*	City of Coachella General Plan (2002)		
	Goal: The City shall require preservation of the habitat areas of rare, threatened and endangered wildlife and plant resources within open space areas.	Yes	The Proposed Project would not preclude the preservation of habitats of rare, threatened, and endangered wildlife and plant resources. In addition, SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive features when siting the towers. In addition, the Proposed Project would implement Mitigation Measure B-8a (Conduct Surveys for Listed Plant Species), and B-1a (Prepare and Implement a Habitat Restoration/ Compensation Plan), which would minimize the disturbance to habitats supporting special status species.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
City of Loma Linda	City of Loma Linda Draft General Plan (2004)		
Applicable Segments: San Bernardino Junction to Vista Substation, San Bernardino Junction to San Bernardino Substation	9.2.10.1a: Preserve outstanding natural features, such as the skyline of a prominent hill, rock outcroppings, and native and/or historically significant trees.	Yes	The Proposed Project would not preclude the preservation of native and/or historically significant trees. As part of the Proposed Project, the final determination for new roads would avoid large trees and other natural features. In addition, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/ plant communities and other features. The Proposed Project would implement Mitigation Measure B-8a (Conduct Surveys for Listed Plant Species) within these segments.
	9.2.10.2a: Base open space preservation and acquisition based on the evaluation of significant viewsheds and ridgelines, wildlife habitats and fragile ecosystems, significant scientifically, historically, or ecologically unique natural areas, passive recreational areas, and stream or creek environs.	Yes	The purpose of the Proposed Project is not to preserve open space. However, this EIR/EIS evaluates wildlife habitats and fragile ecosystems, natural areas, and stream and creek environs. In addition, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plant/plant communities and other features. Through the evaluation of these biological resources and the implementation of the APMs, SCE would site towers based upon the information presented within this EIR/EIS.
	Guiding Policy 9.4.4: Preserve habitats supporting rare and endangered species of plants and animals including wildlife corridors.	Yes	The Proposed Project would not preclude the preservation of habitats supporting rare and endangered species of plants and animals. In addition, SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive features when siting the towers. In addition, the Proposed Project would implement Mitigation Measure B-8a (Conduct Surveys for Listed Plant Species), and B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), which would minimize the disturbance to habitats supporting special status species.
	9.4.4b: Require appropriate setbacks adjacent to natural streams to provide adequate buffer areas ensuring the protection of biological resources.	Yes	SCE would implement APMs B-19 and B-21, which would minimize disturbance to riparian areas through avoidance of riparian areas, and the restoration of any affected areas. In addition, Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) would be implemented in this area as part of the Proposed Project.

Table D.2-12. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	9.4.4d: Through the project approval and design review process, require new development projects to protect sensitive habitat areas including, but not limited to, coastal sage scrub, and native grasslands. Ensure the preservation in place of habitat areas found to be occupied by State and federally protected species. Where preserved habitat areas occupy areas that would otherwise be granted as part of a development project, facilitate the transfer of allowable density to other, non-sensitive portions of the site.	Yes	The Proposed Project would not preclude the protection of sensitive habitat areas. In addition, SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. These APMs would allow SCE to avoid identified sensitive features when siting the towers. In addition, the Proposed Project would implement Mitigation Measure B-8a (Conduct Surveys for Listed Plant Species), and B-1a (Prepare and Implement a Habitat Restoration/ Compensation Plan), which would minimize the disturbance to habitats supporting special status species.
City of Redlands	City of Redlands General Plan (1995)		
Applicable Segment: Calimesa and San Timoteo Canyon	4.41g: Preserve natural vegetation and wildlife areas to create wildlife corridors extending throughout the Live Oak Canyon and San Timoteo Canyon areas.	Yes	The Proposed Project would not preclude the preservation of vegetation and wildlife areas for its use as wildlife corridors. SCE's implementation of APMs B-19 and B-21 would minimize disturbance to riparian areas, and would provide for the restoration of any affected areas. In addition, Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) would be implemented in this area as part of the Proposed Project.

Kofa NWR. Construction activities may adversely affect biological resources within the Kofa NWR, which would conflict with the Refuge's management policies and plans. Impacts in crossing of the Kofa NWR would be minimized through utilization of existing utility access (gas and transmission) roads during the construction and operational phases of the project (APM L-1). All vehicular traffic would be limited to approved access or spur roads. This APM would minimize disturbances to habitat, but direct impacts to species would still occur. Wildlife utilizing the habitats adjacent to the Proposed Project during construction activities would be disturbed by the associated noises and may relocate away from the activities. Impacts would be temporary and limited to the duration of the activities, thus species would be able to utilize the adjacent habitats following the activities. Impacts to some species would be more adverse than others, but overall impacts related to conflict with biological resources policies within the Kofa NWR would be considered less than significant (Class III). Based on the evaluation of environmental impacts identified in this EIR/EIS, t~~T~~he Proposed Project may not ~~would not~~ conflict with management policies of the Kofa NWR. However, the determination of compatibility will be made by the USFWS in its Compatibility Determination for the Proposed Project.

Mecca Hills. The Mecca Hills, which have been identified as a Riverside County Natural Area, are located south of the I-10 freeway and south of Cactus City Rest Area. Riverside County considers this area unique for its geologic features and bighorn sheep are known to occur in this area. The Proposed Project does not encroach into the Mecca Hills and therefore, construction of the Proposed Project is not expected to impact this County designated Natural Area.

California Desert Conservation Area Plan (CDCA). In this segment, only the portion of the ROW between Devers Substation and Whitewater Canyon is included in the CDCA Plan. The management areas within this segment that were identified in the CDCA Plan are the HMP for CVFTL and the Whitewater Canyon ACEC. Construction of this segment of the Proposed Project will not affect the CVFTL HMP area

because this area is located south of the I-10 freeway. Because the construction of the Proposed Project will span the Whitewater River, the Proposed Project is not expected to impact the management policies for the Whitewater ACEC.

Chocolate Mountains/Mule Mountains HMA. This Herd Management Area is located south-southwest and west of Blythe in the Mule Mountains and Little Chuckwalla Mountains west of the western edge of this segment. Construction of this segment of the Proposed Project is not expected to impact this HMA because the ROW runs north of the boundary of this area.

Chuckwalla Valley Dune Thicket ACEC. This segment of the Proposed Project bisects this ACEC between MPs E124.9 and E126.2. The Proposed Project does fall within the existing utility ROW that bisects the ACEC. Five future tower locations will be located within the ACEC. This ACEC is managed for preservation of the dune thicket vegetation and preservation of the Mojave fringe-toed lizard that is known to occur in the ACEC. APM s B-8, B-12, B-13, B-33, B-36 address pre-construction surveys in sand dune habitats and avoidance of sensitive habitat areas, including dune habitat and blow sands, and siting of towers and roads so as to avoid impacts to dune habitats. Even with the implementation of these APMs, construction of the Proposed Project will impact areas within the Chuckwalla Valley Dune Thicket ACEC. The impacts resulting from construction of the Proposed Project will result in significant impacts to sensitive habitat in this ACEC and will conflict with the management policies in the CDCA Plan (Class II). Implementation of Mitigation Measure B-7d (Purchase mitigation lands for impacts to fringe-toed lizard habitat) and B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) will reduce the level of the impacts to the Coachella Valley Dune Thicket ACEC.

Eagle Mountains HMP. The Eagle Mountains are located north of the I-10 and west of Desert Center. The HMP to address the needs of burro deer and bighorn sheep has not yet been developed for this area. This segment of the Proposed Project does not bisect the Eagle Mountains. Therefore, there will be no impacts to the Eagle Mountains or the management of species and habitats in the Eagle Mountains.

McCoy Wash. McCoy Wash, which was identified as an HMP in the CDCA Plan, is located north of the I-10 and north of Blythe. This Proposed Project does not cross this HMP area and, therefore, there will be no impacts to McCoy Wash.

Orocopia Mountains and Chuckwalla Mountains Native Ungulate HMPs. These HMPs cover portions of the Chuckwalla and Orocopia Mountains between the Little Chuckwalla Mountains and the Cactus City Rest Area. The majority of these areas were incorporated into the Chuckwalla DWMA as part of the NECO Plan. Because these areas were incorporated into the Chuckwalla DWMA, the impacts of the Proposed Project are discussed under the NECO Plan.

Northern and Eastern Colorado Deserts Coordinated Management Plan (NECO). This segment of the Proposed Project is located within the areas covered by the NECO plan.

Chuckwalla DWMA ACEC. This ACEC generally encompasses the Chuckwalla Mountains and portions of the Chuckwalla Valley and Orocopia Mountains and this DWMA/ACEC is managed for the desert tortoise and bighorn sheep. This segment of the Proposed Project traverses through a portion of this ACEC from near Wiley's Well Road and the Chuckwalla Valley Dune Thicket to near the Cactus City Rest Area. The Proposed Project does fall within the existing utility ROW that bisects the ACEC. Construction of this segment of the Proposed Project will result in permanent loss of habitat for the desert tortoise at the 97 tower locations and where the permanent access/spur roads will be constructed. Temporary impacts to desert tortoise habitat and foraging areas for bighorn sheep will occur at laydown/staging areas and where temporary access/spur roads will be constructed. This permanent and temporary loss of desert tortoise habitat in this ACEC will result in significant impacts in this ACEC and will conflict

with the management policies in the NECO Plan (Class II). Implementation of Mitigation Measure B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat), and B-9f (Perform construction outside of breeding and lambing period) will reduce the level of the direct impacts to the Chuckwalla DWMA ACEC.

Draft Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). The Proposed Project falls within the planning area for the CVMSHCP from just west of Desert Center to the Cactus City Rest Area (MPs E155.8 to E188.2). The Proposed Project traverses through the proposed Desert Tortoise and Linkage Conservation Area. This area is proposed to be managed for desert tortoise, Mecca aster, Orocopia sage, Le Conte's thrasher, Coachella Valley round-tailed squirrel, and Palm Springs pocket mouse. Construction of the Proposed Project through this proposed Conservation Area may result in temporary and permanent impacts to habitat for these species and may result in the loss of individuals of these species. Even with the implementation of APMs B-1, B-3, B-4, B-8, B-12, B-16, B-19, B-23, and B-25 through B-33, the impact of construction of the Proposed Project through this proposed Conservation Area would conflict with the management strategies under the proposed CVMSHCP (Class II). Implementation of Mitigation Measure B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce conflicts to less than significant levels.

Western Riverside County Multiple Species Habitat Conservation Plan – The Pass Area Plan. Construction of this segment of the Proposed Project would occur within the Pass Area Plan. Construction would not occur in any criteria cells and therefore, it would not conflict with the conservation goals for this Plan Area. However, the construction in and adjacent to the San Gorgonio River and the major tributary to the east would impact the San Gorgonio River–San Bernardino–San Jacinto Mountains Linkage, which is a special linkage area in the Western Riverside MSHCP. In addition, the construction impacts within the San Gorgonio River and the large tributary would require SCE to comply with the provisions in the MSHCP regarding impacts to wildlife corridors and linkages and to riparian/riverine species. The construction of this segment of the Proposed Project in the San Gorgonio River/San Bernardino-San Jacinto Mountains Linkage would conflict with the provisions of the Western Riverside MSHCP and this would be a potentially significant impact (Class II). Implementation of Mitigation Measures B-13a (Demonstrate compliance with the Western Riverside County MSHCP) and B-13b (Implement the Best Management Practices required by the Western Riverside County MSHCP) would result in compliance with the provisions of the Western Riverside County MSHCP.

Mitigation Measures for Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

B-9f **Perform construction outside of breeding and lambing period.**

B-7d **Purchase mitigation lands for impacts to fringe-toed lizard habitat.**

B-9i **Schedule construction when the Coachella Valley round-tailed squirrel is dormant.**

B-13a **Demonstrate compliance with the Western Riverside County MSHCP.** SCE shall provide documentation that it has complied with the provisions of the MSHCP.

B-13b **Implement the Best Management Practices required by the Western Riverside County MSHCP.** SCE shall provide documentation that is has implemented the Best Management Practices set forth in Appendix C of the Western Riverside MSCHP.

D.2.6.2 Impacts of Transmission Line Operation

Impact B-14: Operation of the transmission line may result in electrocution of listed and/or protected bird species (Class III)

Peregrine falcons, golden eagles, and other large aerial perching birds are most susceptible to electrocution because of their size, distribution, and behavior (Olendorff et al., 1981; APLIC, 1996). Because raptors and other large aerial perching birds often perch on tall structures that offer optimal views of potential prey, the design characteristics of transmission poles appear to be a major factor in raptor electrocutions (APLIC, 1996). Electrocution occurs only when a bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. This happens most frequently when a bird attempts to perch on a transmission pole with insufficient clearance between these elements. Raptor species that utilize the towers for nesting could be electrocuted while landing. Nests may be built in areas that are susceptible to electrical charges which may result in fire as well as an electrical outage. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV; as such, "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in collisions by listed bird species (Class II)

Bird collisions with power lines generally occur when: (1) a power line or other aerial structure transects a daily flight path used by a concentration of birds, and (2) migrants are traveling at reduced altitudes and encounter tall structures in their path (Brown, 1993). Collision rates generally increase in low light conditions, during inclement weather, such as rain or snow, during strong winds, and during panic flushes when birds are startled by a disturbance or are fleeing from danger. Collisions are more probable near wetlands, valleys that are bisected by power lines, and within narrow passes where power lines run perpendicular to flight paths. Passerines (i.e., songbirds) and waterfowl (i.e., mallard ducks) are known to collide with wires (APLIC, 1994), particularly during nocturnal migrations or poor weather conditions (Avery et al., 1978). However, passerines and waterfowl have a lower potential for collisions than larger birds, such as raptors. Some behavioral factors contribute to a lower collision mortality rate for these birds. Passerines and waterfowl tend to fly under power lines, as opposed to larger species, which generally fly over the lines and risk colliding with the higher static lines, and many smaller birds tend to reduce their flight activity during poor weather conditions (Avery et al., 1978). It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the project vicinity. These data are not available for the proposed transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest such as along waterways or over adjacent agricultural areas like those in the Harquahala Valley. The operation of the Proposed Project may result in mortality of listed or sensitive bird species and this would be considered a potentially significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a **Utilize collision-reducing techniques in installation of transmission lines.** SCE shall install the transmission line utilizing APLIC standards for collision-reducing techniques as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994 (APLIC, 1996)."

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

- Overhead lines that occur significantly above the above-mentioned features and that are located in highly utilized avian flight paths will be marked utilizing aerial marker spheres, swinging plates, spiral vibration dampers, bird flight diverters, avifauna spirals, or other diversion device as to be visible to birds and reduce avian collisions with lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon juvenile tortoises as well as other wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the Proposed Project will result in an increase in potential nesting sites for common ravens. An increase in the number of ravens nesting in tortoise habitat will likely result in an increase in predation on juvenile tortoises and potentially on other wildlife species (including sensitive and/or listed species). APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~Migratory Birds to take common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant if SCE does not check the towers and remove nests on a regular basis and if SCE removes other nests that are actively utilized by other raptors. An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a potentially significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a **Prepare and implement a raven control plan.** SCE shall prepare a common raven control plan that identifies the purpose of conducting raven control, provides training in how to identify raven nests and how to determine whether a nest belongs to a raven or a different raptor species, describes the seasonal limitations on disturbing nesting raptors species (excluding ravens), describes the procedure for obtaining a permit from the USFWS's ~~Law Enforcement~~ Division of Migratory Birds, and describes procedures for documenting the activities on an annual basis. SCE shall gain approval of the plan from the USFWS's ~~Law Enforcement~~ Division of Migratory Birds. SCE shall provide this raven control plan to all transmission line companies that conduct operations within the ROW.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the Proposed Project will require regular maintenance of the various facilities associated with the project. Maintenance activities require the use of access and spur roads by vehicles and equipment. The operations and maintenance activities will be conducted at about the same frequency as currently exists for the DPV1 transmission line. SCE has indicated that vehicle speeds would be limited to a maximum of 25 mph in desert tortoise habitat (APM B-29). The implementation of this APM, and the approximate same level of use of the roads as currently exists for operation and maintenance activities, will result in a similar impact to what currently exists. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse but less than significant (Class III).

D.2.7 Alternatives for Devers-Harquahala

D.2.7.1 SCE Harquahala-West Alternative

Environmental Setting

The SCE Harquahala-West Alternative would travel through the same types of habitat as the Harquahala to Kofa NWR segment of the Proposed Project. This alternative would consist of undisturbed desert upland and xeroriparian vegetation typical of the Creosote–White Bursage series from MP 3 to MP 12 with some fallow and alfalfa agricultural fields from MP 0 to MP 3. From MP 12 to MP 21, the alternative would follow a previously disturbed pipeline corridor and unpaved access road. Typical plant species in the undisturbed portion include creosote bush, white bursage, ratany, plantain, and various cacti. The existing access road is primarily unvegetated but contains some invasive plants, such as Mediterranean grass and Russian thistle, along the edges and less recently disturbed areas.

Several special status plant and wildlife species have potential to occur along the SCE Harquahala-West Alternative alignment. These species are the same as those identified in Section D.2.2.1, Harquahala to Kofa NWR, and include several species of bats, reptiles, an invertebrate, and cacti and woody plants protected by the Arizona Native Plant Law. Additionally, migratory birds, burros, and bighorn sheep have potential to occur along this alternative.

Impacts and Mitigation Measures

Construction and operation of the SCE Harquahala-West Alternative would create similar direct and indirect impacts as those described in Section D.2.6 for the Proposed Project, Harquahala to Kofa NWR segment. Although the SCE Harquahala-West Alternative would result in a shorter transmission line (total distance of 216 miles instead of 230 miles) and fewer transmission towers (48 fewer 500 kV towers), a new access road would be required, resulting in about 5.28 acres of additional ground disturbance. Overall, the impact potential and intensity for impacts resulting from construction and operation of the alternative would be similar to the Proposed Project, as discussed below.

Construction Impacts

Vegetation

Although the SCE Harquahala-West Alternative transmission line would be shorter, a new access road would be required, resulting in about 5.28 acres of more ground disturbance and a loss of native desert scrub habitat. As discussed in Section D.2.6.1.1, construction impacts to vegetation may occur in a variety of ways, including the direct removal of plants during the course of construction. Depending on the site specific topography, these impacts may extend beyond the ROW unless precautions are taken. The removal of common native vegetation types, such as desert scrub, coastal sage, or chaparral, creates possibilities for erosion or weed invasion that can affect adjacent and downslope habitats. As such, it is the indirect, off-ROW impacts associated with the removal of native vegetation that may be significant. Removal or incidental loss of sensitive species or individual native specimen trees would also be considered a significant impact. The following discussion addresses construction impacts to native vegetation types resulting from the SCE Harquahala-West Alternative.

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The SCE Harquahala-West Alternative would result in both temporary and permanent impacts to Sonoran desert scrub habitat in this segment of the ROW. Ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, transportation, maintenance of construction equipment and supplies, staging area and material yard preparation and use, and use or improvement of existing access roads has the potential to disturb vegetation. These activities would result in the permanent removal of Sonoran desert scrub at tower sites located along the alternative. The permanent loss or temporary disturbance of Sonoran desert scrub habitat would be considered a significant (Class II) impact without mitigation. Potential impacts to native vegetation would be reduced to a less than significant level through implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-1: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species (Class II)

The introduction of invasive non-native and noxious plant species would be the same as described for the Proposed Project. The SCE Harquahala-West Alternative would temporarily remove Sonoran desert scrub vegetation at the construction sites located adjacent to each tower. Introduction of non-native plant species would occur primarily during construction, but would also continue to occur during operation and maintenance phases of the alternative. The introduction of non-native or noxious weeds would be related to the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed, use of straw bales or wattles that contain seeds of non-native plant species, and enhanced public access to the alternative ROW corridor during and after construction.

To reduce the potential for the introduction of invasive and noxious weeds, SCE would implement APM B-2 (Standard Noxious Weed BMPs) and B-11, which would require hand clearing of vegetation in certain areas located along the ROW. This APM would facilitate the maintenance of existing root systems, which may help to stabilize the soils against erosion and assist in the restoration of these areas if the plants resprout at the conclusion of construction activities. SCE would also implement APM B-19, which would require the restoration of disturbed areas at the conclusion of construction. However, SCE has not indicated which areas would be subject to hand clearing or restoration at this time. The introduction of non-native plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

B-2a Conduct invasive and noxious weed inventory.

B-2b Implement control measures for invasive and noxious weeds.

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. This impact would be the same as described for the Proposed Project. As the construction activities will be temporary, the increased dust settling on plants is not expected to be a significant or adverse impact (Class III).

Wildlife

Direct impacts on wildlife anticipated as a result of the SCE Harquahala-West Alternative include the removal of vegetation, which would result in the temporary loss of wildlife habitat along with the displacement and/or potential mortality of resident wildlife species that are poor dispersers such as snakes, lizards, and small mammals. Construction may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Depending on the timing and location of construction activities, the alternative may also result in temporary disruption along terrestrial and riparian wildlife movement corridors crossed by the alternative route.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

Direct loss of small mammals, reptiles, and other less mobile species could occur during construction of the SCE Harquahala-West Alternative. This action would result primarily from the use of construction vehicles and the grading of laydown areas for tower erection and would be the similar to the Proposed Project.

Under this alternative a large part of the proposed route would be constructed along the existing utility ROW and within or immediately adjacent to existing maintained road easements. Most of the wildlife expected to be impacted by construction in these disturbed easements ARE common, wide-ranging species. Due to the narrow area of disturbance along this alternative and the short duration of disturbance, most of the more common wildlife species found along the route are expected to quickly recolonize the corridor after construction and subsequent revegetation work is completed. Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on wildlife from construction would generate potentially adverse but less than significant impacts (Class III). Impacts from construction on listed and candidate wildlife species are discussed separately under Threatened or Endangered Wildlife.

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described above, ground-disturbing activity including tower pad preparation and construction and grading of new access roads has the potential to disturb vegetation utilized by nesting birds. The SCE Harquahala-West Alternative encompasses variable habitats for nesting and migratory birds, which may provide potential nesting opportunities along the alternative route. These areas include native and non-native trees and shrubs and natural rock features such as cliffs and large rock outcrops associated with Saddle Mountain, Palo Verde Hills, and Eagle Mountains.

Impacts to burrowing owls or other nesting birds during breeding season would be largely the same as the Proposed Project and would be considered a significant impact without mitigation. APMs B-8 and

B-16 would require additional detailed surveys within a 100-foot buffer around the area of disturbance and avoidance of sensitive sites. These APMs, by themselves, would not sufficiently ensure that impacts to migratory birds would be less than significant. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would ensure that violation of the Migratory Bird Treaty Act does not occur and would reduce impacts to nesting birds to a less than significant level (Class II).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a Conduct pre-construction surveys and monitoring for breeding birds.

Threatened or Endangered Plant or Wildlife Species

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II)

The SCE Harquahala-West Alternative would result in removal of Sonoran desert scrub habitat in this segment of the ROW. Any ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, transportation, maintenance of construction equipment and supplies, staging area and material yard preparation and use, and use or improvement of existing access roads has the potential to disturb vegetation. Similar to the Proposed Project these activities would result in potential impacts to ~~two federally listed species Arizona agave, and Arizona cliff rose. The alternative may also remove other~~ plant species protected by the Arizona Native Plant Law, including blue palo verde, foothill palo verde, velvet mesquite, desert ironwood, ocotillo, and various cacti (saguaro, chollas, barrel, hedgehog, beavertail, prickly pear, desert Christmas, and nipple) that occur within the alternative route. These species are protected from being salvaged, harvested, or otherwise removed from the environment.

SCE would implement APMs that would require construction vehicles to travel on established roads, to the maximum extent practicable (APM B-3), and that spur roads, access roads, and other disturbed sites created during construction are recontoured and restored following construction activities (APM B-19). Additionally, APMs would ensure that pre-construction surveys for sensitive or protected plants are conducted (APM B-8) and concentrations of sensitive plants and salvage-restricted plants are avoided or individuals transplanted (APMs B-9; B-12; B-13). APM B-9 requires that *Ferocactus* and *Coryphantha* species be transplanted, and other native plants may be transplanted (APM B-12) or sold to SCE. Because there is still potential for significant impacts to occur to native plants protected under the Arizona Native Plant Law, construction-related impacts would be potentially significant (Class II), but with the implementation of Mitigation Measure B-6a (Develop a transplanting plan) these impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-6: Construction activities would result in indirect or direct loss of listed plants

B-6a Develop a transplanting plan.

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

While there is only one listed terrestrial wildlife species known or expected to occur in the general vicinity of the SCE Harquahala-West Alternative, other species could potentially occur in the area. Impacts to these species could be caused by temporary incremental loss of habitat and accidental death of individuals during land clearing, excavation, and grading phases of the SCE Harquahala-West Alternative. In addition, individuals near the construction area may temporarily abandon their territories due to disturbance from noise and increased human activity. The following discussion highlights construction impacts that would occur to specific threatened or endangered wildlife species.

Invertebrates. There is no indication that any rare or listed invertebrates occur along SCE Harquahala-West Alternative. Surveys conducted of the alternative area did not detect the presence of listed invertebrates, and impacts would be considered less than significant (Class III). Although no listed invertebrate species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Fishes. As described above, there is no indication that any rare or listed fish species occur in or along the SCE Harquahala-West Alternative. Surveys conducted of the alternative area did not detect the presence of listed fish species, and impacts would be considered less than significant (Class III).

Amphibians. There is no indication that any rare or listed amphibians occur along the SCE Harquahala-West Alternative. Surveys conducted of the alternative area did not detect the presence of listed amphibian species, and impacts would be considered less than significant (Class III). Although no listed amphibians were identified, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Reptiles – Desert Tortoise. The SCE Harquahala-West Alternative contains Sonoran desert scrub habitat that has the potential to support desert tortoise, a federal and State listed threatened species. Although this species has not been found during surveys of the alternative and the area has not been designated as critical habitat for this species, the habitat is still considered suitable for desert tortoise. If present, this species would be subject to disturbance and possible mortality from construction vehicles on roads, at staging/laydown areas, and at tower construction sites. Desert tortoises are known to occasionally travel long distances of up to several miles or more.

Construction activities that affect the Sonoran Desert tortoise would be similar to the Proposed Project. Construction of the alternative would also result in the loss of suitable habitat for the Sonoran Desert tortoise. APM B-14 would serve to minimize habitat loss, and native habitat would be restored in areas disturbed during construction under APM B-19. Habitat loss in Category II management areas would be limited to the Eagletail Mountains.

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to Sonoran Desert Tortoise in Arizona would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

Birds. There is no indication that any rare or listed birds occur along the SCE Harquahala-West Alternative. Surveys conducted of the alternative area did not detect the presence of listed bird species, and impacts would be considered less than significant (Class III). Although no listed bird species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Mammals. There is no indication that any rare or listed mammals occur along the SCE Harquahala-West Alternative. Surveys conducted of the alternative area did not detect the presence of listed mammal species, and impacts would be considered less than significant (Class III). Although no listed mammal species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class III)

No sensitive plant species have been identified as occurring within the vicinity of the SCE Harquahala-West Alternative, and none are expected to occur. Kofa mountain barberry has a low potential to occur in the area, but it is unlikely to occur along the alternative route. The alternative does not contain suitable habitat for sensitive plants and is located outside the geographical range for any of the sensitive plant species that were identified in Table D.2-4 to have a high or moderate potential to occur. These species have not been previously recorded in the alternative area and were not identified during surveys conducted by SCE. Implementation of APM B-8 (Pre-construction Surveys for Rare Plants) would reduce potential impacts to sensitive plants (Class III).

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Construction activities may result in direct mortality of the cheese-weed moth lacewing as a result of vehicle collisions or host plant destruction. Although APM B-23 was designed to minimize impacts to creosote bush to benefit Le Conte's thrasher, this would also serve to benefit cheese-weed moth lacewing which is associated with creosote bush communities. Additional surveys, sensitive area avoidance, and pre-cautionary construction measures are included in APMs B-1, B-3, B-8, B-10, B-12, B-13, B-14, B-16, and B-23. Although suitable habitat for the cheese-weed moth lacewing occurs along the alternative route, there are no known locations of the species within the vicinity of the SCE Harquahala-West Alternative. Consequently, implementation of the APMs listed above and avoidance of known locations of cheese-weed moth lacewing makes impacts to this species unlikely. Impacts to this species would be considered less than significant (Class III).

Fishes. As identified above for listed species, construction of the SCE Harquahala-West Alternative is not expected to impact aquatic habitat. Construction activities would avoid impacts to water bodies as the alternative would span irrigation canals that occur in the Harquahala Valley. Impacts from degra-

dation of water quality would be avoided by implementation of APM B-7 (Avoidance of Wetland Areas) and APM-B-21 (No Clearing of Riparian Habitat). Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. There is no indication that any sensitive amphibians occur in the vicinity of the SCE Harquahala-West Alternative. Surveys conducted of the alternative area did not detect the presence of sensitive amphibian species in this segment and impacts would be considered less than significant (Class III). Although no sensitive amphibians were identified in the area, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Reptiles. The common chuckwalla, banded Gila monster, and desert rosy boa have the potential to occur on rocky slopes, foothills, and other rocky areas along the SCE Harquahala-West Alternative. There are no recorded occurrences of any of these species in the vicinity of the alternative. If individuals of these species do occur along this segment; direct mortality or injury could result from construction vehicles or equipment.

SCE has indicated that prior to construction, surveys for sensitive species would be conducted along the ROW (APM B-8 and B-16). Sensitive area avoidance and pre-cautionary construction measures are included in APMs B-3, B-5, and B-17. However, there is still potential for direct and indirect mortality of the common chuckwalla, banded Gila monster, and desert rosy boa; therefore construction-related impacts would be potentially significant (Class II), but would be reduced to less than significant levels with implementation of Mitigation Measures B-9b (Conduct biological monitoring), B-9c (Implement a Worker Environmental Awareness Program), and B-9d (Conduct pre-construction reptile surveys). In addition to APMs B-3, B-5, B-8, B-16, and B-17, the following mitigation measures would be implemented to reduce potential impacts to less than significant levels.

Mitigation Measures for Impact B-9: Construction activities would result in indirect impacts, a direct loss of individuals, or a direct loss of habitat for sensitive plant and/or wildlife species

B-9b **Conduct biological monitoring**

B-9c **Implement a Worker Environmental Awareness Program.**

B-9d **Conduct pre-construction reptile surveys.**

Birds. The SCE Harquahala-West Alternative would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, potential bird strikes on high tension wires, and disturbance of nesting activities. The burrowing owl is known to occur in along the alternative and an osprey was observed north of the area near the CAP canal and the Big Horn Mountains. Due to the preferred habitat of osprey to be near water, however, it is unlikely that this species would occur in the vicinity of the alternative route and would be impacted by construction activities. The SCE Harquahala-West Alternative may displace burrowing owls from wintering or nesting burrows or cause disturbance to resident birds. During construction activities, owl burrows may be crushed by construction equipment. Burrowing owls may also be displaced or abandon their burrows as a result of human interference and noise during construction activities. Additional surveys, sensitive area avoidance, and pre-cautionary construction measures are included in APMs B-3, B-5, B-16, and B-17. However, there is still potential for direct and indirect mortality of the western burrowing owl, and construction-related impacts would be potentially significant (Class II). Implementation of Mitigation Measure B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to burrowing owls to less than significant levels.

Mitigation Measure for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-9e Conduct pre-construction surveys and owl relocation.

Mammals. Sensitive mammal species expected to occur along the SCE Harquahala-West Alternative include pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, cave myotis, and desert bighorn sheep.

While there are no recorded occurrences of pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, or cave myotis in the vicinity of the alternative, suitable habitat for these species is present and there is potential for them to occur along the route. Construction and maintenance activities are not expected to have an impact on sensitive bat species as the habitat located along the proposed alternative ROW would not be expected to support nesting or breeding activities of sensitive bats. Bats typically roost in trees, caves, rock crevices, or old buildings. The construction of the alternative would not impact roosting habitat nor would it impact foraging habitat for these species because the riparian and wetland habitats would be avoided.

Desert bighorn sheep may be present at the time of construction activities and may be adversely affected by visual disturbances, noise and dust associated with the activities. Bighorn sheep in the vicinity of the alternative may be disturbed or scared off as a result of the noise, but these impacts would be temporary and limited to the construction phase of the alternative. Construction vehicles would remain on established roads (APMs B-3 and B-17) to the maximum extent practicable in order to avoid unnecessary disturbances to wildlife, and vehicles would be required to drive at low speeds in tortoise habitat (APM B-29), which would also reduce the potential for collisions with other wildlife. Impacts to bighorn sheep could be adverse, but would be considered less than significant (Class III), and no additional mitigation is proposed. The SCE Harquahala-West Alternative would comply with the AGFD and BLM management policies for bighorn sheep.

State and Federal Jurisdictional Habitats

Impact B-10: Construction activities would result in adverse effects to jurisdictional waters and wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are present along the SCE Harquahala-West Alternative. In addition, construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts would be reduced to a less than significant level with the implementation of Mitigation Measure B-1a (Implement a habitat restoration/compensation plan).

Mitigation Measure for Impact B-10: Construction activities would result in adverse effects to jurisdictional waters and wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Wildlife Corridors and Nursery Sites

Impact B-11: Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The drainages within the SCE Harquahala-West Alternative consist of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events. Subsequently, most of the washes do not contain perennial flows and are not expected to support fish and other species that are dependent on permanent water sources. The exceptions along the alternative ROW are the irrigation canals in the Harquahala Valley. The transmission line will span the irrigation canals in the Harquahala Valley, and access to either side of these areas will utilize existing access roads. Therefore, no impacts to the movement of fish within the irrigation canals in the Harquahala Valley would occur.

Impact B-12: Construction activities would result in adverse effects to linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of the SCE Harquahala-West Alternative is not expected to impact any linkages or wildlife movement corridors in the agricultural areas or in the desert scrub. These areas are not technically considered movement corridors. Rather, they generally provide for local movement of wildlife within large blocks of open space. No impacts to wildlife corridors would occur along the alternative.

Plans, Policies, and Ordinances

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (No Impact)

The SCE Harquahala-West Alternative, as an individual section of the project, would traverse BLM land, and Maricopa and La Paz Counties in Arizona. Plans developed by these jurisdictions, including the Maricopa County 2020 Comprehensive Plan, Maricopa County 2020 Tonopah-Arlington Area Plan, and the La Paz County Comprehensive Plan, were assessed to determine if any biological resources policies would apply to the construction and operation of the SCE Harquahala-West Alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. However, it was determined that no biological resources policies from the three aforementioned plans required further analysis, and the SCE Harquahala-West Alternative would not conflict with any of these policies.

Operational Impacts

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Impacts to birds would be the same as described for the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV; as such "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in collisions by listed bird species (Class II)

Bird collisions for this segment would be similar to the Proposed Project. It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest, such as along waterways or over adjacent agricultural areas like those in the Harquahala Valley. The operation of the SCE Harquahala-West Alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon juvenile tortoises as well as other wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the SCE Harquahala-West Alternative will result in an increase in potential nesting sites for common ravens. An increase in the number of ravens nesting in tortoise habitat will likely result in an increase in predation on juvenile tortoises and potentially on other wildlife species (including sensitive and/or listed species). An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the SCE Harquahala-West Alternative would require regular maintenance of the various facilities associated with the alternative. Maintenance activities require the use of access and spur roads by vehicles and equipment. The operation and maintenance activities will be conducted at about the same frequency as currently exists for the DPV1 transmission line. SCE has indicated that vehicle speeds would be limited to a maximum of 25 mph in desert tortoise habitat (APM B-29). The implementation of this APM, and the approximate same level of use of the roads as currently exists for operation and maintenance activities, will result in a similar impact to what currently exists. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse, but less than significant (Class III).

D.2.7.2 SCE Palo Verde Alternative

Environmental Setting

The SCE Palo Verde Alternative would travel through similar types of habitat as the Harquahala to Kofa NWR segment of the Proposed Project. This alternative would consist of generally undisturbed desert upland and xeroriparian vegetation typical of the Creosote–White Bursage series from MP 1 to about MP 9 where it would follow existing transmission lines. It would continue to follow existing lines along existing roads and disturbed areas from MP 0 to MP 1 and MP 9 to MP 15 at the PVNGS Switchyard. Typical plant species in the undisturbed portion include creosote bush, white bursage, ratany, plantain, and various cacti. The disturbed areas are primarily unvegetated, but contain some invasive plants, such as Mediterranean grass and Russian thistle along the edges and less recently disturbed areas. This alternative would bisect several washes that contain a variety of xeroriparian plant species, such as mesquite, catclaw acacia, and desert ironwood. Fairly dense pockets of vegetation occur between MP 11 and MP 12.

Several special status plant and wildlife species have potential to occur along the SCE Palo Verde Alternative. These species are the same as those identified in Section D.2.2.1, Harquahala to Kofa NWR, and include several bats, reptiles, an invertebrate, and cacti and woody plants protected by the Arizona Native Plant Law. The straw top cholla (*O. echinocarpa*) is a special status species that was identified by the AGFD as potentially occurring along this alternative. Additionally, migratory birds, burros, and bighorn sheep have potential to occur along this alternative. A portion of the SCE Palo Verde Alternative (MP 1 to about MP 8) would cross through habitat for the Sonoran Desert tortoise, which is designated by the BLM as Category II habitat and is managed to maintain stable, viable populations of tortoise and halt further declines in tortoise habitat values.

Impacts and Mitigation Measures

Construction and operation of the SCE Palo Verde Alternative would create similar direct and indirect impacts as those described in Section D.2.6 for the Proposed Project, Harquahala to Kofa NWR segment. The SCE Palo Verde Alternative would result in a longer transmission line (total distance of 240 miles instead of 230 miles) that would require the construction of more transmission towers and would result in additional ground disturbance and a loss of native desert scrub habitat. Overall, the impact potential and intensity for impacts resulting from construction and operation of the alternative would be similar to the Proposed Project, as discussed below.

Construction Impacts

Vegetation

The SCE Palo Verde Alternative would result in additional ground disturbance and a loss of native desert scrub habitat. As discussed in Section D.2.6.1, construction impacts to vegetation may occur in a variety of ways, including the direct removal of plants during the course of construction. Depending on the site specific topography, these impacts may extend beyond the ROW. The removal of common native vegetation types, such as desert scrub, coastal sage, or chaparral, creates possibilities for erosion or weed invasion that can affect adjacent and down slope habitats. As such, it is the indirect, off-ROW impacts associated with the removal of native vegetation that may be significant. Removal or incidental loss of sensitive species or individual native specimen trees would also be considered a significant impact. The following discussion addresses construction impacts to native vegetation types resulting from the SCE Palo Verde Alternative.

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The SCE Palo Verde Alternative would result in both temporary and permanent impacts to Sonoran desert scrub habitat in this segment of the ROW. Construction impacts would be the same as described for the Proposed Project. These activities would result in the permanent removal of Sonoran desert scrub at tower sites located along the alternative. The permanent loss or temporary disturbance of Sonoran desert scrub habitat would be considered a significant (Class II) impact without mitigation. Potential impacts to native vegetation would be reduced to a less than significant level through implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction invasive non-native or noxious plant species (Class II)

The introduction of invasive non-native or noxious plant species would be the same as described for the Proposed Project The introduction of invasive non-native or noxious plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of non-native plant species

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

B-2a Conduct invasive and noxious weed inventory.

B-2b Implement control measures for noxious weeds.

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. This impact would be the same as described for the Proposed Project. As the construction activities will be temporary, the increased dust settling on plants is not expected to be a significant or adverse impact (Class III).

Wildlife

Direct impacts on wildlife anticipated as a result of the SCE Palo Verde Alternative include the removal of vegetation, which would result in the temporary loss of wildlife habitat along with the displacement and/or potential mortality of resident wildlife species that are poor dispersers such as snakes, lizards, and small mammals. Construction may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Depending on the timing and location of construction activities, the alternative may also result in temporary disruption along terrestrial and riparian wildlife movement corridors crossed by the alternative route.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

Direct loss of small mammals, reptiles, and other less mobile species could occur during construction of the SCE Palo Verde Alternative. Construction activities and human presence can also alter or disrupt the breeding and foraging habitat for wildlife species.

A large part of the proposed route would be constructed along the existing utility ROW and within or immediately adjacent to existing maintained road easements. Most of the wildlife expected to be impacted by construction in these disturbed easements is composed of common, wide-ranging species. Due to the narrow area of disturbance along this alternative and the short duration of disturbance, most of the more common wildlife species found along the route are expected to quickly recolonize the corridor after construction and subsequent revegetation work is completed. Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on wildlife from construction would generate potentially adverse but less than significant impacts (Class III). Impacts from construction on listed and candidate wildlife species are discussed separately under Threatened or Endangered Wildlife.

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described above, ground-disturbing activity including tower pad preparation and construction and grading of new access roads has the potential to disturb vegetation utilized by nesting birds. The SCE Palo Verde Alternative encompasses variable habitats for nesting and migratory birds, which may provide potential nesting opportunities along the alternative route. These areas include native and non-native trees and shrubs and natural rock features such as cliffs and large rock outcrops associated with Saddle Mountain, Palo Verde Hills, Big Horn Mountains, and Eagletail Mountains.

Impacts to raptors, burrowing owls, or other nesting birds during breeding season would be considered significant without mitigation. APMs B-8 and B-16 would require additional detailed surveys within a 100-foot buffer around the area of disturbance and avoidance of sensitive sites. These APMs, by themselves, would not sufficiently ensure that impacts to migratory birds would be less than significant. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would ensure that violation of the Migratory Bird Treaty Act does not occur and would reduce impacts to nesting birds to a less than significant level (Class II).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a Conduct pre-construction surveys and monitoring for breeding birds.

Threatened or Endangered Plant or Wildlife Species

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II)

The SCE Palo Verde Alternative would result in removal of Sonoran desert scrub habitat in this segment of the ROW. Any ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, transportation, maintenance of construction equipment and supplies, staging area and material yard preparation and use, and use or improvement of existing access roads has the poten-

tial to disturb vegetation. Similar to the Proposed Project these activities would result in potential impacts to ~~two federally listed species Arizona agave, and Arizona cliff rose. The alternative may also remove other~~ plant species protected by the Arizona Native Plant Law, including blue palo verde, foothill palo verde, velvet mesquite, desert ironwood, ocotillo, and various cacti (saguaro, chollas, barrel, hedgehog, beavertail, prickly pear, desert Christmas, and nipple) that occur within the alternative route. These species are protected from being salvaged, harvested, or otherwise removed from the environment.

SCE would implement APMs that would require construction vehicles to travel on established roads, to the maximum extent practicable (APM B-3), and that spur roads, access roads, and other disturbed sites created during construction are recontoured and restored following construction activities (APM B-19).

In addition, the APMs would ensure that pre-construction surveys for sensitive or protected plants are conducted (APM B-8) and concentrations of sensitive plants and salvage-restricted plants are avoided or individuals transplanted (APM B-9; B-12; B-13). APM B-9 requires that *Ferocactus* and *Coryphantha* species be transplanted, and other native plants may be transplanted (APM B-12) or sold to SCE. Because there is still potential for significant impacts to occur to native plants protected under the Arizona Native Plant Law, construction-related impacts would be potentially significant (Class II). With the implementation of Mitigation Measure B-6a (Develop a transplanting plan), impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-6: Construction activities would result in indirect or direct loss of listed plants

B-6a Develop a transplanting plan.

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

While there is only one listed terrestrial wildlife species known or expected to occur in the general vicinity of the SCE Palo Verde Alternative, other species could potentially occur in the area. Impacts to these species could be caused by temporary incremental loss of habitat and accidental death of individuals during land clearing, excavation, and grading phases of the SCE Palo Verde Alternative. In addition, individuals near the construction area may temporarily abandon their territories due to disturbance from noise and increased human activity. The following discussion highlights construction impacts that would occur to specific threatened or endangered wildlife species.

Invertebrates. There is no indication that any rare or listed invertebrates occur along SCE Palo Verde Alternative. Surveys conducted of the alternative area did not detect the presence of listed invertebrates, and impacts would be considered less than significant (Class III). Although no listed invertebrate species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Fishes. As described above, here is no indication that any rare or listed fish species occur in along the SCE Palo Verde Alternative. Surveys conducted of the alternative area did not detect the presence of listed fish species, and impacts would be considered less than significant (Class III).

Amphibians. There is no indication that any rare or listed amphibians occur along the SCE Palo Verde Alternative. Surveys conducted of the alternative area did not detect the presence of listed amphibian species, and impacts would be considered less than significant (Class III). Although no listed amphibians were identified, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Reptiles – Desert Tortoise. The SCE Palo Verde Alternative contains Sonoran desert scrub habitat that has the potential to support desert tortoise, a federal- and State-listed threatened species. Although this species has not been found during surveys of the alternative and the area has not been designated as critical habitat for this species, the habitat is still considered suitable for desert tortoise. If present, this species would be subject to disturbance and possible mortality from construction vehicles on roads, at staging/laydown areas, and at tower construction sites. Desert tortoises are known to occasionally travel long distances of up to several miles or more.

Construction activities that affect the Sonoran Desert tortoise would be similar to the Proposed Project. Construction of the alternative would also result in the loss of suitable habitat for the Sonoran Desert tortoise. APM B-14 would serve to minimize habitat loss, and native habitat would be restored in areas disturbed during construction under APM B-19. Habitat loss in Category II management areas would be limited to approximately one linear mile in the Eagletail Mountains, and habitat loss in Category III management areas would consist of approximately eight linear miles in the Big Horn Mountains.

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to Sonoran Desert Tortoise would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

Birds. There is no indication that any rare or listed birds occur along the SCE Palo Verde Alternative. Surveys conducted of the alternative area did not detect the presence of listed bird species, and impacts would be considered less than significant (Class III). Although no listed bird species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Mammals. There is no indication that any rare or listed mammals occur along the SCE Palo Verde Alternative. Surveys conducted of the alternative area did not detect the presence of listed mammal species, and impacts would be considered less than significant (Class III). Although no listed mammal species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class III)

No sensitive plant species have been identified as occurring within the vicinity of the SCE Palo Verde Alternative, and none are expected to occur. Kofa mountain barberry has a low potential to occur in the area, but it is unlikely to occur along the alternative route. The alternative does not contain suitable habitat for sensitive plants and is located outside the geographical range for any of the sensitive plant species that were identified in Table D.2-4 to have a high or moderate potential to occur. These species have not been previously recorded in the alternative area and were not identified during surveys conducted by SCE. Implementation of APM B-8 (Pre-construction Surveys for Rare Plants) would minimize impacts to sensitive plants (Class III).

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Construction activities may result in direct mortality of the cheese-weed moth lacewing as a result of vehicle collisions or host plant destruction. Although APM B-23 was designed to minimize impacts to creosote bush to benefit Le Conte's thrasher, this would also serve to benefit cheese-weed moth lacewing which is associated with creosote bush communities. Additional surveys, sensitive area avoidance, and pre-cautionary construction measures are included in APMs B-1, B-3, B-8, B-10, B-12, B-13, B-14, B-16, and B-23. Although suitable habitat for the cheese-weed moth lacewing occurs along the alternative route, there are no known locations of the species within the vicinity of the SCE Palo Verde Alternative. Consequently, implementation of the APMs listed above and avoidance of known locations of cheese-weed moth lacewing makes impacts to this species unlikely. Impacts to this species would be considered less than significant (Class III).

Fishes. As identified above for listed species, construction of the SCE Palo Verde Alternative is not expected to impact aquatic habitat. Construction activities would avoid impacts to water bodies as the alternative would span irrigation canals that occur in the Harquahala Valley. Impacts from degradation of water quality would be avoided by implementation of APM B-7 (Avoidance of Wetland Areas) and APM-B-21 (No Clearing of Riparian Habitat). Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. There is no indication that any sensitive amphibians occur in the vicinity of the SCE Palo Verde Alternative. Surveys conducted of the alternative area did not detect the presence of sensitive amphibian species in this segment and impacts would be considered less than significant (Class III). Although no sensitive amphibians were identified in the area, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Reptiles. The common chuckwalla, banded Gila monster, and desert rosy boa have the potential to occur on rocky slopes, foothills, and other rocky areas along the SCE Palo Verde Alternative. There are no recorded occurrences of any of these species in the vicinity of the alternative. If individuals of these species do occur along this segment; direct mortality or injury could result from construction vehicles or equipment.

SCE has indicated that prior to construction, surveys for sensitive species would be conducted along the ROW (APM B-8 and B-16). Sensitive area avoidance and pre-cautionary construction measures are included in APMs B-3, B-5, and B-17. However, there is still potential for direct and indirect mortality

of the common chuckwalla, banded Gila monster, and desert rosy boa; therefore construction-related impacts would be potentially significant (Class II), but would be reduced to less than significant levels with implementation of Mitigation Measures B-9b (Conduct biological monitoring), B-9c (Conduct Implement a Worker Environmental Awareness Program), and B-9d (Conduct pre-construction reptile surveys). In addition to APMs B-3, B-5, B-8, B-16, and B-17, the following mitigation measures would be implemented to reduce potential impacts to less than significant levels.

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Reptiles)

B-9b **Conduct biological monitoring.**

B-9c **Implement a Worker Environmental Awareness Program.**

B-9d **Conduct pre-construction reptile surveys.**

Birds. The SCE Palo Verde Alternative would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, potential bird strikes on high tension wires, and disturbance of nesting activities. The burrowing owl is known to occur in along the alternative and an osprey was observed north of the area near the CAP canal and the Big Horn Mountains. Due to the preferred habitat of osprey to be near water, however, it is unlikely that this species would occur in the vicinity of the alternative route and would be impacted by construction activities. The SCE Palo Verde Alternative may displace burrowing owls from wintering or nesting burrows or cause disturbance to resident birds. During construction activities, owl burrows may be crushed by construction equipment. Burrowing owls may also be displaced or abandon their burrows as a result of human interference and noise during construction activities. Additional surveys, sensitive area avoidance, and precautionary construction measures are included in APMs B-3, B-5, B-16, and B-17. However, there is still potential for direct and indirect mortality of the western burrowing owl, and construction-related impacts would be potentially significant (Class II). Implementation of Mitigation Measure B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to burrowing owls to less than significant levels. Mitigation Measure B-9e (Conduct pre-construction surveys and owl re-location) presents additional detail for the aforementioned APMs, and would therefore supersede these APMs.

Mitigation Measure for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Burrowing Owls)

B-9e **Conduct pre-construction surveys and owl re-location.**

Mammals. Sensitive mammal species expected to occur along the SCE Palo Verde Alternative include pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, cave myotis, wild free-roaming horses and burros, and desert bighorn sheep.

While there are no recorded occurrences of pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, or cave myotis in the vicinity of the alternative, suitable habitat for these species is present and there is potential for them to occur along the route. Construction and maintenance activities are not expected to have an impact on sensitive bat species as the habitat located along the proposed alternative ROW would not be expected to support nesting or breeding activities of sensitive bats. Bats typically roost in trees, caves, rock crevices, or old buildings. The construction of the alternative would not impact roosting habitat nor would it impact foraging habitat for these species because the riparian and wetland habitats would be avoided.

Desert bighorn sheep may be present at the time of construction activities and may be adversely affected by visual disturbances, noise and dust associated with the activities. Bighorn sheep in the vicinity of the alternative may be disturbed or scared off as a result of the noise, but these impacts would be temporary and limited to the construction phase of the alternative. Construction vehicles would remain on established roads (APMs B-3 and B-17) to the maximum extent practicable in order to avoid unnecessary disturbances to wildlife, and vehicles would be required to drive at low speeds in tortoise habitat (APM B-29), which would also reduce the potential for collisions with other wildlife. Impacts to bighorn sheep could be adverse, but would be considered less than significant (Class III), and no additional mitigation is proposed. The SCE Palo Verde Alternative would comply with the AGFD and BLM management policies for bighorn sheep.

State and Federal Jurisdictional Habitats

Impact B-10: Construction activities would result in adverse effects to jurisdictional waters and wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are present along the SCE Palo Verde Alternative. In addition, construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts would be reduced to a less than significant level with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-10: Construction activities would result in adverse effects to jurisdictional waters and wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Wildlife Corridors and Nursery Sites

Impact B-11: Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The drainages within the SCE Palo Verde Alternative consist of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events. Subsequently, most of the washes do not contain perennial flows and are not expected to support fish and other species that are dependent on permanent water sources. The exceptions along the alternative ROW are the irrigation canals in the Harquahala Valley. The transmission line will span the irrigation canals in the Harquahala Valley, and access to either side of these areas will utilize existing access roads. Therefore, no impacts to the movement of fish within the irrigation canals in the Harquahala Valley would occur.

Impact B-12: Construction activities would result in adverse effects to linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of the SCE Palo Verde Alternative is not expected to impact any linkages or wildlife movement corridors in the agricultural areas or in the desert scrub. These areas are not technically considered movement corridors. Rather, they generally provide for local movement of wildlife within large blocks of open space. No impacts to wildlife corridors would occur along the alternative.

Plans, Policies, and Ordinances

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (No Impact)

The SCE Palo Verde Alternative, as an individual section of the project, would traverse BLM land and Maricopa County in Arizona. Plans developed by this jurisdiction, including the Maricopa County 2020 Comprehensive Plan and the Maricopa County 2020 Tonopah-Arlington Area Plan, were assessed to determine if any biological resources policies would apply to the construction and operation of the SCE Palo Verde Alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. However, it was determined that no biological resources policies from the two aforementioned plans required further analysis, and the SCE Palo Verde Alternative would not conflict with any of these policies.

Operational Impacts

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Impacts to birds would be the same as described for the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV; as such "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in collisions by listed bird species (Class II)

Bird collisions would be the same as the Proposed Project. It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest, such as along waterways or over adjacent agricultural areas like those in the Harquahala Valley. The operation of the SCE Palo Verde Alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon juvenile tortoises as well as other wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the SCE Palo Verde Alternative will result in an increase in potential nesting sites for common ravens. An increase in the number of ravens nesting in tortoise habitat will likely result in an increase in predation on juvenile tortoises and potentially on other wildlife species (including sensitive and/or listed species). APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~Migratory Birds to "take" common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant if the various companies do not check the towers and remove nests on a regular basis and if the various companies remove other nests that are actively utilized by other raptors. An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the SCE Palo Verde Alternative will require regular maintenance of the various facilities associated with the alternative. Maintenance activities require the use of access and spur roads by vehicles and equipment. The operation and maintenance activities will be conducted at about the same frequency as currently exists for the DPV1 transmission line. SCE has indicated that vehicle speeds would be limited to a maximum of 25 mph in desert tortoise habitat (APM B-29). The implementation of this APM, and the approximate same level of use of the roads as currently exists for operation and maintenance activities, will result in a similar impact to what currently exists. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse, but less than significant (Class III).

D.2.7.3 Harquahala Junction Switchyard Alternative

Environmental Setting

The Harquahala Junction Switchyard Alternative site would be located within the Creosote–White Bursage habitat series and is primarily undisturbed. The proposed site contains typical species associated with the Desert scrub community, and several ephemeral washes are present in the area.

Several special status plant and wildlife species have potential to occur on the Harquahala Junction Switchyard Alternative site. These species are the same as those identified in Section D.2.2.1, Harquahala to Kofa NWR, and include several bats, reptiles, an invertebrate, and cacti and woody plants protected by the Arizona Native Plant Law. Additionally, migratory birds, burros, and bighorn sheep have potential to occur on the site.

Impacts and Mitigation Measures

Construction and operation of the Harquahala Junction Switchyard Alternative would result in similar direct and indirect impacts as those described in Section D.2.6 for the Proposed Project, Harquahala to Kofa NWR segment. The Harquahala Junction Switchyard Alternative would result in a slightly shorter transmission line (total distance of 225 miles instead of 230 miles); however, a new switchyard would be constructed on up to 40 acres of land, which would create an additional impact of between 6 and 40 acres of undisturbed, native desert scrub habitat. Overall, the impact potential and intensity for impacts resulting from construction and operation of the alternative would be similar to the Proposed Project, as discussed below.

Construction Impacts

Vegetation

The Harquahala Junction Switchyard Alternative would construct a new switchyard that would contribute to a loss of native desert scrub habitat. As discussed in Section D.2.6.1, construction impacts to vegetation may occur in a variety of ways, including the direct removal of plants during the course of construction. The following discussion addresses construction impacts to native vegetation types resulting from the Harquahala Junction Switchyard Alternative.

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The Harquahala Junction Switchyard Alternative would result in both temporary and permanent impacts to Sonoran desert scrub habitat. Ground-disturbing activities associated with the switchyard and transmission facilities have the potential to disturb vegetation. These activities would result in the permanent removal of Sonoran desert scrub at the switchyard and tower sites located along the alternative. The permanent loss or temporary disturbance of Sonoran desert scrub habitat would be considered a significant (Class II) impact without mitigation. Under this alternative additional impact to desert scrub habitats would occur. Potential impacts to native vegetation would be reduced to a less than significant level through implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/ Compensation Plan).

Mitigation Measure for Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species (Class II)

The introduction of non-native plant species would be the same as described for the Proposed Project except that a greater area would be subject to potential invasion by non-native weeds. The introduction of non-native plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

B-2a Conduct invasive and noxious weed inventory.

B-2b Implement control measures for invasive and noxious weeds.

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. Increased levels of dust on the leaves of plants can decrease the photosynthetic capabilities of the plants. SCE would implement Title 1 measures (Air Quality) to decrease fugitive dust including reduced vehicle speeds, use of tackifiers, and periodic watering of the ROW. Watering will be done in such a way as to prevent pooling of water on the soil surface so that toad species would not be stimulated to emerge from their subsoil aestivation burrows prior to natural rain events. Because the vegetation in desert areas is typically subject to blowing winds and dust, the additional levels of dust would not be expected to significantly impact the photosynthetic capabilities of plants in the surrounding areas. In addition, because the construction activities will be temporary, the increased dust settling on plants is not expected to be an adverse impact (Class III).

Wildlife

Direct impacts on wildlife anticipated as a result of the Harquahala Junction Switchyard Alternative include the removal of vegetation, which would result in the temporary loss of wildlife habitat along with the displacement and/or potential mortality of resident wildlife species that are poor dispersers such as snakes, lizards, and small mammals. Construction may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Depending on the timing and location of construction activities, the alternative may also result in temporary disruption along terrestrial and riparian wildlife movement corridors crossed by or adjacent to the alternative.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

Direct loss of small mammals, reptiles, and other less mobile species could occur during construction of the Harquahala Junction Switchyard Alternative. This action would result primarily from the use of construction vehicles and the grading of laydown areas for the switchyard and transmission tower erection. Construction activities and human presence can also alter or disrupt the breeding and foraging habitat for wildlife species.

A large part of the alternative would be constructed adjacent to the existing utility ROW and within or immediately adjacent to existing maintained road easements. Most of the wildlife expected to be impacted by construction in these disturbed easements is composed of common, wide-ranging species. Due to the narrow area of disturbance along this alternative and the short duration of disturbance, most of the more common wildlife species found along the route are expected to quickly recolonize the corridor after construction and subsequent revegetation work is completed. Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on wildlife from construction would generate potentially adverse but less than significant impacts (Class III). Impacts from construction on listed and candidate wildlife species are discussed separately under Threatened or Endangered Wildlife.

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described above, ground-disturbing activities have the potential to disturb vegetation utilized by nesting birds. The Harquahala Junction Switchyard Alternative encompasses variable habitats for nesting and migratory birds, which may provide potential nesting opportunities along the alternative. These areas include native and non-native trees and shrubs and natural rock features such as cliffs and large rock outcrops associated with Saddle Mountain, Palo Verde Hills, Big Horn Mountains, and Eagletail Mountains.

Impacts to raptors, burrowing owls, or other nesting birds during breeding season would be considered significant. APMs B-8 and B-16 would require additional detailed surveys within a 100-foot buffer around the area of disturbance and avoidance of sensitive sites. These APMs, by themselves, would not sufficiently ensure that impacts to migratory birds would be less than significant. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would ensure that violation of the Migratory Bird Treaty Act does not occur and would reduce impacts to nesting birds to a less than significant level (Class II).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a Conduct pre-construction surveys and monitoring for breeding birds.

Threatened or Endangered Plant or Wildlife Species

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II)

The Harquahala Junction Switchyard Alternative would result in removal of Sonoran desert scrub habitat. Any ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, transportation, maintenance of construction equipment and supplies, staging area and material

yard preparation and use, and use or improvement of existing access roads has the potential to disturb vegetation. Similar to the Proposed Project these activities would result in potential impacts to ~~two federally listed species Arizona agave, and Arizona cliffrose. The alternative may also remove other~~ plant species protected by the Arizona Native Plant Law, including blue palo verde, foothill palo verde, velvet mesquite, desert ironwood, ocotillo, and various cacti (saguaro, chollas, barrel, hedgehog, beavertail, prickly pear, desert Christmas, and nipple) that occur within the alternative route. These species are protected from being salvaged, harvested, or otherwise removed from the environment.

SCE would implement APMs that would require construction vehicles to travel on established roads, to the maximum extent practicable (APM B-3), and that spur roads, access roads, and other disturbed sites created during construction are recontoured and restored following construction activities (APM B-19).

In addition, the APMs would ensure that pre-construction surveys for sensitive or protected plants are conducted (APM B-8) and concentrations of sensitive plants and salvage-restricted plants are avoided or individuals transplanted (APM B-9; B-12; B-13). APM B-9 requires that *Ferocactus* and *Coryphantha* species be transplanted, and other native plants may be transplanted (APM B-12) or sold to SCE. Because there is still potential for significant impacts to occur to native plants protected under the Arizona Native Plant Law, construction-related impacts would be potentially significant (Class II). With the implementation of Mitigation Measure B-6a (Develop a transplanting plan), impacts would be reduced to a less than significant level.

The Harquahala Junction Switchyard Alternative would not conflict with conditions of the Arizona Native Plant Law.

Mitigation Measure for Impact B-6: Construction activities would result in indirect or direct loss of listed plants

B-6a Develop a transplanting plan.

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

While only one listed terrestrial wildlife species is known or expected to occur in the general vicinity of the Harquahala Junction Switchyard Alternative, other species could potentially occur in the area. Impacts to these species could be caused by temporary incremental loss of habitat and accidental death of individuals during land clearing, excavation, and grading phases of the Harquahala Junction Switchyard Alternative. In addition, individuals near the construction area may temporarily abandon their territories due to disturbance from noise and increased human activity. The following discussion highlights construction impacts that would occur to specific threatened or endangered wildlife species.

Invertebrates. There is no indication that any rare or listed invertebrates occur along Harquahala Junction Switchyard Alternative. Surveys conducted of the alternative area did not detect the presence of listed invertebrates, and impacts would be considered less than significant (Class III). Although no listed invertebrate species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Fishes. As described above, there is no indication that any rare or listed fish species occur in along the Harquahala Junction Switchyard Alternative. Surveys conducted of the alternative area did not detect the presence of listed fish species, and impacts would be considered less than significant (Class III).

Amphibians. There is no indication that any rare or listed amphibians occur along the Harquahala Junction Switchyard Alternative. Surveys conducted of the alternative area did not detect the presence of listed amphibian species, and impacts would be considered less than significant (Class III). Although no listed amphibians were identified, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Reptiles - Desert Tortoise. The Harquahala Junction Switchyard Alternative contains Sonoran desert scrub habitat that has the potential to support desert tortoise, a federal- and State-listed threatened species. Although this species has not been found during surveys of the alternative and the area has not been designated as critical habitat for this species, the habitat is still considered suitable for desert tortoise. If present, this species would be subject to disturbance and possible mortality from construction vehicles on roads, at staging/laydown areas, and at tower construction sites. Desert tortoises are known to occasionally travel long distances of up to several miles or more.

Construction activities that affect the Sonoran Desert tortoise would be similar to the Proposed Project. Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to Sonoran Desert Tortoise would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

Birds. There is no indication that any rare or listed birds occur along the Harquahala Junction Switchyard Alternative. Surveys conducted of the alternative area did not detect the presence of listed bird species, and impacts would be considered less than significant (Class III). Although no listed bird species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Mammals. There is no indication that any rare or listed mammals occur along the Harquahala Junction Switchyard Alternative. Surveys conducted of the alternative area did not detect the presence of listed mammal species, and impacts would be considered less than significant (Class III). Although no listed mammal species were identified in the vicinity of the alternative, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class III)

No sensitive plant species have been identified as occurring within the vicinity of the Harquahala Junction Switchyard Alternative, and none are expected to occur. Kofa mountain barberry has a low potential to occur in the area, but it is unlikely to occur within the vicinity of the switchyard or associated transmission facilities. The alternative does not contain suitable habitat for sensitive plants and is located outside the geographical range for any of the sensitive plant species that were identified in Table D.2-4 to have a high or moderate potential to occur. These species have not been previously recorded in the alternative area and were not identified during surveys conducted by SCE. Implementation of APM B-8 (Pre-construction Surveys for Rare Plants) would minimize potential impacts to sensitive plants (Class III).

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates

Construction activities may result in direct mortality of the cheese-weed moth lacewing as a result of vehicle collisions or host plant destruction. Although APM B-23 was designed to minimize impacts to creosote bush to benefit Le Conte's thrasher, this would also serve to benefit cheese-weed moth lacewing which is associated with creosote bush communities. Additional surveys, sensitive area avoidance, and precautionary construction measures are included in APMs B-1, B-3, B-8, B-10, B-12, B-13, B-14, B-16, and B-23. Although suitable habitat for the cheese-weed moth lacewing occurs along the alternative route, there are no known locations of the species within the vicinity of the Harquahala Junction Switchyard Alternative. Consequently, implementation of the APMs listed above and avoidance of known locations of cheese-weed moth lacewing makes impacts to this species unlikely. Impacts to this species would be considered less than significant (Class III).

Fishes. As identified above for listed species, construction of the Harquahala Junction Switchyard Alternative is not expected to impact aquatic habitat. Construction activities would avoid impacts to water bodies as the alternative would span irrigation canals that occur in the Harquahala Valley. Impacts from degradation of water quality would be avoided by implementation of APM B-7 (Avoidance of Wetland Areas) and APM-B-21 (No Clearing of Riparian Habitat). Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. There is no indication that any sensitive amphibians occur in the vicinity of the Harquahala Junction Switchyard Alternative. Surveys conducted of the alternative area did not detect the presence of sensitive amphibian species in this segment and impacts would be considered less than significant (Class III). Although no sensitive amphibians were identified in the area, SCE would implement APM B-16 (Pre-construction Surveys) prior to construction.

Reptiles. The common chuckwalla, banded Gila monster, and desert rosy boa have the potential to occur on rocky slopes, foothills, and other rocky areas along the Harquahala Junction Switchyard Alternative. There are no recorded occurrences of any of these species in the vicinity of the alternative. If individuals of these species do occur along this segment; direct mortality or injury could result from construction vehicles or equipment.

SCE has indicated that prior to construction, surveys for sensitive species would be conducted along the ROW (APM B-8 and B-16). Sensitive area avoidance and pre-cautionary construction measures are included in APMs B-3, B-5, and B-17. However, there is still potential for direct and indirect mortality of the common chuckwalla, banded Gila monster, and desert rosy boa; therefore construction-related impacts would be potentially significant (Class II), but would be reduced to less than significant levels with the Mitigation Measures B-9b (Conduct biological monitoring), B-9c (Implement a Worker Environmental Awareness Program), B-9d (Conduct pre-construction reptile surveys). In addition to APMs B-3, B-5, B-8, B-16, and B-17, the following mitigation measures would be implemented to reduce potential impacts to less than significant levels.

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-9b **Conduct biological monitoring.**

B-9c **Implement a Worker Environmental Awareness Program.**

B-9d **Conduct pre-construction reptile surveys.**

Birds. The Harquahala Junction Switchyard Alternative would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, potential bird strikes on high tension wires, and disturbance of nesting activities. The burrowing owl is known to occur in along the alternative and an osprey was observed north of the area near the CAP canal and the Big Horn Mountains. Due to the preferred habitat of osprey to be near water, however, it is unlikely that this species would occur in the vicinity of switchyard and would be impacted by construction activities. The Harquahala Junction Switchyard Alternative may displace burrowing owls from wintering or nesting burrows or cause disturbance to resident birds. During construction activities, owl burrows may be crushed by construction equipment. Burrowing owls may also be displaced or abandon their burrows as a result of human interference and noise during construction activities. Additional surveys, sensitive area avoidance, and pre-cautionary construction measures are included in APMs B-3, B-5, B-16, and B-17. However, there is still potential for direct and indirect mortality of the western burrowing owl, and construction-related impacts would be potentially significant (Class II). Implementation of Mitigation Measure B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to burrowing owls to less than significant levels. Mitigation Measure B-9e (Conduct pre-construction surveys and owl re-location) presents additional detail for the aforementioned APMs, and would therefore supersede these APMs.

Mitigation Measure for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Burrowing Owl)

B-9e **Conduct pre-construction surveys and owl relocation.**

Mammals. Sensitive mammal species expected to occur along the Harquahala Junction Switchyard Alternative include pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, cave myotis, and desert bighorn sheep.

While there are no recorded occurrences of pocketed free-tailed bat, big free-tailed bat, California leaf-nosed bat, or cave myotis in the vicinity of the alternative, suitable habitat for these species is present and there is potential for them to occur along the route. Construction and maintenance activities are not expected to have an impact on sensitive bat species as the habitat located near the switchyard would not be expected to support nesting or breeding activities of sensitive bats. Bats typically roost in trees, caves, rock crevices, or old buildings. The construction of the alternative would not impact roosting habitat nor would it impact foraging habitat for these species because the riparian and wetland habitats would be avoided.

Desert bighorn sheep may be present at the time of construction activities and may be adversely affected by visual disturbances, noise, and dust associated with the activities. Bighorn sheep in the vicinity of the alternative may be disturbed or scared off as a result of the noise, but these impacts would be temporary and limited to the construction phase of the alternative. Construction vehicles would remain on established roads (APMs B-3 and B-17) to the maximum extent practicable in order to avoid unnecessary disturbances to wildlife, and vehicles would be required to drive at low speeds in tortoise habitat (APM B-29), which would also reduce the potential for collisions with other wildlife. Impacts to bighorn sheep could be adverse, but would be considered less than significant (Class III), and no additional mitigation is proposed. The Harquahala Junction Switchyard Alternative would comply with the AGFD and BLM management policies for bighorn sheep.

State and Federal Jurisdictional Habitats

Impact B-10: Construction activities would result in adverse effects to jurisdictional waters and wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are present along the Harquahala Junction Switchyard Alternative. In addition, construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts would be reduced to a less than significant level with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-10: Construction activities would result in adverse effects to jurisdictional waters and wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Wildlife Corridors and Nursery Sites

Impact B-11: Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The drainages within the Harquahala Junction Switchyard Alternative consist of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events. Subsequently, most of the washes do not contain perennial flows and are not expected to support fish and other species that are dependent on permanent water sources. The exceptions within the vicinity of the switchyard are the irrigation canals in the Harquahala Valley. Any transmission facilities associated with the switchyard would span the irrigation canals in the Harquahala Valley, and access to either side of these areas would utilize existing access roads. Therefore, no impacts to the movement of fish within the irrigation canals in the Harquahala Valley would occur.

Impact B-12: Construction activities would result in adverse effects to linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of the Harquahala Junction Switchyard Alternative is not expected to impact any linkages or wildlife movement corridors in the agricultural areas or in the desert scrub. These areas are not technically considered movement corridors. Rather, they generally provide for local movement of wildlife within large blocks of open space. No impacts to wildlife corridors would occur along the alternative.

Plans, Policies, and Ordinances

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (No Impact)

The Harquahala Junction Switchyard Alternative, as an individual section of the project, would be located Maricopa County in Arizona. Plans developed by this jurisdiction, including the Maricopa County 2020 Comprehensive Plan and the Maricopa County 2020 Tonopah-Arlington Area Plan, were assessed to determine if any biological resources policies would apply to the construction and operation of this alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. However, it was determined that no biological resources policies from the two aforementioned plans required further analysis, and the Harquahala Junction Switchyard Alternative would not conflict with any of these policies.

Operational Impacts

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Impacts to birds would be the same as described for the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV; as such "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in collisions by listed bird species (Class II)

Bird collisions would be the same as the Proposed Project. It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest, such as along waterways or over adjacent agricultural areas like those in the Harquahala Valley. The operation of the SCE Palo Verde Alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon juvenile tortoises as well as other wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the transmission facilities associated with the Harquahala Junction Switchyard Alternative will result in an increase in potential nesting sites for common ravens. An increase in the number of ravens nesting in tortoise habitat will likely result in an increase in predation on juvenile tortoises and potentially on other wildlife species (including sensitive and/or listed species). APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~Migratory Birds to "take" common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant if the various companies do not check the towers and remove nests on a regular basis and if the various companies remove other nests that are actively utilized by other raptors. An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the Harquahala Junction Switchyard Alternative will require regular maintenance of the various facilities associated with the alternative. Maintenance activities require the use of access and spur roads by vehicles and equipment. The operation and maintenance activities will be conducted at about the same frequency as currently exists for the DPV1 transmission line. SCE has indicated that vehicle speeds would be limited to a maximum of 25 mph in desert tortoise habitat (APM B-29). The implementation of this APM, and the approximate same level of use of the roads as currently exists for operation and maintenance activities, will result in a similar impact to what currently exists. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse, but less than significant (Class III).

D.2.7.4 Desert Southwest Transmission Project Alternative

Environmental Setting

Vegetation Communities and Wildlife

In general, the vegetation communities across the Desert Southwest Transmission Project Alternative are the same as those described in the Vegetation Overview (Section D.1.1.1) and in the descriptions for the Proposed Project segments from Midpoint Substation to Cactus City Rest Area (Section D.2.2.6) and from Cactus City Rest Area to Devers Substation (Section D.2.2.7). Between the Keim Substation and the Cactus City Rest Area, this alternative crosses through Sonoran creosote bush scrub and dry desert wash woodland. In addition, scattered desert dunes also occur as described in Section D.2.2.6. The areas where the route of this alternative differ from the Proposed Project occur where the construction of one double-circuit 500 kV line or two parallel 500 kV transmission lines will occur for 8.8 miles from Keim Substation to Midpoint Substation, and also where the three new substation/switching stations (Keim, Midpoint, and on Dillon Road) would be constructed. In addition, it also differs where the transmission line runs south along the I-10 west of Alligator Rock, and where the line would cross to the north side of I-10, approximately 2.5 miles east of the Cactus City rest area. The alternative would continue west adjacent to the existing DPV1 transmission line. Near the Keim Substation, this alternative crosses disturbed areas, agricultural lands, and the I-10 freeway. South of the I-10, the route of this alternative crosses through patches of agricultural lands within the broader expanse of creosote bush scrub located west of Blythe. The alternative locations for the Midpoint Substation and the Dillon Road Substation are also vegetated with Sonoran creosote bush scrub.

The vegetation in the area where this alternative would proceed north of Alligator Rock, along the south side of the I-10, and along the north side of I-10 (east of the Proposed Project crossing of the I-10), also consists of Sonoran creosote bush scrub and dry desert wash woodland. In general, the vegetation community in these portions of the alternative alignment exhibit somewhat of a sparser distribution of shrubs, a lower plant species diversity, a higher incidence of non-native plant species, and an increased level of human disturbance. The El Paso Natural Gas (EPNG) pipeline access road (Aztec Road) and various other dirt roads located on the north and south sides of I-10 provide access for off-highway vehicles and assorted human disturbances, such as trash dumping. This generally leads to a degradation of the vegetation communities as a result of direct impact to vegetation, deposition of trash, and introduction of non-native plant species. As this alternative turns southwest and proceeds toward the junction with the proposed DPV2 line, the level of disturbance within the vegetation communities decreases, and the plant diversity and density increases.

From Dillon Road west to Devers Substation, this alternative traverses through patches of stabilized desert sand fields, mesquite hummocks, stabilized sand fields, stabilized desert dunes, ephemeral sand fields, and Sonoran mixed woody and succulent scrub that are interspersed with areas of creosote bush scrub as described in Section (D.2.2.7). In addition, the line also crosses scattered agricultural areas, disturbed areas, and developed areas.

The wildlife species documented within the ROW for this alternative are the same as those described in Sections D.2.1.1.2 and D.2.2.7 for the Proposed Project. The agricultural and disturbed areas near the Keim Substation and in the areas just south of I-10 would be expected to support common wildlife species that are typically associated with urban and agricultural areas. The creosote bush scrub habitat between the agricultural areas south of I-10 and the alternative Midpoint Substation location supports the same wildlife species that occur along the route of the Proposed Project.

North of Alligator Rock and in areas adjacent to I-10, several factors may influence the abundance and diversity of wildlife species. The habitat in these areas displays a higher level of disturbance related to a higher abundance of non-native plant species, an increased level of humans and vehicles, and a higher level of noise related to vehicles on I-10. All of these factors negatively impact wildlife species and may lead to decreased abundance and diversity of wildlife species. In addition, roads that cross areas of wildlife habitat tend to act as a "sink" because there is a higher incidence of wildlife mortality related to vehicle use on the roads. This "sink" tends to reduce the numbers of individuals in wildlife populations close to the roads because animals residing in close proximity have a higher probability of mortality. The EPNG pipeline road (Aztec Road), the various dirt roads that runs on the north and south sides of I-10, and I-10 act as sinks on the north side of Alligator Rock and in the areas between Alligator Rock and the Cactus City Rest Area. As a result, the habitat in areas north of Alligator Rock and near I-10 likely have a lower abundance and diversity of wildlife species. However, as the route of the Desert Southwest Transmission Project Alternative approaches the junction with the proposed DPV2 Alternative, the wildlife habitat becomes less disturbed and more diverse. Therefore, the abundance and diversity of wildlife would be expected to increase nearer to the proposed DPV2 Alternative.

Special Status Plant and Wildlife Species

Plants. The locations of sensitive plant species observed, and the potential for other sensitive plants to occur, along the portions of this alternative that match the proposed DPV2 alignment were documented in Table D.2-10 in Section D.2.6.1.6. The potential for special status plant species to occur along the additional portions of the route and at the proposed Substation locations would be the same as those described in Table D.2-4 (sensitive plant table) in Section D.2.1.1.3.

Two sensitive plant species have been documented along the route of the Desert Southwest Transmission Line Alternative. Harwood's milkvetch was found to be relatively common during sensitive plant surveys conducted in 2005 (Tetra Tech). This species was found in relatively high numbers between the Keim Substation and approximately MM E119. It was also found in lower numbers between Wiley's Well Road (MM E123.7) and Graham Pass Road (MM E132). The foxtail cactus was observed in 2003 and 2005 (Environmental Planning Group, 2003 and 2005) from near Alligator Rock (MM E155) west to near Red Cloud Mine Road (approximately MM E163). It was also observed just east of Cactus City Rest Area, near MM E186, and the Cactus City Rest Area (MM E188.2).

Potential habitat for 10 additional sensitive plant species, including ayenia, crucifixion thorn, glandular ditaxis, California ditaxis, Orocopia sage, desert spike-moss, and Cove's cassia, Abram's spurge, Spearleaf, Latimer's woodland gilia, and Mecca-aster is present in the areas north of Alligator Rock and south of I-10 between Alligator Rock and Cactus City Rest Area. These species would not be expected to occur at the Keim Substation due to a lack of suitable habitat.

Between the Cactus City Rest Area and Devers Substation, one listed species Coachella Valley milkvetch is known to occur within the ROW for this alternative. Fifteen sensitive plant species have a high to moderate potential to occur in this segment of the Desert Southwest Transmission Project Alternative and at the site of the Dillon Road Substation. Some of these include Arizona spurge, flat-seeded spurge, California ditaxis, foxtail cactus, little San Bernardino Mountains gilia, slender woolly-heads, desert sand-parsley, Parish's brittlescale, Latimer's woodland gilia, purple stemodia, and Mecca-aster.

Wildlife. The potential for sensitive wildlife species to occur along this alternative would be similar to what was previously described for the Proposed Project in Sections D.2.1.1.2, D.2.2.6, and D.2.2.7. The known distributions where desert tortoise, loggerhead shrike, Le Conte's thrasher, and Mohave fringe-

toed lizard have been observed, and the potential for other sensitive wildlife species to occur along the portions of this alternative that match the alignment of the proposed DPV2 line are described in Sections D.2.2.6 (Midpoint Substation to Cactus City Rest Area) and D.2.2.7 (Cactus City Rest Area to Devers Substation). Because this alternative does not traverse the Colorado River and the agricultural areas in the Palo Verde Valley, the six listed bird species identified in that segment, California black rail, Yuma clapper rail, western yellow-billed cuckoo, elf owl, Gila woodpecker, and least Bell's vireo, would not be expected to occur. Other riparian or aquatic species including razorback sucker, vermillion flycatcher, Sonoran yellow warbler, summer tanager, peregrine falcon, willow flycatcher, southwestern willow flycatcher, white-faced ibis, brown-crested flycatcher, and yellow-breasted chat would not be expected to occur because suitable habitat is not present.

The Mojave fringe-toed lizard, loggerhead shrike, and Le Conte's thrasher have been documented at the Midpoint Substation alternative location, and the fringe-toed lizard has also been observed south of I-10 and the Keim Substation, along the north-south portion of the transmission line route. The desert tortoise also potentially occurs west of the agricultural and disturbed areas along the transmission line between the Keim and Midpoint Substations and at the Midpoint Substation. These species have a low potential to occur at the Keim Substation location due to the close proximity to disturbed and agricultural areas.

The alternative alignment north of Alligator Rock and along the south side of I-10 would be expected to support the same sensitive wildlife species that potentially occur in this segment of the proposed DPV2 line because suitable desert scrub habitat exists. However, because of the "sink" effect associated with the various access roads in the Alligator Rock area and along I-10, as described above, and because the habitat located in areas close to the I-10 is somewhat disturbed, the density of desert tortoise and other sensitive wildlife species would be expected to be lower in the areas north of Alligator Rock and nearer to I-10.

Two listed wildlife species (desert tortoise and Coachella Valley fringe-toed lizard) and one Federal Candidate for listing (Palm Springs round-tailed ground squirrel) are known to occur in the portion of the Desert Southwest Transmission Project Alternative between Cactus City Rest Area and Devers Substation. The desert tortoise was observed from near the Cactus City Rest Area (MP E188.2) west to almost MP E196 (Alice Karl and Associates, August 2005). In 2003, a desert tortoise location was reported near MP E198.6 (Environmental Planning Group, December 2003). This appears to be an isolated location because it is approximately 2.6 miles west of the furthest location detected in the 2005 surveys (Alice Karl and Associates, August 2005).

The Coachella Valley fringe-toed lizard is present within the various parcels that make up the Coachella Valley Preserve and it is likely present in other suitable habitat areas that occur within and adjacent to the ROW. The ROW crosses the Preserve between approximately MPs E209.9 and E212. Suitable blow sand areas, which are considered suitable habitat areas for this species, are located approximately between MPs E219.2 and E220 and MPs E224.5 and E225.2. The Palm Springs round-tailed ground squirrel is known to occur in the vicinity of the transmission line route along Dillon Road, north of I-10, and north of I-10 in the vicinity of Jefferson Street northwest of Indio (Environmental Planning Group, December 2003). Other populations are scattered around the valley from approximately 18 miles southeast of the City of Coachella, northwest to the east end of the San Gorgonio Pass area. Suitable habitat also occurs along much of the ROW from a point near Dillon Road north of the City of Coachella and west to Devers Substation (Environmental Planning Group, December 2003). All three potentially occur at the site of the Dillon Road Substation.

Two sensitive bird species, burrowing owl and California horned lark, have also been documented in this portion of the alternative and could potentially occur at the Dillon Road Substation. In addition, as described in Section D.2.2.7, 23 additional sensitive species could potentially occur in this segment because either suitable habitat is present or there has been a documented occurrence in the vicinity. Some of these include:

- Coachella Valley giant sand-treader cricket
- Coachella Valley Jerusalem cricket
- flat-tailed horned lizard
- Mojave fringe-toed lizard
- rosy boa
- northern red-diamond rattlesnake
- golden eagle
- ferruginous hawk
- Le Conte's thrasher
- mountain plover
- loggerhead shrike
- California leaf-nosed bat
- pallid bat
- Townsend's big-eared bat
- spotted bat
- fringed myotis
- western mastiff bat
- pocketed free-tailed bat
- big free-tailed bat
- San Diego black-tailed jackrabbit
- Palm Springs pocket mouse
- pallid San Diego pocket mouse
- Los Angeles pocket mouse
- American badger

The Desert Southwest Transmission Project Alternative would cross through the Chuckwalla Dune Thicket ACEC and Chuckwalla DWMA ACEC in the same or very similar locations as was described for the Proposed Project (Sections D.2.2.6, and D.2.2.7). In addition, this alternative would traverse through the same portion of designated Critical Habitat that was described for the Proposed Project (Sections D.2.2.6 and D.2.2.7).

Construction Impacts – Vegetation

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The Desert Southwest Transmission Project Alternative would permanently remove Sonoran desert scrub and may potentially remove dry desert wash woodland vegetation at tower locations between the Keim Substation and the Devers Substation. In addition, Sonoran desert scrub would also be removed at the locations of the Midpoint and Dillon Road Substations. The Keim Substation does not support native vegetation communities. As stated for Impact B-1 in Section D.2.6.1.1, the vegetation will be permanently removed at the locations of the tower footings. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance.

The permanent loss and temporary disturbance of Sonoran desert scrub and dry desert wash woodland resulting from the construction in this alternative would result in significant impacts to native vegetation communities. Loss of Sonoran desert scrub habitat would be considered a significant impact (Class II). Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) shall be implemented by the SCE to reduce impacts to less than significant levels.

Mitigation Measure for Impact B-1: Construction activities would permanently remove native vegetation

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction invasive non-native or noxious plant species (Class II)

Construction impacts along the entire length of the Desert Southwest Transmission Project Alternative, along the transmission line between the Keim and Midpoint Substations, and at the Midpoint and Dillon Road Substations would temporarily remove Sonoran desert scrub vegetation at the construction sites located adjacent to each tower. Introduction of invasive non-native or noxious plant species would occur primarily during construction, but would also continue to occur during operation and maintenance phases of the alternative. The introduction of invasive non-native or noxious weeds would be related to the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed, use of straw bales or wattles that contain seeds of non-native plant species, and enhanced public access to the project corridor during and after construction.

To reduce the potential for the introduction of noxious weeds, SCE would implement APM B-2 (Standard Noxious Weed BMPs) and B-11, which would require hand clearing of vegetation in certain areas located along the ROW. This APM would facilitate the maintenance of existing root systems which may help to stabilize the soils against erosion and assist in the restoration of these areas if the plants resprout at the conclusion of project activities. SCE would also implement APM B-19, which would require the restoration of disturbed areas at the conclusion of construction. However, SCE has not indicated which areas would be subject to hand clearing or restoration at this time. The introduction of non-native plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-2a **Conduct invasive and noxious weed inventory.**

B-2b **Implement control measures for invasive and noxious weeds.**

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. Increased levels of dust on the leaves of plants can decrease the photosynthetic capabilities of the plants. SCE would implement Title 1 measures (Air Quality) to decrease fugitive dust including reduced vehicle speeds, use of tackifiers, and periodic watering of the ROW. Watering will be done in such a way as to prevent pooling of water on the soil surface so that toad species would not be stimulated to emerge from their subsoil aestivation burrows prior to natural rain events. With the implementation of Title 1 rules the potential impacts of increased dust settling on plants is expected to be adverse but not significant (Class III).

Impacts and Mitigation Measures – Wildlife

Direct impacts on wildlife would be similar to those described in Section D.2.6.1.4 of the Proposed Project.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

The direct loss of small mammals, reptiles, and other less mobile species would likely occur in the undeveloped areas along the length of the Desert Southwest Transmission Project Alternative and at the Midpoint and Dillon Road Substations. The loss of vegetation would also result in the temporary loss of breeding and foraging habitat for wildlife.

Wildlife species are most vulnerable to construction-related disturbances during their breeding seasons. Disturbances from construction could result in nest, roost, or territory abandonment and subsequent reproductive failure if these disturbances were to occur during an affected species' breeding season.

A large part of the alternative would be constructed adjacent to the existing utility ROW and within or immediately adjacent to existing maintained road easements. Most of the wildlife expected to be impacted by construction in these disturbed easements is composed of common, wide-ranging species. Due to the narrow area of disturbance along this alternative and the short duration of disturbance, most of the more common wildlife species found along the route are expected to quickly recolonize the corridor after construction and subsequent revegetation work is completed. Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on wildlife from construction would generate potentially adverse but less than significant impacts (Class III). Impacts from construction on listed and candidate wildlife species are discussed separately under Threatened or Endangered Wildlife.

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described in Section 2.6.1.5 ground-disturbing activity, including tower pad preparation and construction and grading of new access roads, has the potential to disturb vegetation utilized by nesting birds. The removal of habitat during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Implementation of Mitigation Measure B-5a would reduce impacts to nesting birds to less than significant levels (Class II).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a Conduct pre-construction surveys and monitoring for breeding birds.

Impacts and Mitigation Measures – Threatened or Endangered Plant or Wildlife Species

Construction impacts for threatened and endangered species would be same as described for vegetation and wildlife in Section D.2.6.1.6.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II)

Threatened or Endangered Plants. The loss of individuals or known habitats of threatened, or endangered plant species would be considered a significant impact without mitigation. One listed plant species, the Coachella Valley milkvetch, is known to occur near Devers Substation and within western portion of the ROW of the Desert Southwest Transmission Line Alternative. This species potentially occurs between the Dillon Road Substation and Devers Substation. No other State or federally listed, endangered, or threatened plant species have been identified as occurring within this alternative and none are expected

to occur. This alternative alignment either does not contain suitable habitat for any other listed plants or it is located outside the geographical range for any of the listed plant species that were identified as having a high or moderate potential to occur (Table D.2-4). Impacts to sensitive plant species would be potentially significant, but would be reduced to less than significant levels (Class II) through the implementation of APMs and Mitigation Measure B-6a (Develop a transplanting plan).

Mitigation Measure for Impact B-6: Construction activities would result in indirect or direct loss of listed plants

B-6a Develop a transplanting plan.

Threatened or Endangered Wildlife

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

The Desert Southwest Transmission Project Alternative contains Sonoran desert scrub habitat that is known to support desert tortoise, a federal- and State-listed threatened species, and sand dune habitats that are known to support Coachella Valley fringe-toed lizard, a federal threatened and State endangered species. In addition, this alternative also contains desert scrub, desert wash, and succulent desert scrub habitats that are known to support the Palm Springs round-tailed ground squirrel, a Federal Candidate for listing. As described in Section D.2.7.4 of the Environmental Setting, with the exception of the desert tortoise, Coachella Valley fringe-toed lizard, and Palm Springs round-tailed ground squirrel, no other listed or candidate wildlife specie were identified with the potential to occur along the route of this alternative.

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. There is no indication that listed amphibian species occur along the alignment for this alternative. This portion of the Project does not fall within the range nor does it support the appropriate habitat requirements of any listed amphibian species that were determined to have a high or moderate potential to occur. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed.

Reptiles.

Desert Tortoise. Construction activities conducted in this alternative could result in impacts to populations of desert tortoise. This segment is located in Sonoran desert scrub habitat that is within the known geographic range of this species. Occupied habitat generally occurs from the eastern portion of this segment (MM E133) and extends to the Cactus City Rest Area (MM E188.2). Surveys conducted in this segment indicate the highest density of tortoises appears to be located between MMs E151 and E196. This area encompasses a section of the route near Alligator Rock (approximately MM E155) that traverses near the foothills of the Chuckwalla Mountains. Surveys in this area found a high incidence of both tortoise and tortoise sign. Desert scrub and dry desert wash habitats located east of MM E133 are considered potential habitat for tortoise even though this species was not observed during previous surveys.

Construction activities that affect the Sonoran Desert tortoise would be similar to the Proposed Project. Construction of this alternative would also result in impacts to designated critical habitat for the desert tortoise. The ROW would pass through designated critical habitat from just east of Wiley's Well Road

(MM E121.7) to just east of the Cactus City Rest Area (MM 188.2). Impacts to designated critical habitat would include the permanent removal of habitat resulting from construction of the 97 towers and from construction of access and spur roads. Temporary impacts to designated critical habitat would also occur as a result of the establishment of laydown/staging areas, construction disturbance around the bases of the 97 towers, and construction of temporary access roads. The impacts resulting from the construction of this segment would result in significant impacts on designated critical habitat for the desert tortoise (Class II).

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to desert tortoise would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

Coachella Valley Fringe-Toed Lizard. Construction activities conducted in this alternative could result in impacts to populations of Coachella Valley fringe-toed lizard a State endangered and federally threatened species. This species occurs in the Coachella Valley Preserve and in some of the sand dunes and blow sands areas located in the undeveloped portions of Coachella Valley. Surveys conducted in 2005 identified suitable blow sand habitat areas within the ROW of the Proposed Project approximately between MMs E219.2 and E220 and MMs E224.5 and E225.2 (Greystone, 2005). This species also likely occurs in suitable blow sand areas that occur adjacent to the ROW for the Proposed Project. Construction in areas adjacent to blow sand habitat may also impact habitat for the Coachella Valley fringe-toed lizard by creating barriers to the movement of sands. To reduce potential impacts to this species SCE would implement APMs B-26, B-33, B-34, and B-36 which specifically address the Coachella Valley fringe-toed lizard and its habitat. In addition to the APMs proposed by SCE, implementation of Mitigation Measure B-7d (Purchase mitigation lands for impacts to fringe-toed lizard habitat) would reduce potential impacts to the Coachella Valley fringe-toed lizard to less than significant levels.

Mitigation Measure for Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Coachella Valley fringe-toed lizard)

B-7d **Purchase mitigation lands for impacts to fringe-toed lizard habitat.**

Critical Habitat. Construction of Desert Southwest Transmission Project Alternative would also result in impacts to designated critical habitat for the Coachella Valley fringe-toed lizard. The ROW contains designated critical habitat for the Coachella Valley fringe-toed lizard between MMs E209.3 and E215. Impacts to designated critical habitat would include the permanent removal of habitat resulting from

construction of towers, access, and spur roads. APM B-19 would provide some restoration to areas disturbed by project activities located within designated critical habitat however this measure would not fully mitigate potential loss of habitat or modifications to designated critical habitat. In addition, APM B-34 also provides for restoration of compacted soils within the Coachella Valley Preserve, which is designated critical habitat for this species. This measure would partially address impacts to critical habitat but it would not fully mitigate for the impacts. Therefore, the impacts resulting from the construction of this segment of the Desert Southwest Transmission Project Alternative would result in significant impacts on designated critical habitat for the Coachella Valley fringe-toed lizard (Class II). Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) and B-7d (Purchase mitigation lands for impacts to fringe-toed lizard habitat), would reduce impacts to less than significant levels.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Critical Habitat)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7d **Purchase mitigation lands for impacts to fringe-toed lizard habitat.**

Birds. Listed bird species have not been documented in this segment of the Desert Southwest Transmission Line Alternative. Construction activities associated with this alternative are not expected top result in impacts to sensitive birds (Class III).

Mammals. Similar to the Proposed Project there is no indication that listed mammals occur in the Desert Southwest Transmission Line Alternative. Construction activities associated with this alternative are not expected top result in impacts to listed mammals (Class III).

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class II)

Plants. Habitat in this alternative is similar to that described in Section D.2.6.1.6 and supports several sensitive plant species including foxtail cactus a federal species of special concern and CNPS List 1b plants such as Harwood's milkvetch, Latimer's woodland gilia, and Mecca aster.

Some of the other species that may occur in this segment include:

- Ayenia
- crucifixion thorn
- glandular ditaxis
- California ditaxis
- Orocopia sage
- desert spike-moss
- Cove's cassia
- Abram's spurge
- Spearleaf
- Arizona spurge
- flat-seeded spurge
- cliff spurge
- little San Bernardino Mountains gilia
- creamy blazing star
- slender woolly-heads
- chaparral sand-verbena
- angel trumpets
- desert sand-parsley
- Parish's brittlescale
- purple stemodia

Construction of towers and access/spur roads would result in the permanent loss of habitat for these sensitive species and may result in a loss of individual plants. Establishment of staging or laydown areas would also result in temporary impacts to habitat for rare plants.

To reduce potential impacts to sensitive plants SCE would implement APM B-8 (Pre-construction Surveys) and APM B-9 (Transplant Sensitive Cactus), which provides for detailed surveys of tower locations prior to construction. Although impacts would remain potentially significant, SCE would also implement the following mitigation measure to reduce these impacts to a less than significant level: Mitigation Measure B-8a (Conduct surveys for listed plant species).

Mitigation Measure for Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plant species.

B-8a Conduct surveys for listed plant species.

Wildlife

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Construction of the portion of the Desert Southwest Transmission Project Alternative would result in the temporary and permanent removal of suitable habitat for Coachella Valley giant sand-treader cricket and Coachella Valley Jerusalem cricket between the Dillon Road Substation and Devers Substation. As described in the Environmental Setting (Section D.2.2), these two species potentially occur in dune habitats and ephemeral sand fields in the Coachella Valley. These two species do not have any State or federal sensitive designations but they are covered species under the Draft Coachella Valley MSHCP. If the Draft MSHCP is not finalized, then impacts to these species would not be significant and would not require mitigation. If the Draft MSHCP is finalized, then mitigation will be required to avoid significant impacts (Class II) resulting from temporary and permanent loss of habitat for these species. Mitigation would include conducting focused surveys for these species prior to construction to determine presence or absence and biological monitoring during construction. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-9a (Conduct pre-construction surveys), and B-9b (Conduct biological monitoring) would reduce the impacts to sensitive invertebrates, if present, to less than significant.

Fish. This segment does not contain standing water and the area does support populations of rare fish. Impacts sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. Only one species of sensitive amphibian, the Couch's Spadefoot toad, potentially occurs along the route of the Desert Southwest Transmission Line Alternative. No other sensitive amphibians would be expected to occur because the habitats along the route are not suitable. Construction of the transmission line from the Keim Substation to the Midpoint Substation, construction of the Midpoint Substation, and construction of a portion of the Desert Southwest Transmission Project Alternative west of the Midpoint Substation would result in the permanent removal of suitable habitat for Couch's spadefoot toad. Temporary loss of potential habitat would also occur as a result of construction impacts around tower locations and at laydown/staging areas. This permanent and temporary loss of habitat and potentially the loss of individuals would be considered a significant impact (Class II). Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-9a (Conduct pre-construction surveys), and B-9b (Conduct biological monitoring) would reduce the impacts to sensitive amphibians, if present, to less than significant.

Reptiles. Construction of the Desert Southwest Transmission Project Alternative would result in potential impacts to flat-tailed horned lizard, Mojave fringe-toed lizard, Colorado Desert fringe-toed lizard, banded Gila monster, rosy boa, and northern red diamond rattlesnake. The Mojave fringe-toed lizard has been documented at the Midpoint Substation Alternative location and south of the I-10 and the Keim Substation, along the north-south portion of the route of the transmission line. The Colorado Desert fringe-toed lizard and banded Gila monster have a potential to occur in the eastern portion of this route while the other sensitive species have the potential to occur in the suitable desert scrub habitat throughout the remainder of this alternative. The temporary and permanent loss of habitat and potentially the loss of individuals of these species would be considered a significant impact (Class II). Implementation of APMs and Mitigation Measures B-9b (Conduct biological monitoring) and B-9d (Conduct pre-construction reptile surveys) would reduce potential impacts to sensitive reptiles to less than significant levels.

Birds. Construction of this alternative would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and disturbance related to construction activities. Construction activities and the increased presence of humans may result in direct or indirect impacts to burrowing owls and other sensitive birds that potentially occur in the vicinity. Construction activities could result in direct displacement of breeding owls and abandonment of nesting burrows. The displacement of burrowing owls from resident burrows would be considered a significant impact (Class II). Construction of the Midpoint Substation would result in the permanent removal of 44 acres and temporary removal of 5 acres of suitable desert scrub habitat utilized by Le Conte's thrasher, Bendire's thrasher, mountain plover, loggerhead shrike, and ferruginous hawk (foraging habitat). This temporary and permanent loss of potential habitat would be considered a significant impact (Class II). Implementation of APMs and Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/ Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), and B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to sensitive birds to less than significant levels.

Mammals. Habitat located along this alternative is largely the same as described for the Proposed Project and may support a variety of sensitive species. Some of species with a moderate to high potential to occur along this alternative include:

- California Leaf-Nosed Bat
- Pallid Bat
- Townsend's Big-Eared Bat
- Spotted Bat
- Yellow Bat
- Arizona Myotis
- Fringed Myotis
- Cave Myotis
- Yuma Myotis
- Western Mastiff Bat
- Pocketed Free-Tailed Bat
- Big Free-Tailed Bat
- Los Angeles Pocket Mouse
- San Diego Pocket Mouse
- Palm Springs Pocket Mouse
- Pallid San Diego Pocket Mouse
- American Badger
- Yuma Mountain Lion
- Nelson's Bighorn Sheep

Disturbance to habitat would be similar to that described for the listed species. Construction activities would result in the removal of habitat that could support populations of these species. The loss of this habitat could affect foraging opportunities for small rodents, bats, and the Yuma mountain lion. However, many of these species are wide ranging and forage across a large geographic area. The habitat along the length of this alternative, from the I-10 south of the Keim Substation to the Midpoint Substation, and at the locations of the Midpoint Substation and Dillon Road Substation is considered suitable habitat for these species, although these species have not been observed during surveys of the site.

Construction-related impacts to bat species could potentially occur in the hilly regions of the Chuckwalla Mountains. No roosting or hibernacula sites have been identified in this area and construction would be limited to daylight hours. Pallid bats, which forage exclusively on the ground, could be impacted by night time travel on the existing access roads. These species are also very susceptible to disturbance and even hiking can result in the abandonment of roosts (Pierson and Brown, 1992). The permanent and temporary loss of habitat and potentially the loss of individuals would be considered a significant impact (Class II). Mitigation Measure B-9h (Conduct pre-construction surveys for roosting bats) would be implemented to reduce impacts to a less than significant level. Impacts to American badger and bighorn sheep are addressed in Section D.2.6.1.8

Construction of this alternative would also directly impact suitable habitat for the Coachella Valley round-tailed ground squirrel, a State species of special concern. This species is known to occur in the vicinity of near Dillon Road and northwest of Indio. Other populations are scattered around the Coachella Valley. Suitable habitat occurs in the ROW from a point near Dillon Road, north of the town of Coachella, and west to the Devers Substation. Construction activities would potentially result in permanent removal of suitable habitat for this species. In addition, temporary removal of potentially suitable habitat will also occur at the construction areas around each of the towers, the laydown/staging areas, and along temporary access/spur roads. Indirect impacts to this species may occur from the presence of humans and construction vehicles and equipment and from the increased level of traffic on the access roads. APM B-25 addresses the avoidance of mesquite hummock habitat for the purpose of benefiting the Coachella Valley round-tailed squirrel. If the species is present, temporary and permanent impacts to habitat for the Coachella Valley round-tailed squirrel would be considered significant (Class II). In addition to the APMs proposed by SCE, Mitigation Measures B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce impacts to the Coachella Valley round-tailed squirrel to less than significant levels.

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9a **Conduct pre-construction surveys.**

B-9b **Conduct biological monitoring.**

B-9d **Conduct pre-construction reptile surveys.**

B-9e **Conduct pre-construction surveys and owl relocation.**

B-9h **Conduct pre-construction surveys for roosting bats.**

B-9i **Schedule construction when the Coachella Valley round-tailed squirrel is dormant.**

State and Federal Jurisdictional Habitats

Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are located along the length of the Desert Southwest Transmission Line Alternative. In addition, jurisdictional drainages and intermittent creeks were noted throughout the western portion of the Proposed Project. Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian

Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts to jurisdictional waters and wetlands would be reduced to less than significant levels with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan

Wildlife Corridors and Nursery Sites

Impact B-11: The alternative would adversely affect the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The majority of the drainages located along the Desert Southwest Transmission Project Alternative consist of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events. Subsequently, most of the washes do not contain perennial flows and are not expected to support fish and other species that are dependent on permanent water sources. There are no known native wildlife nursery sites along the route of this alternative. Therefore, no impacts would be expected to the movement of fish and other species that are dependent upon water sources and no are expected to native wildlife nursery sites.

Impact B-12: The alternative would adversely affect linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of this alternative is not expected to impact any linkages or wildlife movement corridors between the Keim Substation and Devers Substation because no major linkages or corridors are present.

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (No Impact)

The Desert Southwest Transmission Line Alternative, as an individual section of the project, would traverse BLM land, the City of Blythe, and portions of unincorporated Riverside County. Plans developed by these jurisdictions, including the CDCA Plan, City of Blythe General Plan, Riverside County Comprehensive General Plan, and several Riverside County Area Plans, were assessed to determine if any biological resources policies would apply to the construction and operation of this alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. Table D.2-12 in Section D.6.2.1.11 discusses those policies from the aforementioned plans that required further analysis. The Desert Southwest Transmission Project Alternative would not conflict with any of these policies.

Operational Impacts

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Impacts to birds would be the same as described for the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV; as such "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in line collisions by listed bird species (Class II)

Bird collisions would be similar to the Proposed Project. It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest, such as along waterways or over adjacent agricultural areas like those in the Palo Verde Valley. The operation of the Desert Southwest Transmission Project Alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the transmission facilities associated with the Desert Southwest Transmission Project Alternative will result in an increase in potential nesting sites for common ravens. APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~Migratory Birds to "take" common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant if the various companies do not check the towers and remove nests on a regular basis and if the various companies remove other nests that are actively utilized by other raptors. An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the Desert Southwest Transmission Project Alternative will require regular maintenance of the various facilities associated with the alternative. Maintenance activities require the use of access and spur roads by vehicles and equipment. SCE has indicated that vehicle speeds would be limited to a maximum of 25 mph in desert tortoise habitat (APM B-29). The implementation of this APM, and the approximate same level of use of the roads as currently exists for operation and maintenance activities, will result in a similar impact to what currently exists. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse, but less than significant (Class III).

D.2.7.5 Alligator Rock–North of Desert Center Alternative

Environmental Setting

Regional Setting. The regional setting for this alternative would be the same as that described for the Proposed Project in Section D.2.2.7 Cactus City Rest Area to Devers Substation.

Vegetation Communities and Wildlife. The Alligator Rock–North of Desert Center Alternative is 1.2 miles longer than the proposed route, which would increase the length and intensity of short-term construction impacts and ground disturbance to native plant communities and wildlife. This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor.

In general, the vegetation communities across this alternative are the same as those described in the Vegetation Overview (Section D.2.1.1.1) and in the descriptions for the Proposed Project segments from Midpoint Substation to Cactus City Rest Area (Section D.2.2.6). The vegetation east of Alligator Rock, east of the developed and disturbed areas associated with Desert Center, and north of the I-10 and west of Desert Center consists of consists of Sonoran creosote bush scrub and dry desert wash woodland. The presence of Desert Center and the numerous roads that provide access into the undeveloped areas around Desert Center and along the north side of the I-10 (Ragsdale Road) has resulted in a degradation of the vegetation communities in and around Desert Center and in areas adjacent to the north side of I-10. The native vegetation communities in these areas exhibit a higher level of damage from off-highway vehicle use and trash dumping and a higher density of non-native plant species.

The wildlife species documented within the ROW for this alternative are similar to those described in Section D.2.1.1.2 for the Proposed Project and Section 2.7.4 for the Desert Southwest Transmission Line Alternative. However, the high level of disturbance (related to off-highway vehicle use, trash dumping, and the presence of roads) in the wildlife habitats around Desert Center and along the north side of the I-10 freeway would be expected to reduce the density and diversity of wildlife species below what would be present in undisturbed habitat areas located further from developed areas.

Special Status Plant and Wildlife Species. Focused sensitive plant surveys have not been conducted in the ROW for this alternative, but the potential for special status plant species to occur in the native vegetation communities located within and adjacent to the ROW for this alternative is the same as what was described for the Midpoint Substation to Cactus City Rest Area segment of the Proposed Project (Section 2.2.6). No listed plant species have been observed or would be expected to occur along this alternative. However, one sensitive plant species, the foxtail cactus, has been observed south of I-10 near Alligator Rock during surveys of the Proposed Project alignment conducted in 2003 and 2005 (Environmental Planning Group, 2003 and 2005). This species is known to occur from near Alligator Rock (MM E155) west to near Red Cloud Mine Road (approximately MM E163). It was also observed between where the ROW crosses the I-10 freeway east of Cactus City Rest Area near MM E186 and the Cactus City Rest Area MM E188.2. Potential habitat for 11 other sensitive plant species is present in the Sonoran desert scrub and desert wash scrub located east of Alligator Rock and in the areas located north of I-10 around Desert Center. Some of the species include desert spike-moss, Cove's cassia, Abram's spurge, Spearleaf, Latimer's woodland gilia, and Mecca aster.

Focused protocol surveys for desert tortoise have not been conducted along this alternative where it diverges from the Proposed Project alignment and proceeds north around the Desert Center and proceeds along the north side of the I-10. Because the wildlife habitat in the undeveloped and undisturbed portions of this alternative is contiguous with other areas that do support desert tortoise, this listed species would be expected to occur. No other listed species of wildlife would be expected to occur north of Desert Center because suitable habitat is not present or because the area does not fall within the range of any other listed wildlife. One Federal Candidate, the Coachella Valley round-tailed squirrel, is known to occur just west of Cactus City Rest Area and potentially occurs in the western portion of this alternative. Three other sensitive species, Le Conte's Thrasher, loggerhead shrike, and prairie falcon have been observed south of the I-10 near Alligator Rock and would be expected to occur in the areas north of the I-10 and Desert Center. The following 19 sensitive wildlife species also have a potential to occur because either suitable habitat is present or the species has been observed in the vicinity of this alternative.

- Mojave fringe-toed lizard
- Colorado Desert fringe-toed lizard
- rosy boa
- flat-tailed horned lizard
- ferruginous hawk
- Bendire's thrasher
- Crissal thrasher
- mountain plover
- pallid bat
- western mastiff bat
- pocketed free-tailed bat
- California leaf-nosed bat
- Townsend's big-eared bat
- spotted bat
- Arizona myotis
- fringed myotis
- cave myotis
- big free-tailed bat
- American badger

However, this area is considered a potential "sink" as previously described for the Desert Southwest Transmission Line Alternative, and because the habitats located in the area close to the I-10 and Desert Center are somewhat disturbed, the density of desert tortoise and other sensitive wildlife species would be expected to be lower.

This alternative would not be located within the Chuckwalla DWMA ACEC from where the alternative crosses north of I-10 on the east side of Desert Center, to approximately one mile west of Desert Center. In the areas where this alternative does cross the Chuckwalla DWMA ACEC, the description of the locations of the DWMA would be similar to what was described for the Proposed Project (Sections D.2.1.1.4). In addition, this alternative would traverse through designated Critical Habitat for the desert tortoise in the areas east and west of Desert Center. Critical Habitat does not include the areas north of I-10, which are located approximately one mile east and one mile west of Desert Center.

Impacts and Mitigation Measures – Vegetation

The types of construction impacts that would occur with this alternative would be the same as those described for the Proposed Action in Section D.2.6.1.

Construction Impacts

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The Alligator Rock–North of Desert Center Alternative would remove Sonoran desert scrub and may potentially remove dry desert wash woodland vegetation at the tower locations between where this alternative diverges from the Proposed Project alignment east of Alligator Rock to where it again converges east of Desert Center. As stated for Impact B-1 in Section 2.6.1.1, the vegetation will be permanently removed at the locations of the tower footings. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance. Because this alternative is 1.2 miles longer than the alignment of the Proposed Project around Alligator Rock, and because this alternative would require the construction of new access roads, this alternative will potentially remove more native vegetation that the Proposed Project. However, due to the higher level of human disturbance north of Desert Center and north of the I-10, the quality of the habitat that would be removed as a result of this alternative less than the habitat along the alignment of the Proposed Project around Alligator Rock. The permanent loss and temporary disturbance of Sonoran desert scrub and dry desert wash woodland resulting from the construction of this alternative would result in significant impacts to native vegetation communities. Loss of Sonoran desert scrub habitat would be considered a significant impact (Class II). Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) would be implemented by the SCE to reduce impacts to less than significant levels.

Mitigation Measure for Impact B-1: Construction activities would permanently remove native vegetation

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction invasive non-native or noxious plant species (Class II)

Construction impacts along the entire length of this alternative would be the same as described in Section D.2.6.5.1. To reduce the potential for the introduction of invasive non-native or noxious weeds, SCE would implement APM B-2 (Standard Noxious Weed BMPs) and B-11, which would require hand clearing of vegetation in certain areas located along the ROW. This APM would facilitate the maintenance of existing root systems which may help to stabilize the soils against erosion and assist in the restoration of these areas if the plants resprout at the conclusion of project activities. SCE would also implement APM B-19, which would require the restoration of disturbed areas at the conclusion of construction. However, SCE has not indicated which areas would be subject to hand clearing or restoration at this time. The introduction of non-native plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-2a **Conduct invasive and noxious weed inventory.**

B-2b **Implement control measures for invasive and noxious weeds.**

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. Increased levels of dust on the leaves of plants can decrease the photosynthetic capabilities of the plants. SCE would implement Title 1 measures (Air Quality) to decrease fugitive dust including reduced vehicle speeds, use of tackifiers, and periodic watering of the ROW. Watering will be done in such a way as to prevent pooling of water on the soil surface so that toad species would not be stimulated to emerge from their subsoil aestivation burrows prior to natural rain events. With the implementation of Title 1 rules the potential impacts of increased dust settling on plants is expected to be adverse but not significant (Class III).

Impacts and Mitigation Measures – Wildlife

Direct impacts on wildlife would be similar to those described in Section D.2.6.1.4.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

The direct loss of small mammals, reptiles, and other less mobile species would likely occur in the undeveloped areas along the length of this alternative. The loss of vegetation would also result in the temporary loss of breeding and foraging habitat for wildlife. Impacts from vehicle traffic and construction-related activities are the same as described in Section 2.6.1.4.

Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on common wildlife from construction would generate potentially adverse but not significant impacts (Class III).

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described in Section 2.6.1.5 ground-disturbing activity, including tower pad preparation and construction and grading of new access roads has the potential to disturb vegetation utilized by nesting birds. The removal of habitat during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Impacts would be potentially significant, but would be reduced to less than significant levels (Class II) with implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

Impacts and Mitigation Measures – Threatened or Endangered Plant or Wildlife Species

Construction impacts for threatened and endangered species would be same as described for vegetation and wildlife in Section D.2.6.1.6.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class III)

The loss of individuals or known habitats of threatened, or endangered plant species would be considered a significant impact without mitigation. No State or federally listed, endangered, or threatened plant species have been identified as occurring within this alternative and none are expected to occur. This alternative alignment either does not contain suitable habitat for any other listed plants or it is located outside the geographical range for any of the listed plant species that were identified as having a high or moderate potential to occur in Table D.2-4. These species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Implementation of APM B-8 (Pre-construction Surveys for Rare Plants) would minimize potential impacts to listed plants (Class III).

Threatened or Endangered Wildlife

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

The Alligator Rock–North of Desert Center Alternative contains Sonoran desert scrub habitat that is likely to support desert tortoise, a federal and State threatened species. Even though focused protocol surveys have not been conducted for this species in areas north of Desert Center, this species likely occurs in the native habitats that occur along this alternative route. In addition, this alternative also contains desert scrub, desert wash, and succulent desert scrub habitats that could potentially support the Coachella Valley round-tailed ground squirrel, a Federal Candidate for listing. Impacts to round-tailed squirrel are discussed under sensitive wildlife. As described in Section 2.7.5, with the exception of the desert tortoise and Coachella Valley round-tailed ground squirrel, no other listed or candidate wildlife specie were identified with the potential to occur along the route of this alternative.

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. No listed amphibian species have a potential to occur along the alignment for this alternative. This portion of the Project does not fall within the range nor does it support the appropriate habitat requirements of any listed amphibian species that were determined to have a high or moderate potential to occur. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed.

Reptiles. Construction activities conducted in this alternative could result in impacts to populations of desert tortoise. This segment is located in Sonoran desert scrub habitat that is within the known geographic range of this species. This area encompasses a section of the route near Alligator Rock (approximately MM E155) that traverses near the foothills of the Chuckwalla Mountains. Desert scrub and dry desert wash habitats located east of MM E133 are considered potential habitat for tortoise even though this species was not observed during previous surveys.

This alternative is 1.2 miles longer than the Proposed Project. The alignment around Alligator Rock would require the construction of access roads associated with placement of a new transmission line through relatively disturbed desert scrub habitat in areas or low tortoise densities. Construction of this alterna-

tive may impact more tortoise habitat than the Proposed Project alignment; however, the overall quality of the habitat is poor. Notwithstanding that fact the take of desert tortoises whether it results from direct or indirect impacts would be considered a significant impact (Class II).

Construction of this alternative would also impact designated critical habitat for the desert tortoise. The ROW would pass through designated critical habitat from where it diverges from the Proposed Project alignment east of Alligator Rock to where it again converges east of Desert Center. Construction of this alternative would result in a reduction of potential impacts to designated Critical Habitat when compared to the Proposed Project. Impacts to designated critical habitat would be similar to that described for the Proposed Project.

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to desert tortoise would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

Birds. Listed bird species have not been documented in this segment. Construction activities associated with the Proposed Project are not expected top result in impacts to these species (Class III).

Mammals. There is no indication that listed mammal species occur in this alternative. The Palm Springs round-tailed ground squirrel, a Federal Candidate for listing is likely to occur. Impacts to round-tailed squirrel are discussed under sensitive wildlife.

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class II)

Plants. Habitat in the Alligator Rock–North of Desert Center Alternative supports several sensitive plant species including foxtail cactus a federal species of special concern and four CNPS List 1B plants including Harwood's milkvetch, Orocopia sage, Latimer's woodland gilia, and Mecca aster. Construction of this segment could result in direct impacts to both Harwood's milkvetch and foxtail cactus. Harwood's milkvetch occurs between the Midpoint Substation and MM E119. Populations of foxtail cactus have been documented to occur from Alligator Rock (MM E155) west to Red Cloud Mine Road (MM approximately MM E163) and between MM E186, near the I-10 crossing, and Cactus City Rest Area (MM E188.2).

Several other plants considered rare or unique by the CNPS (List 2-4) also occur in this area and may be subject to disturbance from construction activities. Some of these species include desert sand parsley, ayenia, crucifixion thorn, glandular ditaxis, and California ditaxis. Desert spike-moss and Cove's cassia may also be present. Construction of towers and access/spur roads would result in the permanent loss of habitat for these sensitive species and may result in a loss of individual plants. Establishment of staging or laydown areas would also result in temporary impacts to habitat for rare plants.

Because the length of this alternative is longer than the alignment for the Proposed Project, impacts to sensitive plant species may be greater than the Proposed Project. However, the disturbed nature of the vegetation communities near Desert Center and along the north side of I-10 may have a lower potential for these species to occur along the alignment. If present, impacts to these sensitive plant species would be considered significant (Class II).

As described in Section D.2.6.1.7 to reduce potential impacts to sensitive plants SCE would implement APM B-8 (Pre-construction Surveys) and APM B-9 (Transplant Sensitive Cactus) which provides for detailed surveys of tower locations prior to construction. If sensitive plant species are located at the site, SCE has indicated that tower locations would be adjusted to reduce impacts. In order to reduce potential impacts to a less than significant level, Mitigation Measure B-8a (Conduct surveys for listed plant species) would be implemented.

Mitigation Measure for Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plant species

B-8a **Conduct surveys for listed plant species.**

Wildlife

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Construction of the Alligator Rock–North of Desert Center Alternative is not expected to result in any impacts to sensitive invertebrate species. There is no indication that any sensitive invertebrates occur in this alternative. Two listed species of fairy shrimp, Riverside fairy shrimp and vernal pool fairy shrimp, are known to occur in southwestern Riverside County but have not been documented in this section of northwestern Riverside County.

Fish. There is no indication that any rare or listed fish species occur in this alternative. Surveys conducted of the Project area did not detect the presence of listed fish species in this segment and impacts would be considered less than significant (Class III).

Amphibians. There is no indication that any listed amphibians occur in this alternative. Surveys conducted of the Project area did not detect the presence of listed Amphibians species in this segment and impacts would be considered less than significant (Class III).

Reptiles. Construction of this segment of the Alligator Rock–North of Desert Center Alternative would remove habitat for Mojave fringe-toed lizard and Colorado Desert fringe-toed lizard. These species are known to occur in this segment and may be subject to mortality from project activities. Flat-tailed horned lizard, the northern red-diamond rattlesnake, and rosy boa may also occur in this area. Implementation of APMs and Mitigation Measures B-9b (Conduct biological monitoring) and B-9d (Conduct pre-construction reptile surveys) would reduce potential impacts to sensitive reptiles to less than significant levels (Class II).

Birds. Three sensitive bird species Le Conte's thrasher, loggerhead shrike, and prairie falcon are known to occur within this alternative. In addition, ferruginous hawk, Bendire's thrasher, and Crissal thrasher have a high potential to occur in this segment. Mountain plover and vermillion flycatcher may also be present but due to habitat conditions in this segment have only a moderate potential to occur. As described in Section 2.6.1.8, the Proposed Project could cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat, potential bird strikes on high tension wires, and disturbance of nesting activities.

Substantial impacts to foraging habitat for the ferruginous hawk would not occur as this is a wide ranging species. Impacts to other birds from displacement or noise would be reduced through APM B-22. This APM is designed to minimize impacts to Crissal thrasher and Le Conte's thrasher and their habitat by avoiding mesquite dominated areas and creosote bush scrub. In order to reduce potential impacts to a less than significant level (Class II), Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would also be implemented.

Mammals. As discussed in Section D.2.2.6 there are a variety of sensitive mammal species that may occur in the vicinity of the Midpoint Station to Cactus City Rest Area segment. Of primary concern in this segment is the potential impact to roosting bat species. Construction activities may have an impact on the three sensitive bat species that have a high potential to occur in this area including pallid bat, western mastiff bat, and pocketed free-tailed bat. Seven other species of bat California leaf-nosed bat, Townsend's big-eared bat, spotted bat, Arizona myotis, fringed myotis, cave myotis, and big free-tailed bat have a moderate potential to occur along this segment. Mitigation Measure B-9h (Conduct pre-construction surveys for roosting bats) would be implemented to reduce potential impacts to a less than significant level.

Construction of this alternative may directly impact suitable habitat for the Palm Springs round-tailed ground squirrel as a result of permanent and temporary removal of habitat. This species is known to occur west of Cactus City Rest Area. Impacts to this species are described in Section D.2.2.6 (Midpoint Substation to Cactus City Rest Area). If present, temporary and permanent impacts to habitat for the Coachella Valley round-tailed squirrel would be considered significant (Class II). In addition to the APMs proposed by SCE, Mitigation Measures B-9i (Schedule construction when the Coachella Valley round-tailed squirrel is dormant) would reduce impacts to the Coachella Valley round-tailed squirrel to less than significant levels.

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9b **Conduct biological monitoring.**

B-9d **Conduct pre-construction reptile surveys.**

B-9h **Conduct pre-construction surveys for roosting bats.**

B-9i **Schedule construction when the Coachella Valley round-tailed squirrel is dormant.**

State and Federal Jurisdictional Habitats

Impact B-10: Adverse effects to Jurisdictional Waters and Wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are located along the length of the Alligator Rock–North of Desert Center Alternative. In addition, construction crews would avoid impacting the streambeds and banks of any streams along the

route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts to jurisdictional waters and wetlands would be reduced to less than significant levels with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Wildlife Corridors and Nursery Sites

Impact B-11: The alternative would adversely affect the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The drainages along the route of this alternative consist of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events. Subsequently, most of the washes do not contain perennial flows and are not expected to support fish and other species that are dependent on permanent water sources. There are no known native wildlife nursery sites along the route of this alternative. Therefore, no impacts would be expected to the movement of fish and other species that are dependent upon water sources and no are expected to native wildlife nursery sites.

Impact B-12: The alternative would adversely affect linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of this alternative is not expected to impact any linkages or wildlife movement corridors in the areas east, north, or west of Desert Center because no major linkages or corridors are present.

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (No Impact)

The Alligator Rock–North of Desert Center Alternative, as an individual section of the project, would traverse BLM land and unincorporated Riverside County. Plans developed by this jurisdiction, including the CDCA Plan, Riverside County Comprehensive General Plan, and the Riverside County Desert Center Area Plan, were assessed to determine if any biological resources policies would apply to the construction and operation of this alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. Table D.2-13 in Section D.6.2.1.11 discusses those policies from the aforementioned plans that required further analysis. The Alligator Rock–North of Desert Center Alternative would not conflict with any of these policies.

Operational Impacts

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Potential impacts to birds from electrocution are discussed in Section D.2.6.2 and would be the same as the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV and "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in line collisions by listed bird species (Class II)

Bird collisions in this segment would be similar to the Proposed Project. It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest. The operation of the alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the transmission facilities associated with the alternative will result in an increase in potential nesting sites for common ravens. APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~Migratory Birds to "take" common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant if the various companies do not check the towers and remove nests on a regular basis and if the various companies remove other nests that are actively utilized by other raptors. An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the Alligator Rock–North of Desert Center Alternative would require regular maintenance of the various facilities associated with the project. Potential impacts from vehicle travel are discussed in Section D.2.6.2 and would be the same as the Proposed Project. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse but not significant (Class III).

D.2.7.6 Alligator Rock–Blythe Energy Transmission Alternative

Environmental Setting

Regional Setting. The regional setting for the Blythe Energy Transmission Alternative around Alligator Rock is the same as that described for the Proposed Project in Section D.2.1.

General Vegetation and Wildlife. The Alligator Rock–Blythe Energy Transmission Alternative would be 0.65 miles longer than proposed route, which would slightly increase the length and intensity of short-term construction impacts and ground disturbance. The vegetation community within the ROW for this alternative consists primarily of Sonoran creosote bush scrub and dry desert wash woodland as described in vegetation overview in the Environmental Setting for the Proposed Project (Section D.2.2) and for the Desert Southwest Transmission Project Alternative (Section D.7.4). The disturbance level of the vegetation near Alligator Rock and along the south side of I-10 is the same as that described for the Desert Southwest Transmission Project Alternative (Section D.7.4).

The wildlife species documented within the ROW for this alternative are the same as those described in the Environmental Setting (Section D.2.2) for the Proposed Project and for the Desert Southwest Transmission Project Alternative (Section D.7.4). The disturbance level in the vegetation communities and wildlife habitats in the areas nearest to the I-10, north of Alligator Rock and along the existing access roads is the same as previously described. However, the vegetation communities and wildlife habitat along the portion of the Blythe Energy Alternative that turns southwest towards the Proposed DPV2 line exhibits less disturbance as it approaches the proposed DPV2 location. This is a result of less human disturbance related to off-highway vehicle use and trash dumping. The abundance and diversity of wildlife would be expected to increase nearer to the Proposed DPV2 Alternative.

Special Status Plant and Wildlife Species. The potential for special status plant species to occur along the route of this alternative near Alligator Rock is the same as what was described for the Proposed Project in Section D.2.1.1.3. Populations of foxtail cactus have been documented to occur from Alligator Rock (MM E155) west to Red Cloud Mine Road (MM approximately MM E163) and between MM E186, near the I-10 crossing, and Cactus City Rest Area (MM E188.2) (Environmental Planning Group, 2003 and 2005). This species potentially occurs along the alignment of the Blythe Energy Alternative. Several other plants considered rare or unique by the CNPS also occur in this area and may be subject to disturbance from construction activities. Some of these species include desert sand parsley, ayenia, crucifixion thorn, glandular ditaxis, and California ditaxis. Desert spike-moss and Cove's cassia may also be present. Latimer's woodland gilia, and Mecca-aster, CNPS List 1B plants are present in the areas north of Alligator Rock and south of I-10 between Alligator rock and Cactus City Rest Area.

Similarly, the potential for sensitive wildlife species to occur would be the same as previously described for the Proposed Project in Section D.2.1.1.3 and for the Desert Southwest Transmission Line Alternative. The density of desert tortoise and other sensitive wildlife species would be expected to be lower in the areas north of Alligator Rock and along the south side of I-10 due to human caused disturbances and introduction of non-native plant species into the habitats. However, the density of desert tortoise and other sensitive wildlife species increases as the line proceeds south towards the junction with the Proposed DPV2 line. This is likely due to the fact that the habitat becomes more diverse and the level of disturbance is less in areas that lie further south of the I-10.

This alternative would also cross the Chuckwalla DWMA ACEC in the same or very similar location that was described for the Proposed Project (Section D.2.1.1.4). In addition, this alternative would traverse through the same portion of designated Critical Habitat for desert tortoise that was described for the Proposed Project (Sections D.2.1.1.4).

Impacts and Mitigation Measures – Vegetation

The types of construction impacts that would occur with this alternative would be the same as those described for the Proposed Action in Section D.2.6.1.

Construction Impacts

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The Alligator Rock–North of Desert Center Alternative would remove Sonoran desert scrub and may potentially remove dry desert wash woodland vegetation at the tower locations between where this alternative diverges from the Proposed Project alignment east of Alligator Rock to where it again converges with the Proposed ROW east of Desert Center. As stated for Impact B-1 in Section 2.6.1.1, the vegetation will be permanently removed at the locations of the tower footings. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance. Because this alternative is 0.65 miles longer than the alignment of the Proposed Project around Alligator Rock, and because this alternative would require the construction of new access roads, this alternative will potentially remove more native vegetation that the Proposed Project. However, due to the higher level of human disturbance north of Alligator Rock and south of the I-10, the quality of the habitat that would be removed as a result of this alternative is generally poorer than the habitat along the alignment of the Proposed Project around Alligator Rock. The permanent loss and temporary disturbance of Sonoran desert scrub and dry desert wash woodland resulting from the construction of this alternative would result in significant impacts to native vegetation communities. Loss of Sonoran desert scrub habitat would be considered a significant impact (Class II). Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) would be implemented by the SCE to reduce impacts to less than significant levels.

Mitigation Measure for Impact B-1: Construction activities would permanently remove native vegetation

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species (Class II)

Construction impacts along the entire length of this alternative would be the same as described in Section (D.2.6.1.2). To reduce the potential for the introduction of invasive or noxious weeds, SCE would implement APM B-2 (Standard Noxious Weed BMPs) and B-11, which would require hand clearing of vegetation in certain areas located along the ROW. This APM would facilitate the maintenance of existing root systems which may help to stabilize the soils against erosion and assist in the restoration of these areas if the plants resprout at the conclusion of project activities. SCE would also implement APM B-19, which would require the restoration of disturbed areas at the conclusion of construction. However, SCE has not indicated which areas would be subject to hand clearing or restoration at this time. The introduction of non-native plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-2a **Conduct invasive and noxious weed inventory.**

B-2b **Implement control measures for invasive and noxious weeds.**

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. Increased levels of dust on the leaves of plants can decrease the photosynthetic capabilities of the plants. SCE would implement Title 1 measures (Air Quality) to decrease fugitive dust including reduced vehicle speeds, use of tackifiers, and periodic watering of the ROW. Watering will be done in such a way as to prevent pooling of water on the soil surface so that toad species would not be stimulated to emerge from their subsoil aestivation burrows prior to natural rain events. With the implementation of Title 1 rules the potential impacts of increased dust settling on plants is expected to be adverse but not significant (Class III).

Wildlife

Direct impacts on wildlife would be similar to those described in Section D.2.6.4.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

The direct loss of small mammals, reptiles, and other less mobile species would likely occur in the undeveloped areas along the length of this alternative. The loss of vegetation would also result in the temporary loss of breeding and foraging habitat for wildlife. Impacts from vehicle traffic and construction-related activities are the same as described in Section 2.6.1.4

Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on common wildlife from construction would generate potentially adverse but not significant impacts (Class III).

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described in Section 2.6.1.5 ground-disturbing activity, including tower pad preparation and construction and grading of new access roads has the potential to disturb vegetation utilized by nesting birds. The removal of habitat during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Impacts would be potentially significant, but would be reduced to less than significant levels (Class II) with implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a Conduct pre-construction surveys and monitoring for breeding birds.

Impacts and Mitigation Measures – Threatened or Endangered Plant or Wildlife Species

Construction impacts for threatened and endangered species would be same as described for vegetation and wildlife in Section D.2.6.1.6

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class III)

The loss of individuals or known habitats of threatened, or endangered plant species would be considered a significant impact without mitigation. No State or federally listed, endangered, or threatened plant species have been identified as occurring within this alternative and none are expected to occur. This alternative alignment either does not contain suitable habitat for any other listed plants or it is located outside the geographical range for any of the listed plant species that were identified as having a high or moderate potential to occur in Table D.2-4. These species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Implementation of APM B-8 (Pre-construction Surveys for Rare Plants) would minimize potential impacts to listed plants (Class III).

Threatened or Endangered Wildlife

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

The Alligator Rock–Blythe Energy Alternative contains Sonoran desert scrub habitat where a known population of desert tortoise occurs. As described in the Environmental Setting of Section D.2.7.6, with the exception of the desert tortoise and possibly the Palm Springs round-tailed ground squirrel, no other listed or candidate wildlife species were identified with the potential to occur along the route of this alternative.

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. No listed amphibian species have a potential to occur along the alignment for this alternative. This portion of the Project does not fall within the range nor does it support the appropriate habitat requirements of any listed amphibian species that were determined to have a high or moderate potential to occur. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed.

Reptiles. Construction of Blythe Energy Alternative around Alligator Rock would impact Sonoran desert scrub habitat that is known to support desert tortoises. Occupied habitat occurs south of I-10 and tortoises and tortoise sign have been documented along the Blythe Energy alignment. The density of tortoises in the areas nearest to the I-10 and north of Alligator Rock appear to be less than those found along the Proposed Project alignment because less tortoise sign was found. Direct impacts from the activities associated with transmission line and access road construction include permanent and temporary removal of occupied and potential habitat, displacement of tortoises from portions of home ranges, removal of foraging habitat, damage to burrows, and mortality of tortoises. Indirect impacts that may result include degradation of habitat in areas adjacent to occupied habitat (introduction of non-native plant species and increased wind/water erosion) and harassment of tortoises resulting from increased presence of humans and vehicle/equipment. Even though the Blythe Energy Alternative is longer than the Proposed Project in the Alligator Rock area, the impacts to desert tortoise would be expected to be less because of the presence of poorer quality habitat in the areas nearer to the I-10 and north of Alligator Rock. In addition, the amount of tortoise sign found along this alternative was less than along the Proposed Project alignment. This alternative may impact more habitat, but lower-quality habitat, than the Proposed Project alignment. The take of desert tortoises, whether it results from direct or indirect impacts, would be considered a significant impact (Class II).

Construction of this alternative would impact designated critical habitat for the desert tortoise. The ROW would pass through designated critical habitat along its entire length. This alternative will impact slightly more designated Critical Habitat because it is 0.65 miles longer than the Proposed Project. Physical impacts to designated critical habitat would be the same as those described for the Alligator Rock–North of Desert Center Alternative (Section D.2.7.5). APM B-19 would provide some restoration of areas within designated critical habitat following the completion of construction but this measure would not fully mitigate for modifications to designated critical habitat. The impacts resulting from the construction of this alternative would result in significant impacts on designated critical habitat for the desert tortoise (Class II).

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to desert tortoise would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

Birds. Listed bird species have not been documented in this segment. Construction activities associated with the Proposed Project are not expected top result in impacts to these species (Class III).

Mammals. There is no indication that listed mammal species occur in this alternative. The Coachella Valley round-tailed ground squirrel, a Federal Candidate for listing is likely to occur. Impacts to round-tailed squirrel are discussed under sensitive wildlife.

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class II)

Plants. Construction of the Alligator Rock–Blythe Energy Alternative would permanently remove suitable habitat for foxtail cactus and may result in the removal of individuals of this species. Foxtail cactus has been documented south of the I-10, in the alignment of the Proposed Project. Permanent removal of the vegetation at the locations of the tower footings and along he access and spur roads will occur. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance. Construction of this alternative will also impact potential habitat for 22 other sensitive plant species (partial list below) that may occur along the alignment of this alternative (refer to Table D.2-4 for specific details).

- Ayenia
- crucifixion thorn
- glandular ditaxis
- California ditaxis
- Orocopia sage
- desert spike-moss
- Cove's cassia
- Abram's spurge
- Spearleaf
- Latimer's woodland gilia
- Mecca aster

Because the length of this alternative is slightly longer than the Alligator Rock alignment for the Proposed Project, the impacts to sensitive plant species may be greater than the Proposed Project. However, the disturbed nature of the vegetation communities along the south side of the I-10 and north of Alligator Rock may lower the potential that these species occur along the alignment. If present, impacts to these sensitive plant species would be considered significant (Class II).

As described in Section D.2.6.1.7 to reduce potential impacts to sensitive plants SCE would implement APM B-8 (Pre-construction Surveys) and APM B-9 (Transplant Sensitive Cactus) which provides for detailed surveys of tower locations prior to construction. If sensitive plant species are located at the site, SCE has indicated that tower locations would be adjusted to reduce impacts. In order to reduce potential impacts to a less than significant level, Mitigation Measure B-8a (Conduct surveys for listed plant species) would be implemented.

Mitigation Measure for Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plant species

B-8a Conduct surveys for listed plant species.

Wildlife

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Construction of the Alligator Rock–North of Desert Center Alternative is not expected to result in any impacts to sensitive invertebrate species because suitable habitat for sensitive invertebrates is not present along the alignment (See Table D.2-5 in the Environmental Setting for details).

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. This alternative does not contain suitable habitat for sensitive amphibians and the area does support populations of sensitive amphibians. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed.

Reptiles. Construction of the Blythe Energy Alternative would result in potential impacts to flat-tailed horned lizard and rosy boa, two sensitive reptiles that may potentially occur in the desert scrub habitat located along this alternative alignment. This impact would be slightly different than the impacts of the Proposed Project because of the slight increase in length (0.65 miles) but the habitat quality in the area along the south side of the I-10 and along the north side of Alligator Rock is less than along the Proposed Project alignment. No other sensitive reptile species that were determined to have a potential to occur along the alignment of the Proposed Project (Table D.2-5 in the Environmental Setting) would be expected to occur along this alternative because of lack of suitable habitat or because this alternative lies outside of the range of these species. The temporary and permanent loss of habitat and potentially the loss of individuals of the sensitive reptile species would be considered a significant impact (Class II). Implementation of APMs and Mitigation Measures B-9b (Conduct biological monitoring) and B-9d (Conduct pre-construction reptile surveys) would reduce potential impacts to sensitive reptiles to less than significant levels.

Birds. Construction of this alternative would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and disturbance related to construction activities. Construction activities and the increased presence of humans may result in direct or indirect impacts to sensitive birds that potentially occur in the vicinity. Construction of this alternative would result in the permanent and temporary removal of suitable desert scrub habitat where Le Conte's thrasher, Bendire's thrasher, mountain plover, loggerhead shrike, and ferruginous hawk (foraging habitat) may occur (See Table D.2-5 in the Environmental Setting for details). No other sensitive bird species are expected to be affected by this alternative due to lack of suitable habitat or the alternative is not within the range of other sensitive bird species. This temporary and permanent loss of potential habitat would be considered a significant impact (Class II). In order to reduce potential impacts to a less than significant level (Class II), Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would also be implemented.

Mammals. Construction of this alternative could result in potential impacts to or remove habitat for a variety of sensitive species including:

- pallid bat
- western mastiff bat
- pocketed free-tailed bat
- California leaf-nosed bat
- Townsend's big-eared bat
- spotted bat
- Arizona myotis
- fringed myotis
- cave myotis
- big free-tailed bat
- American badger

The potential impacts to these species would be similar to that described for the listed species. Construction activities would result in the removal of habitat that could support populations of these species. The loss of this habitat could affect foraging opportunities for small rodents and bats. Construction-related impacts to bat species could potentially occur in the hilly regions of the Chuckwalla Mountains. No roosting or hibernacula sites have been identified in this area and construction would be limited to daylight hours. Pallid bats could be impacted by night time travel on the existing access roads. The permanent and temporary loss of habitat and potentially the loss of individuals would be considered a significant impact (Class II). Mitigation Measure B-9h (Conduct pre-construction surveys for roosting bats) would be implemented to reduce potential impacts to a less than significant level.

Impacts to American badger are addressed in Section D.2.6.1.8.

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9b **Conduct biological monitoring.**

B-9d **Conduct pre-construction reptile surveys.**

B-9h **Conduct pre-construction surveys for roosting bats.**

State and Federal Jurisdictional Habitats

Impact B-10: Adverse effects to Jurisdictional Waters and Wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are located along the length of Alligator Rock–Blythe Energy Alternative around Alligator Rock. Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts to jurisdictional waters and wetlands would be reduced to less than significant levels with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Wildlife Corridors and Nursery Sites

Impact B-11: The alternative would adversely affect the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The drainages along the route of this alternative consist of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events. The washes do not contain perennial flows and are not expected to support fish and other species that are dependent on permanent water sources. There are no known native wildlife nursery sites along the route of this alternative. Therefore, no impacts would be expected to the movement of fish and other species that are dependent upon water sources and no are expected to native wildlife nursery sites.

Impact B-12: The alternative would adversely affect linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of this alternative is not expected to impact any linkages or wildlife movement corridors because no major linkages or corridors are present.

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (No Impact)

The Alligator Rock–Blythe Energy Transmission Project Alternative, as an individual section of the project, would traverse BLM land and unincorporated Riverside County. Plans developed by this jurisdiction, including the CDCA Plan, Riverside County Comprehensive General Plan, and the Riverside County Desert Center Area Plan, were assessed to determine if any biological resources policies would apply to the construction and operation of this alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. Table D.2-13 in Section D.6.2.1.11 discusses those policies from the aforementioned plans that required further analysis. The Alligator Rock–Blythe Energy Transmission Project Alternative would not conflict with any of these policies.

Operational Impacts

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Potential impacts to birds from electrocution are discussed in Section D.2.6.2 and would be the same as the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV and "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in line collisions by listed bird species (Class II)

Bird collisions with power lines generally occur when: (1) a power line or other aerial structure transects a daily flight path used by a concentration of birds, and (2) migrants are traveling at reduced altitudes and encounter tall structures in their path (Brown, 1993). Collision rates generally increase in low light conditions, during inclement weather, such as rain or snow, during strong winds, and during panic flushes when birds are startled by a disturbance or are fleeing from danger. Collisions are more probable near wetlands, valleys that are bisected by power lines, and within narrow passes where power lines run perpendicular to flight paths. Passerines (i.e., songbirds) and waterfowl (i.e., mallard ducks) are known to collide with wires (APLIC, 1994), particularly during nocturnal migrations or poor weather conditions (Avery et al., 1978). However, passerines and waterfowl have a lower potential for collisions than larger birds, such as raptors. Some behavioral factors contribute to a lower collision mortality rate for these birds. Passerines and waterfowl tend to fly under power lines, as opposed to larger species, which generally fly over the lines and risk colliding with the higher static lines, and many smaller birds tend to reduce their flight activity during poor weather conditions (Avery et al., 1978). It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest. The operation of the alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the transmission facilities associated with the alternative will result in an increase in potential nesting sites for common ravens. APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~Migratory Birds to "take" common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant if the various companies do not check the towers and remove nests on a regular basis and if the various companies remove other nests that are actively utilized by other raptors. An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the Alligator Rock–Blythe Energy Transmission Alternative would require regular maintenance of the various facilities associated with the project. Potential impacts from vehicle travel are discussed in Section D.2.6.2 and would be the same as the Proposed Project. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse but not significant (Class III).

D.2.7.7 Alligator Rock–South of I-10 Frontage Alternative

Environmental Setting

Regional Setting. The regional setting for the South of I-10 Frontage Alternative around Alligator Rock is the same as that described for the Proposed Project in Section D.2.2.1.

General Vegetation and Wildlife. This alternative route is the same as the route proposed for the Desert Southwest Transmission Project. The South of I-10 Frontage Alternative would diverge from the Proposed Project at MP 151, approximately 3.5 miles east of Desert Center and would follow the Alligator Rock–Blythe Energy Transmission Alternative route for 3.25 miles to the point at which the BEPTL Alternative turns southwest, just east of Alligator Rock. After passing between the northern end of Alligator Rock and the I-10 itself, this alternative would continue in a westerly direction, immediately south of I-10 and Aztec Avenue for 6.3 miles. It would rejoin the Proposed Project route at MP 160. The Alligator Rock–South of I-10 Frontage Alternative would be 9.77 miles long and the proposed route would be 9.2 miles long in the equivalent segment.

The Alligator Rock–South of I-10 Frontage Alternative would be 0.57 miles longer than the proposed route, which would slightly increase the length and intensity of short-term construction impacts and ground disturbance. The vegetation community within the ROW for this alternative consists primarily of Sonoran creosote bush scrub and dry desert wash woodland as described in vegetation overview in the Environmental Setting for the Proposed Project (Section D.2.1.1.1) and for the Desert Southwest Transmission Project Alternative (Section D.2.7.4). The disturbance level of the vegetation near Alligator Rock and along the south side of I-10 is the same as that described for the Desert Southwest Transmission Project Alternative (Section D.2.7.4).

The wildlife species documented within the ROW for this alternative are the same as those described in the Environmental Setting (Section D.2.2) for the Proposed Project and for the Desert Southwest Transmission Project Alternative (Section D.2.7.4). The disturbance level in the vegetation communities and wildlife habitats in the areas nearest to the I-10, north of Alligator Rock and along the existing access roads is the same as previously described. However, this alternative traverses close to the I-10 for a longer distance than either the Desert Southwest or Blythe Energy Alternatives. This alternative traverses through more disturbed vegetation communities and wildlife habitat on the south side of the I-10 than either of the other two Alternatives. In addition, the entire length of this alternative is comprised of poorer quality habitat than the habitat in the alignment of the Proposed Project. The abundance, diversity, and density of wildlife species along the length of this alternative would be expected to be less due to the high disturbance level in the habitat.

Special Status Plant and Wildlife Species. The potential for special status plant species to occur along the route of this alternative near Alligator Rock is the same as what was described for the Proposed Project in Section D.2.2 and for the Desert Southwest Transmission Project Alternative (Section D.2.7.4).

Similarly, the potential for sensitive wildlife species to occur would be the same as previously described for the Proposed Project in Section D.2.2 and the Desert Southwest Transmission Project Alternative (Section D.2.7.4).

This alternative would cross through the Chuckwalla DWMA ACEC in the same or very similar location as was described for the Proposed Project (Section D.2.1.1.4). In addition, this alternative would traverse through the same portion of designated Critical Habitat that was described for the Proposed Project (Section D.2.1.1.4).

Impacts and Mitigation Measures – Vegetation

The types of construction impacts that would occur with this alternative would be the same as those described for the Proposed Action in Section D.2.6.1.

Construction Impacts

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The Alligator Rock–South of I-10 Frontage Alternative would remove Sonoran desert scrub and may potentially remove dry desert wash woodland vegetation at the tower locations between where this alternative diverges from the Proposed DPV2 line east of Alligator Rock to where it again converges with the DPV2 line. As stated for Impact B-1 in Section 2.6.1.1, the vegetation will be permanently removed at the locations of the tower footings. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance. Because this alternative is 0.57 miles longer than the alignment of the Proposed Project around Alligator Rock, this alternative will potentially remove more native vegetation that the Proposed Project. However, due to the higher level of human disturbance south of Alligator Rock and south of the I-10, the quality of the habitat that would be removed as a result of this alternative is generally poorer than the habitat along the alignment of the Proposed Project around Alligator Rock. The permanent loss and temporary disturbance of Sonoran desert scrub and dry desert wash woodland resulting from the construction of this alternative would result in significant impacts to native vegetation communities. Loss of Sonoran desert scrub habitat would be considered a significant impact (Class II). Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) would be implemented by the SCE to reduce impacts to less than significant levels.

Mitigation Measure for Impact B-1: Construction activities would permanently remove native vegetation

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species (Class II)

Construction impacts along the entire length of this alternative would be the same as described in Section (D.2.6.1.2). To reduce the potential for the introduction of invasive or noxious weeds, SCE would implement APM B-2 (Standard Noxious Weed BMPs) and B-11, which would require hand clearing of

vegetation in certain areas located along the ROW. This APM would facilitate the maintenance of existing root systems which may help to stabilize the soils against erosion and assist in the restoration of these areas if the plants resprout at the conclusion of project activities. SCE would also implement APM B-19, which would require the restoration of disturbed areas at the conclusion of construction. However, SCE has not indicated which areas would be subject to hand clearing or restoration at this time. The introduction of non-native plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-2a (Conduct invasive and noxious weed inventory), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-2a **Conduct invasive and noxious weed inventory.**

B-2b **Implement control measures for invasive and noxious weeds.**

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. Increased levels of dust on the leaves of plants can decrease the photosynthetic capabilities of the plants. SCE would implement Title 1 measures (Air Quality) to decrease fugitive dust including reduced vehicle speeds, use of tackifiers, and periodic watering of the ROW. Watering will be done in such a way as to prevent pooling of water on the soil surface so that toad species would not be stimulated to emerge from their subsoil aestivation burrows prior to natural rain events. With the implementation of Title 1 rules the potential impacts of increased dust settling on plants is expected to be adverse but not significant (Class III).

Wildlife

Direct impacts on wildlife would be similar to those described in Section D.2.6.4.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

The direct loss of small mammals, reptiles, and other less mobile species would likely occur in the undeveloped areas along the length of this alternative. The loss of vegetation would also result in the temporary loss of breeding and foraging habitat for wildlife. Impacts from vehicle traffic and construction-related activities are the same as described in Section 2.6.1.4.

Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on common wildlife from construction would generate potentially adverse but not significant impacts (Class III).

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described in Section 2.6.1.5 ground-disturbing activity, including tower pad preparation and construction and grading of new access roads has the potential to disturb vegetation utilized by nesting birds. The removal of habitat during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Impacts would be potentially significant, but would be reduced to less than significant levels (Class II) with implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a Conduct pre-construction surveys and monitoring for breeding birds.

Impacts and Mitigation Measures – Threatened or Endangered Plant or Wildlife Species

Construction impacts for threatened and endangered species would be same as described for vegetation and wildlife in Section D.2.4.1.6.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class III)

The loss of individuals or known habitats of threatened, or endangered plant species would be considered a significant impact without mitigation. No State or federally listed, endangered, or threatened plant species have been identified as occurring within this alternative and none are expected to occur. This alternative alignment either does not contain suitable habitat for any other listed plants or it is located outside the geographical range for any of the listed plant species that were identified as having a high or moderate potential to occur in Table D.2-4. These species have not been previously recorded in the Proposed Project area and were not identified during surveys conducted by SCE. Implementation of APM B-8 (Pre-construction Surveys for Rare Plants) would minimize potential impacts to listed plants (Class III).

Threatened or Endangered Wildlife

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

The Alligator Rock–South of I-10 Frontage Alternative contains Sonoran desert scrub habitat where a known population of desert tortoise occurs. As described in the Environmental Setting of this section, with the exception of the desert tortoise and possibly the Palm Springs round-tailed ground squirrel, no other listed or candidate wildlife species were identified with the potential to occur along the route of this alternative.

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. No listed amphibian species have a potential to occur along the alignment for this alternative. This portion of the Project does not fall within the range nor does it support the appropriate habitat requirements of any listed amphibian species that were determined to have a high or moderate potential to occur. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed.

Reptiles. Focused protocol-level surveys have not been conducted for desert tortoise in the portion of the alignment where it diverges from the Desert Southwest Transmission Project Alternative west to where it converges with the Proposed DPV2 line. Construction of South of I-10 Frontage Alternative around Alligator Rock would impact Sonoran desert scrub habitat that is known to support desert tortoises. Occupied habitat occurs south of I-10 in the Proposed Project alignment and tortoises and tortoise sign have been documented along the Desert Southwest and Blythe Energy Transmission Line Alternatives. The density of tortoises in the areas nearest to the I-10 and north of Alligator Rock appear to be less than those found along the Proposed Project alignment (Section D.2.2) because less tortoise sign was found. Direct impacts from the activities associated with transmission line and access road construction include permanent and temporary removal of occupied and potential habitat, displacement of tortoises from portions of home ranges, removal of foraging habitat, damage to burrows, and mortality of tortoises. Indirect impacts that may result include degradation of habitat in areas adjacent to occupied habitat (introduction of non-native plant species and increased wind/water erosion) and harassment of tortoises resulting from increased presence of humans and vehicle/equipment. Even though the South of I-10 Frontage Alternative is longer than the Proposed Project in the Alligator Rock area, the impacts to desert tortoise would be expected to be less because of the presence of poorer quality habitat in the areas nearer to the I-10 and north of Alligator Rock. In addition, the amount of tortoise sign found along the portions of this alternative that correspond to the Desert Southwest Transmission Project Alternative was less than along the Proposed Project alignment. A similar survey result would be expected for the portion of the South of I-10 Frontage Alternative that runs along the I-10 from where it diverges from Desert Southwest to where it converges with the Proposed DPV2 line. This alternative may impact more habitat, but lower-quality habitat, than the Proposed Project alignment. The take of desert tortoises, whether it results from direct or indirect impacts, would be considered a significant impact (Class II).

Construction of this alternative would impact designated critical habitat for the desert tortoise. The ROW would pass through designated critical habitat along its entire length. This alternative will impact slightly more designated Critical Habitat because it is 0.57 miles longer than the Proposed Project. Physical impacts to designated critical habitat would be the same as those described for the Alligator Rock–North of Desert Center Alternative (Section D.2.7.5). APM B-19 would provide some restoration of areas within designated critical habitat following the completion of construction but this measure would not fully mitigate for modifications to designated critical habitat. The impacts resulting from the construction of this alternative would result in significant impacts on designated critical habitat for the desert tortoise (Class II).

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to desert tortoise would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Mitigation Measures for Impact B-7: Construction activities could result in the loss of listed wildlife or habitat (Tortoise)

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

Birds. Listed bird species have not been documented in this segment. Construction activities associated with the Proposed Project are not expected top result in impacts to these species (Class III).

Mammals. There is no indication that listed mammal species occur in this alternative. The Palm Springs round-tailed ground squirrel, a Federal Candidate for listing is likely to occur. Impacts to round-tailed squirrel are discussed under sensitive wildlife.

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class II)

Plants. Construction of the Alligator Rock–South of I-10 Frontage Alternative would permanently remove suitable habitat for foxtail cactus and may result in the removal of individuals of this species. Foxtail cactus has been documented south of the I-10, in the alignment of the Proposed Project. Permanent removal of the vegetation at the locations of the tower footings and along he access and spur roads will occur. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance. Construction of this alternative will also impact potential habitat for 22 other sensitive plant species (partial list below) that may occur along the alignment of this alternative (refer to Table D.2-4 for specific details).

- Ayenia
- crucifixion thorn
- glandular ditaxis
- California ditaxis
- Orocopia sage
- desert spike-moss
- Cove's cassia
- Abram's spurge
- Spearleaf
- Latimer's woodland gilia
- Mecca aster

Because the length of this alternative is slightly longer than the Alligator Rock alignment for the Proposed Project, the impacts to sensitive plant species may be greater than the Proposed Project. However, the disturbed nature of the vegetation communities along the south side of the I-10 and north of Alligator Rock may lower the potential that these species occur along the alignment. If present, impacts to these sensitive plant species would be considered significant (Class II).

As described in Section D.2.6.1.6 to reduce potential impacts to sensitive plants SCE would implement APM B-8 (Pre-construction Surveys) and APM B-9 (Transplant Sensitive Cactus) which provides for detailed surveys of tower locations prior to construction. If sensitive plant species are located at the site, SCE has indicated that tower locations would be adjusted to reduce impacts. In order to reduce potential impacts to a less than significant level, Mitigation Measure B-8a (Conduct surveys for listed plant species) would be implemented.

Mitigation Measure for Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plant species

B-8a Conduct surveys for listed plant species.

Wildlife

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Construction of the Alligator Rock–South of I-10 Frontage Alternative is not expected to result in any impacts to sensitive invertebrate species because suitable habitat for sensitive invertebrates is not present along the alignment (See Table D.2-5 for details).

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. This alternative does not contain suitable habitat for sensitive amphibians and the area does support populations of sensitive amphibians. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed.

Reptiles. Construction of the Alligator Rock–South of I-10 Frontage Alternative would result in potential impacts to flat-tailed horned lizard and rosy boa, two sensitive reptiles that may potentially occur in the desert scrub habitat located along this alternative alignment. This impact would be slightly different than the impacts of the Proposed Project because of the slight increase in length (0.57 miles) but the habitat quality in the area along the south side of the I-10 and along the north side of Alligator Rock is less than along the Proposed Project alignment. No other sensitive reptile species that were determined to have a potential to occur along the alignment of the Proposed Project (Table D.2-5 in the Environmental Setting) would be expected to occur along this alternative because of lack of suitable habitat or because this alternative lies outside of the range of these species. The temporary and permanent loss of habitat and potentially the loss of individuals of the sensitive reptile species would be considered a significant impact (Class II). Implementation of APMs and Mitigation Measures B-9b (Conduct biological monitoring) and B-9d (Conduct pre-construction reptile surveys) would reduce potential impacts to sensitive reptiles to less than significant levels.

Birds. Construction of this alternative would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and disturbance related to construction activities. Construction activities and the increased presence of humans may result in direct or indirect impacts to sensitive birds that potentially occur in the vicinity. Construction of this alternative would result in the permanent and temporary removal of suitable desert scrub habitat where Le Conte's thrasher, Bendire's thrasher, mountain plover, loggerhead shrike, and ferruginous hawk (foraging habitat) may occur (See Table D.2-5 in the Environmental Setting for details). No other sensitive bird species are expected to be affected by this alternative due to lack of suitable habitat or the alternative is not within the range of other sensitive bird species. This temporary and permanent loss of potential habitat would be considered a significant impact (Class II). In order to reduce potential impacts to a less than significant level (Class II), Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would also be implemented.

Mammals. Construction of the South of I-10 Frontage Alternative could result in potential impacts to or remove habitat for a variety of sensitive species including:

- pallid bat
- western mastiff bat
- pocketed free-tailed bat
- California leaf-nosed bat
- Townsend's big-eared bat
- spotted bat
- Arizona myotis
- fringed myotis
- cave myotis
- big free-tailed bat
- American badger

The potential impacts to these species would be similar to that described for the listed and sensitive species in the Desert Southwest Transmission Line Alternative. Construction activities would result in the removal of habitat that could support populations of these species. The loss of this habitat could affect foraging opportunities for small rodents and bats. Construction-related impacts to bat species could potentially occur in the hilly regions of the Chuckwalla Mountains. No roosting or hibernacula sites have been identified in this area and construction would be limited to daylight hours. Pallid bats could be impacted by night time travel on the existing access roads. The permanent and temporary loss of habitat and potentially the loss of individuals would be considered a significant impact (Class II). Mitigation Measure B-9h (Conduct pre-construction surveys for roosting bats) would be implemented to reduce potential impacts to a less than significant level.

Impacts to American badger are addressed in Section D.2.6.5.3

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9b **Conduct biological monitoring.**

B-9d **Conduct pre-construction reptile surveys.**

B-9h **Conduct pre-construction surveys for roosting bats.**

State and Federal Jurisdictional Habitats

Impact B-10: Adverse effects to Jurisdictional Waters and Wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes and ephemeral drainages are located along the length of Alligator Rock–South of I-10 Frontage Alternative around Alligator Rock. Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts to jurisdictional waters and wetlands would be reduced to less than significant levels with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/ Compensation Plan).

Mitigation Measure for Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Wildlife Corridors and Nursery Sites

Impact B-11: The alternative would adversely affect the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The drainages along the route of this alternative consist of desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events and they do not contain perennial flows. The washes would not be expected to support fish and other species that are dependent on permanent water sources. There are no known native wildlife nursery sites along the route of this alternative. Therefore, no impacts would be expected to the movement of fish and other species that are dependent upon water sources and no are expected to native wildlife nursery sites.

Impact B-12: The alternative would adversely affect linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of this alternative is not expected to impact any linkages or wildlife movement corridors because no major linkages or corridors are present.

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (No Impact)

The Alligator Rock–South of I-10 Frontage Alternative, as an individual section of the project, would traverse BLM land and unincorporated Riverside County. Plans developed by this jurisdiction, including the CDCA Plan, Riverside County Comprehensive General Plan, and the Riverside County Desert Center Area Plan, were assessed to determine if any biological resources policies would apply to the construction and operation of this alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. Table D.2-13 in Section D.6.2.1.11 discusses those policies from the aforementioned plans that required further analysis. The Alligator Rock–South of I-10 Frontage Alternative would not conflict with any of these policies.

Operational Impacts

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Potential impacts to birds from electrocution are discussed in Section D.2.6.2 and would be the same as the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV and "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in line collisions by listed bird species (Class II)

Bird collisions would be the same as the Proposed Project. It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest. The operation of the alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the transmission facilities associated with the alternative will result in an increase in potential nesting sites for common ravens. APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~Migratory Birds to "take" common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant if the various companies do not check the towers and remove nests on a regular basis and if the various companies remove other nests that are actively utilized by other raptors. An increase in predation on the desert tortoise and other species by ravens nesting in the transmission towers is considered a significant impact (Class II). Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the Alligator Rock–South of I-10 Frontage Alternative would require regular maintenance of the various facilities associated with the project. Potential impacts from vehicle travel are discussed in Section D.2.6.2 and would be the same as the Proposed Project. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse but not significant (Class III).

D.2.8 Alternatives for West of Devers

D.2.8.1 Devers-Valley No. 2 Alternative

Environmental Setting

Regional Setting. The regional setting for this alternative would be the same as that described for the Proposed Project in Section D.2.1.

Vegetation Communities and Wildlife.

Vegetation. A biological survey of the route of the Devers-Valley No. 2 Alternative was conducted in February of 2006 by the EIR/EIS Consultants. A portion of the route of this alternative was inaccessible due to its steep topography and the presence of snow on the access roads. The inaccessible portion included the area from just west of Snow Creek Road where the line climbs into the foothills of the San Jacinto Mountains to where the line exits the mountains near Helen Avenue (southwest of Cabazon).

In general, the vegetation communities across the length of the Devers-Valley No. 2 Alternative are the same as some of the communities described in the Vegetation Overview (Section D.2.1.1.1). The locations of some of the vegetation communities is similar to what was described for the Proposed Project segments from Devers to East Border of Banning (Section D.2.3.1), Banning and Beaumont (Section D.2.3.2), Calimesa to San Bernardino Junction (Section D.2.3.3), and San Bernardino Junction to Vista Substation (D.2.3.4).

In general, the desert portion of this alignment, between Devers Substation and the foothills of the San Jacinto Mountains, supports similar vegetation communities to those occurring along the Proposed DPV2 alignment, between Devers and Cabazon. From Devers Substation west to where the Devers-Valley No. 2 Alternative crosses I-10, the vegetation communities consist of creosote bush scrub interspersed with patches of white bursage and disturbed creosote bush scrub (primarily within the wind farm areas). Just south of the I-10, the alignment crosses the Whitewater River, which consists of a broad sandy and cobbled desert wash that is mostly devoid of native vegetation. The periodic high flows in the wash tend to scour the vegetation and allow for invasion of non-native weedy species of plants. Between the Whitewater River and Highway 111, the ROW is dominated by disturbed creosote bush scrub. The ROW crosses the broad expanse of the San Gorgonio River and Snow Creek between Highway 111 and the foothills of the San Jacinto Mountains located to the southwest. The San Gorgonio River is a broad desert wash characterized by braided channels interspersed with patches of creosote bush scrub and coarse sand dunes.

As the alternative alignment enters the foothills, the vegetation communities change to areas dominated by brittlebush scrub and cheese bush on the lower slopes to semi-desert chaparral on the higher slopes. The inaccessible portions of this alignment likely support a mixture of semi-desert chaparral and sage scrub communities which transition to chamise chaparral along the alignment at the higher elevations. Repeated fires in 1994, 1995, 1996, and 2004 have occurred in the portions of this alternative alignment that traverse through the San Bernardino National Forest and Santa Rosa and San Jacinto National Monument. Much of the vegetation is recovering from the fires but the current condition of the vegetation in the burned areas has not been characterized due to inaccessibility.

Other plant communities crossed by this alternative between the San Bernardino National Forest and the Valley Substation include buckwheat scrub, mixed buckwheat-chamise chaparral, saltbush scrub, and scattered patches of Riversidean sage scrub. These communities are most common on the lower slopes of

the hills located south of Banning and Beaumont, in the hills adjacent to Highway 79, and in the Lakeview Mountains located between San Jacinto and Romoland. Non-native grasslands are also present as just grasslands and as mixed scrub/grassland communities through the Badlands between Beaumont and the San Jacinto Valley.

Scattered desert washes occur along the portion of the route from Devers Substation west to the areas south of Banning. These washes are either vegetated with creosote bush scrub or small patches of desert willow woodland. In addition to the desert washes, this alternative also traverses through Smith Creek, south of Banning, which is vegetated with a sparse riparian community and crosses the San Jacinto River in the San Jacinto Valley. Numerous smaller ephemeral drainages are present in the foothills of the San Jacinto Mountains, in the Badlands area, and in the Lakeview Mountains.

The ROW of this alternative crosses through developed areas at the base of the foothills southwest of Cabazon, east of Old Banning Idyllwild Road, south of Banning, and north of the Valley Substation. Scattered rural development also occurs in the areas south of Banning and Beaumont and in portions of San Jacinto and Romoland. Agricultural areas are crossed in the San Jacinto Valley between Gilman Springs Road and just south of Ramona Expressway and in portions of Romoland, located north of the Valley Substation.

Wildlife. The common species of wildlife that would be expected to occur along the route of the Devers-Valley Alternative are the same as those addressed in the Wildlife Overview in the Environmental Setting (Section D.2.1.1.2).

Special Status Plant and Wildlife Species.

Plants. One listed species of plant, the Coachella Valley milkvetch, is known to occur within the ROW of the Proposed Project and the corresponding ROW for the Devers-Valley No. 2 Alternative, near Devers Substation. This species could also potentially occur along the route of this alternative between Devers Substation and the foothills of the San Jacinto Mountains because suitable habitat is present in these areas.

Five listed plants species, including Munz's onion, San Diego ambrosia, San Jacinto Valley crownscale, Nevin's barberry, and Mojave tarplant, have a high to moderate potential to occur along the route of this alternative because suitable habitat is present and/or this species has been recorded in the vicinity of the ROW (see Table D.2-4 for details).

Forty-four species of sensitive plants also have a moderate to high potential for occurrence along the route of the Devers-Valley No. 2 Alternative (see Table D.2-4 for details) either because suitable habitat is present or an occurrence has been documented within the vicinity of the ROW. These species include:

- White-bracted spineflower
- chaparral sand-verbena
- Yucaipa onion
- Jaeger's milk vetch
- Parry's spineflower
- cliff spurge
- little San Bernardino Mountains gilia
- slender woolly-heads
- Plummer's mariposa lily
- Intermediate mariposa lily
- South coast saltscale
- Parish's chaenactis
- Rock draba
- Leafy buckwheat
- Mission Canyon bluecup
- Adder's mouth
- San Felipe monardella
- White-margined oxytheca
- California beardtongue
- Cliff cinquefoil
- Southern skullcap
- Southern jewel-flower
- Woven-spored lichen
- Smooth tarplant
- Long-spined spineflower
- Southern California black walnut
- Robinson's pepper-grass
- ocellated Humboldt lily
- Parish's bush mallow
- Hall's monardella
- California muhly
- Fish's milkwort
- Engelmann oak
- Coulter's matilija poppy
- San Miguel savory
- San Bernardino aster
- Parish's brittlescale
- Adram's spurge
- Arizona spurge
- Flat-seeded spurge/sandmat
- Foxtail cactus
- California bedstraw
- Spearleaf
- Little mousetail
- Sonoran maiden fern

Special Status Wildlife Species

The potentials for listed and sensitive species to occur along the route of the Devers-Valley No. 2 Alternative and the details regarding where the species have been observed in relation to the location of the alternative are listed in Table D.2-5 in the Environmental Setting.

Invertebrates. Two species of invertebrates, Coachella Valley giant sand-treader cricket and Coachella Valley Jerusalem cricket, have a high potential to occur along the Devers-Valley No. 2 Alternative between Devers Substation and the foothills of the San Jacinto Mountains. Suitable habitat for both species, which consists of active sand dunes and ephemeral sand fields, is present in a patchy distribution between Devers Substation and the foothills of the San Jacinto Mountains. These species are covered under the CVMSHCP.

Fishes and Amphibians. This Devers-Valley No. 2 Alternative does not cross any perennial streams that are considered suitable for any listed or sensitive fishes.

Two listed species of amphibians, the arroyo toad and mountain yellow-legged frog, are noted as meeting the criteria for a determination of a high potential for occurrence in portions of the Devers-Valley No. 2 Alternative. The arroyo toad was reported as occurring in Whitewater Canyon in 1992 but it is unknown if this species still occurs there. There is speculation that Snow Creek, located south of Highway 111 and just east of the Devers-Valley No. 2 Alternative. The mountain yellow-legged frog was historically found in Whitewater River and has recently been documented in the San Jacinto Mountains.

Two sensitive amphibian species, the coast range newt and western spadefoot, have a moderate to high potential to occur along this alternative because suitable habitat is present in portions of the ROW.

Reptiles. Two listed species of reptiles, the desert tortoise and Coachella Valley fringe-toed lizard, have been documented near the Devers Substation and in the portion of the Devers-Valley No. 2 Alternative located just west of Devers Substation. These species have a high potential to occur in the portion of the Devers-Valley No. 2 Alternative between Devers Substation and the foothills of the San Jacinto Mountains.

Two sensitive reptiles, the San Diego horned lizard and northern red diamond rattlesnake, have been observed in this in the eastern portion of the Devers-Valley No. 2 Alternative but they also have a high potential to occur along most of the route of this alternative.

Six sensitive reptile species have a high to moderate potential to occur in portions of the Devers-Valley No. 2 Alternative because suitable habitat is present and because the species has been documented in the vicinity of the ROW. These species include the flat-tailed horned lizard, Belding's orange-throated whiptail, silvery legless lizard, coast patch-nosed snake, rosy boa, southern rubber boa, and two-striped garter snake. The southern rubber boa may occur in the higher elevations in the San Jacinto Mountains portion of this alternative. The two-striped garter snake may occur in drainage areas that are seasonally wet or are tributaries to larger drainages. Suitable habitat for flat-tailed horned lizard, Belding's orange throated whiptail, rosy boa, and silvery legless lizard occurs in various areas along the route of this alternative.

Birds. Two listed species of bird, the least Bell's vireo and coastal California gnatcatcher, have a high potential to occur in habitat located in the vicinity of this alternative. Potentially suitable habitat for least Bell's vireo is present in Snow Creek, Potrero Creek, and in various drainages along the route between Beaumont and the Valley Substation. The California gnatcatcher has been reported in the Badlands near Laborde Canyon, which is less than a mile from the route of this alternative. This species has a high potential to occur in the sage scrub habitats located between Banning and the Valley Substation.

Two sensitive bird species, the Le Conte's thrasher and loggerhead shrike, have been observed near the Devers Substation. In addition, burrowing owls have been documented in close proximity to the ROW of this alternative between Devers Substation and Highway 111. Suitable habitat for these species is present along portions of the ROW. Fourteen additional sensitive bird species also potentially occur because suitable habitat is present and the species has been documented in the vicinity of this alternative. These species include:

- Cooper's hawk
- ferruginous hawk
- golden eagle
- northern harrier
- prairie falcon
- white-tailed kite
- brown-crested flycatcher
- vermillion flycatcher
- mountain plover
- California horned lark
- Yellow warbler
- Southern California rufous-crowned sparrow
- Bell's sage sparrow
- long-eared owl

Mammals. Two listed mammal species, the Stephens' kangaroo rat and the desert bighorn sheep, have a high potential for occurrence along the route of this alternative between Banning and the Valley Substation.

The Stephens' kangaroo rat is known to occur in the Potrero ACEC/Conservation Unit. In fact, one of the primary conservation goals for the Potrero Conservation Unit is the preservation of a large population of Stephens' kangaroo rat.

The Peninsular bighorn sheep is a federally endangered species, and has designated Critical Habitat through which the Devers-Valley No. 2 Alternative would pass.

One Federal Candidate species, the Palm Springs round-tailed ground squirrel, is known to occur in the vicinity of the western portion of this alternative. Suitable habitat for this species occurs in a patchy distribution between Devers Substation and the foothills of the San Jacinto Mountains.

Numerous sensitive mammal species have a high or moderate potential to occur in or adjacent to this alternative because suitable habitat is present and the species has been reported in the vicinity. These species include:

- pallid bat
- western mastiff bat
- pocketed free-tailed bat
- California leaf-nosed bat
- Townsend's big-eared bat
- Western yellow bat
- spotted bat
- Arizona myotis
- fringed myotis
- Yuma myotis
- cave myotis
- big free-tailed bat
- Peninsular bighorn sheep
- northwestern San Diego pocket mouse
- Pallid San Diego pocket mouse
- Palm Springs pocket mouse
- Los Angeles pocket mouse
- San Diego black-tailed jackrabbit
- American badger

Special Habitat Management Areas Overview

Section D.2.1.1.4 describes the Overview of Special Habitat Management Plans that apply to the Proposed Project and the alternatives. The following paragraphs provide a description of which of the plans apply to the Devers-Valley No. 2 Alternative.

California Desert Conservation Area Plan (1980). As described in Section D.2.1.1.4, the western border of the CDCA lies just west of Whitewater Canyon. Two BLM ACECs occur within or in the vicinity of the Devers-Valley No. 2 Alternative. The Whitewater Canyon ACEC, which is within the CDCA Planning Area, is located within the just north of the alignment of the Proposed Project where it crosses Whitewater Canyon. The Devers-Valley No. 2 Alternative does not intercept the Whitewater Canyon ACEC because the route diverges away from the Proposed DPV2 alignment to the east of Whitewater Canyon and southeast of the boundary of the Whitewater Canyon ACEC. The Potrero ACEC, which is located outside of the CDCA Planning Area, which is located south of Beaumont in the Badlands area of Western Riverside County.

Potrero Creek Conservation Unit – San Jacinto Wildlife Area. The Potrero Creek Conservation Unit of the San Jacinto Wildlife Area, which encompasses approximately 9,117 acres, is located in the San Jacinto Mountains south of the City of Beaumont and east of the San Jacinto Valley. This Conservation Unit overlaps with BLM's Potrero ACEC. The Devers-Valley No. 2 Alternative crosses through the northern portion of this Conservation Unit.

San Jacinto and Santa Rosa Mountains National Monument. The Devers-Valley No. 2 Alternative enters the National Monument after it crosses to the south side of Highway 111. The route would travel southwest up the San Jacinto Mountains and through the rugged terrain of the National Monument for approximately 2.8 miles, crossing Snow Creek (the ROW is adjacent to Snow Creek Road), and would enter the San Jacinto Wilderness that is located within the San Bernardino National Forest (although the transmission corridor itself has been removed from the wilderness). After approximately 0.5 miles within the San Jacinto Wilderness, the alternative would turn west-northwest and would travel an estimated 0.8 miles to exit the National Monument.

San Bernardino National Forest. The Devers-Valley No. 2 Alternative enters the San Jacinto Wilderness within the SBNF approximately 2.8 miles into the rugged terrain of the San Jacinto Mountains. As stated previously, the transmission corridor itself has been removed from the wilderness. After approximately 0.5 miles within the San Jacinto Wilderness, the alternative would turn west-northwest and would travel an estimated 1.2 miles to exit the SBNF and Wilderness area.

Western Riverside MSHCP. The Devers-Valley No. 2 Alternative traverses through Criteria Cells in the Potrero/Badlands Subunit of the Pass Area Plan and in the Gillman Springs/Southern Badlands Subunit of the San Jacinto Valley Area Plan. Portions of the length of this alternative within the Western Riverside County MSHCP planning area fall within the survey areas for burrowing owl, Los Angeles pocket mouse, San Bernardino kangaroo rat, and narrow endemic plant species. This alternative crosses the Proposed Core Number 3, which consists of the Badlands area that functions as a linkage between the San Bernardino National Forest, areas southwest of the forest in San Bernardino County, and other areas located north of this core area. In addition, this alternative crosses through the Proposed Non-contiguous Habitat Block Number 5 that is located in the Lakeview Mountains.

Final Draft Coachella Valley MSHCP. Like the Proposed Project, the Devers-Valley No. 2 Alternative traverses through a small portion of the Proposed Upper Mission Creek/Big Morongo Canyon Conservation Unit of the Draft Coachella Valley MSHCP. In addition, this alternative also traverses through the Proposed Whitewater Floodplain, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Units in the areas south of the I-10 and south of Highway 111.

San Bernardino National Forest Management Indicator Species

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

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

Healthy Diverse Habitats (Mule Deer). Mule deer are common on the SBNF and much of the Devers-Valley No. 2 Alternative ROW that is on NFS Lands supports habitat that could be utilized by this species. These animals occupy a wide range of habitats but prefer to forage and shelter near riparian areas, seeps, and oak woodlands. While these species occupy most habitats late successional chaparral typically is not preferred for foraging. Mule deer on NFS lands typically use dense vegetation for cover and forage mainly in the open sagebrush and edge habitats that occur along the route. These species are able to move along an elevational gradient to maximize use of climatic conditions and forage availability during different seasons. Movement usually occurs in the fall and spring and roughly the same routes are used by the same herds year after year. Mule deer have been chosen as an indicator of the effectiveness of forest management strategies on landscape patterns in chaparral age class diversity (USDA 2005).

Fragmentation (Mountain lion). The mountain lion (*Puma concolor*) is selected as an MIS to monitor the effects of forest activities and uses on a landscape-level scale to determine effects of habitat fragmentation and habitat linkages (USDA 2005). The general health of this species largely depends on current deer populations and this solitary animal prefers large areas of undisturbed habitat that supports

a stable prey base. Populations of this species on NFS lands are low primarily because this species requires large home ranges and has limited social interaction (USDA 2005). The greatest concern to this species is loss of habitat and connectivity between home ranges. Suitable range for this species occurs in the Devers-Valley No. 2 Alternative ROW and this species is expected to be present in the area.

Montane Conifer Forest (California spotted owl, California black oak, and White fir). The California spotted owl is an uncommon permanent resident of heavily forested areas along the coastal ranges in southern California. The California spotted owl occurs in all major mountain ranges of Southern California, including the San Bernardino, San Gabriel, Tehachapi, Santa Lucia, Santa Ana, Cuyamaca/Laguna, Liebre/ Sawmill Mountain, Mount San Jacinto, Palomar Mountain and the Los Padres Ranges (Noon and McKelvey 1992). Spotted owls would not be expected to heavily utilize the portion of the ROW on NFS lands because the ROW does not support montane conifer forest. Rather, the portion of the ROW occurring on NFS lands is vegetated with scrub and chaparral communities. The California spotted owl is an ideal indicator of the health of montane conifer forests, as this species requires the presence of "mature, large diameter, high canopy stands with densely shaded understory" for successful population growth.

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

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

Aquatic Habitat (Arroyo toad). The proposed Project is not located within the designated critical habitat for this species (USFWS 2005b). The arroyo toad occurs in semi-arid regions including valley-foothill, desert riparian, and desert wash habitat. This species breeds in shallow, gravelly streams, and rivers with sandy banks that typically contain willows, cottonwoods, and sycamores, and it has been known to utilize upland habitat within 2000 meters (6,562 feet) of breeding habitat for foraging and wintering (USFWS 2005b). The arroyo toad was chosen as an indicator of the health of aquatic habitat on the SBNF. This species is not expected to occur in the Devers-Valley No. 2 Alternative ROW on NFS lands.

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak is a deciduous tree that occurs in the interior coast ranges in monotypic stands or with coast live oak or valley oak (USDA 2005). Some blue oak woodlands can also occur on serpentine soils (Stephenson and Calcarone 1999). Valley oak is the largest deciduous tree in the western United States and typically occupies valley floors and lower foothill communities with a grass-dominated understory on deep soils with a shallow depth to

perennially available soil moisture (USDA 2005). This species can form the dominant vegetation layer along semi moist drainages and form oak riparian woodlands. Engelmann oak, a deciduous species, has a small natural range and is the only species of subtropical white oaks in California (USDA 2005). This species most commonly occurs in savannas with grassland understory on valley floors, foothill slopes and raised stream terraces within riparian corridors in the northwestern Peninsula Range in San Diego and Orange counties (Sawyer and Keeler-Wolf 1995). These MIS have been chosen as indicators of oak regeneration within the San Bernardino National Forest. Monitoring of these species, in particular saplings, will measure the success of the forest management strategies (USDA 2005).

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

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

Impacts and Mitigation Measures – Vegetation

Impact B-1: Construction activities would result in temporary and permanent loss of native vegetation (Class II)

The Devers-Valley No. 2 Alternative would remove Sonoran desert scrub, dry desert wash woodland, brittlebush, buckwheat, and Riversidean sage scrub, mixed buckwheat-chaparral, and potentially riparian habitats located in the drainages along the route. In addition, this alternative would also impact sand dunes and active sand fields located south of the I-10. As stated for Impact B-1 in Section 2.6.1.1, the vegetation will be permanently removed at the locations of the tower footings. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance. The permanent loss and temporary disturbance of native vegetation communities resulting from the construction of this alternative would result in significant impacts. Loss of these communities would be considered a significant impact (Class II). Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) would be implemented by SCE to reduce impacts to less than significant levels.

Mitigation Measure for Impact B-1: Construction activities would permanently remove native vegetation

B-1a Prepare and implement a Habitat Restoration/Compensation Plan.

Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species (Class II)

Construction impacts along the entire length of this alternative would be the same as described in Section (D.2.6.1.2). To reduce the potential for the introduction of invasive non-native or noxious weeds, SCE would implement APM B-2 (Standard Noxious Weed BMPs) and B-11, which would require hand

clearing of vegetation in certain areas located along the ROW. This APM would facilitate the maintenance of existing root systems which may help to stabilize the soils against erosion and assist in the restoration of these areas if the plants resprout at the conclusion of project activities. SCE would also implement APM B-19, which would require the restoration of disturbed areas at the conclusion of construction. However, SCE has not indicated which areas would be subject to hand clearing or restoration at this time. The introduction of non-native plant species would be considered a significant impact (Class II). Implementation of the Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), and B-2b (Implement control measures for invasive and noxious weeds) would reduce impacts from the introduction of non-native plant species to less than significant levels.

Mitigation Measures for Impact B-2: Construction activities would result in the introduction of invasive non-native or noxious plant species

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-2b **Implement control measures for invasive and noxious weeds.**

Impact B-3: Construction activities would create dust that may result in degradation to vegetation (Class III)

Construction activities would result in increased levels of blowing dust that may settle on the vegetation surrounding the construction areas. Increased levels of dust on the leaves of plants can decrease the photosynthetic capabilities of the plants. SCE would implement Title 1 measures (Air Quality) to decrease fugitive dust including reduced vehicle speeds, use of tackifiers, and periodic watering of the ROW. Watering will be done in such a way as to prevent pooling of water on the soil surface so that toad species would not be stimulated to emerge from their subsoil aestivation burrows prior to natural rain events. With the implementation of Title 1 rules the potential impacts of increased dust settling on plants is expected to be adverse but not significant (Class III).

Impacts and Mitigation Measures – Wildlife

Direct impacts on wildlife would be similar to those described in Section D.2.6.1.4.

Impact B-4: Construction activities and increased vehicular traffic on access roads would result in disturbance to wildlife species (Class III)

The direct loss of small mammals, reptiles, and other less mobile species would likely occur in the undeveloped areas along the length of this alternative. The loss of vegetation would also result in the temporary loss of breeding and foraging habitat for wildlife. Impacts from vehicle traffic and construction-related activities are the same as described in Section 2.6.1.4.

Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, all of the above-listed impacts on common wildlife from construction would generate potentially adverse but not significant impacts (Class III).

Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds (Class II)

As described in Section 2.6.1.5, ground-disturbing activity, including tower pad preparation and construction and grading of new access roads, has the potential to disturb vegetation utilized by nesting birds. The removal of habitat during the breeding season would likely result in the displacement of breeding birds

and the abandonment of active nests. Implementation of Mitigation Measure B-5a (Conduct pre-construction surveys and monitoring for breeding birds) would reduce impacts to nesting birds to less than significant levels (Class II).

Mitigation Measure for Impact B-5: Construction activities during the breeding season would result in a potential loss of nesting birds

B-5a Conduct pre-construction surveys and monitoring for breeding birds.

Impacts and Mitigation Measures – Threatened or Endangered Plant or Wildlife Species

Construction impacts for threatened and endangered species would be same as described for vegetation and wildlife in Section D.2.6.1.6.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II)

Threatened or Endangered Plants. The loss of individuals or known habitats of threatened, or endangered plant species would be considered a significant impact without mitigation. One listed plant species, the Coachella Valley milkvetch, is known to occur near the Devers Substation and could be directly affected by the construction of this alternative. In addition, five other State or federally listed, endangered, or threatened plant species have been identified as occurring within this alternative, including Munz's onion, San Diego ambrosia, San Jacinto Valley crownscale, Nevin's barberry, and Mojave tarplant, have a high to moderate potential to occur because suitable habitat is present. Impacts to listed plant species would be considered significant without mitigation (Class II). Mitigation Measure B-6a (Conduct surveys for listed plant species) would reduce potential impacts to a less than significant level.

Mitigation Measure for Impact B-6: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plant species

B-6a Conduct surveys for listed plant species.

Impact B-7: Construction activities would result in indirect or direct loss of listed wildlife or habitat (Class II and Class III)

The Devers-Valley No. 2 Alternative contains Sonoran desert scrub between the Devers Substation and the foothills of the San Jacinto Mountains that is likely to support desert tortoise, a federal- and State-listed threatened species. This species has been found in very low numbers in the areas located north of I-10 and West of Devers Substation. Focused protocol surveys were not conducted for this species along this portion of this alternative. This species may occur in the native habitats along this portion of the alternative route.

In addition, this eastern end of this alternative also contains desert scrub, desert wash, and succulent desert scrub habitats that could potentially support the Palm Springs round-tailed ground squirrel, a federal Candidate for listing and suitable habitat for the Coachella Valley fringe-toed lizard. Other listed species that have a potential to occur along this alternative are the least Bell's vireo (riparian habitat), California gnatcatcher (sage scrub and buckwheat scrub), and Stephens' kangaroo rat (grasslands and scrub habitats).

Within the San Bernardino National Forest, this alternative also includes Critical Habitat for the Peninsular bighorn sheep, a federally endangered species. As described above in the Environmental Setting for this alternative, with the exception of the aforementioned species, no other listed or candidate wildlife species were identified with the potential to occur along the route of this alternative.

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts to sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. Two listed species of amphibians, the arroyo toad and mountain yellow-legged frog, are noted as meeting the criteria for a determination of a high potential for occurrence in portions of the Devers-Valley No. 2 Alternative. The arroyo toad potentially occurs in Whitewater Canyon, which is not within the ROW for the Devers-Valley No. 2 Alternative. The habitat in the broad portion of Whitewater River, where the transmission line would cross, is not considered suitable habitat for this species so no impacts to this species would be expected. The mountain yellow-legged frog is present in isolated drainages in the San Jacinto Mountains. The ROW for this alternative does not cross the drainages where this species has been found. This species would not be impacted by the construction of this alternative because construction will not occur in the drainages where this species is known to occur. Impacts to sensitive amphibians would be considered less than significant (Class III) and no additional mitigation is proposed.

Reptiles. Construction of this alternative between Devers Substation and the foothills of the San Jacinto Mountains would impact Sonoran desert scrub habitat that may potentially support desert tortoises. Desert tortoise is a federal- and State-listed threatened species. This species has been found in very low numbers in the areas located north of I-10 and West of Devers Substation. Direct impacts from the activities associated with transmission line and access road construction include permanent and temporary removal of occupied and potential habitat, displacement of tortoises from portions of home ranges, removal of foraging habitat, damage to burrows, and mortality of tortoises. Indirect impacts that may result include degradation of habitat in areas adjacent to occupied habitat (introduction of non-native plant species and increased wind/water erosion) and harassment of tortoises resulting from increased presence of humans and vehicle/equipment. The take of desert tortoises, whether it results from direct or indirect impacts, would be considered a significant impact (Class II).

Potentially significant impacts to desert tortoise could be reduced by the implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35. These APMs would reduce impacts through worker education, inspection of parked vehicles, pre-construction surveys, biological monitoring, speed control on roads, avoidance of tortoise burrows, and relocation of tortoises from work areas. Although these APMs would lessen this impact to a certain degree, further protection measures are required to protect this species. Impacts to desert tortoise would be significant (Class II), but could be reduced to a less than significant level with mitigation. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-7b (Conduct pre-construction tortoise surveys), B-7c (Purchase mitigation lands for impacts to tortoise habitat) would be required to ensure that impacts to desert tortoise would be less than significant.

Critical Habitat. The alternative would pass through designated Critical Habitat for the Peninsular bighorn sheep. Construction of this alternative would not have any impact on designated critical habitat for the desert tortoise because the project area does not fall within the boundaries of designated Critical Habitat for this species. Similarly, construction will also not impact designated Critical Habitat for the arroyo toad or Mountain yellow-legged frog because the ROW does not cross any designated Critical Habitat for these species.

Birds. Construction of this alternative may directly impact suitable habitat for the California gnatcatcher and least Bell's vireo. The California gnatcatcher has been reported in the Badlands near Laborde Canyon, which is less than a mile from the route of this alternative. This species has a high potential to

occur in the sage scrub habitats located between Banning and the Valley Substation. The least Bell's vireo has a high potential to occur in riparian habitats that may be located within the ROW or in areas adjacent to the ROW. Potentially suitable habitat for least Bell's vireo is present in Snow Creek, Potrero Creek, and in various drainages along the route between Beaumont and the Valley Substation. Any impacts to listed species of birds would be considered significant (Class II). Implementation of Mitigation Measures B-5a (Conduct pre-construction surveys and monitoring for breeding birds) and B-7e (Conduct focused surveys for California gnatcatchers) would reduce the impacts to the listed bird species to less than significant.

Mammals. Construction of this segment may directly impact suitable habitat for the Stephens' kangaroo rat, Palm Springs round-tailed ground squirrel, and Peninsular bighorn sheep as a result of permanent and temporary removal of habitat.

The ground squirrel is known to occur between the Devers Substation and the foothills of the San Jacinto Mountains. The potential impacts to suitable habitat would be the same as those described for the Desert Southwest Transmission Project Alternative (Section D.2.7.4). APM B-25 addresses the avoidance of mesquite hummock habitat for the purpose of benefiting the Coachella Valley round-tailed squirrel Impacts to round-tailed squirrel are discussed under sensitive wildlife.

The Stephens' kangaroo rat is known to occur south of Banning and Beaumont, in suitable grassland and open scrub habitats in the foothills of the San Jacinto Mountains. A large population of this species is present in the Potrero area where this alternative will traverse through the Potrero Conservation Unit of the San Jacinto Wildlife Area. Without mitigation, the loss of habitat and individuals of Stephens' kangaroo rat would also result in significant impacts (Class II). APM B-16 provides for additional wildlife surveys and APM B-39 states that Stephens' kangaroo rat habitat would be avoided, where possible. Even with the implementation of these APMs, the impacts to these species would be considered significant (Class II). Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan) and B-7f (Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat) would reduce impacts to a less than significant level.

Peninsular bighorn sheep may be present at the time of construction. Bighorn sheep in the vicinity of this alternative may be disturbed or scared off as a result of the construction noise, especially given the proposed use of helicopters for tower construction. These impacts would be temporary and limited to the construction phase of the project. To reduce potential impacts, construction vehicles would remain on established roads (APMs B-3 and B-17) to the maximum extent practicable in order to avoid unnecessary disturbances to wildlife, and vehicles would be required to drive at low speeds in tortoise habitat (APM B-29), which would also reduce the potential for collisions with other wildlife. Impacts to bighorn sheep that are present in and near the San Bernardino National Forest would be considered significant (Class II). Implementation of Mitigation Measure B-9f (Perform construction outside of breeding and lambing period) would reduce impacts to less than significant levels. Construction of this alternative would also comply with the CDFG and SBNF management policies for bighorn sheep.

Mitigation Measures for Impact B-7: Construction activities would result in indirect impacts, a direct loss of individuals, a direct loss of habitat for listed plant and/or wildlife species, or impact designated or proposed critical habitat for a listed species

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-7b **Conduct pre-construction tortoise surveys.**

B-7c **Purchase mitigation lands for impacts to tortoise habitat.**

B-7e **Conduct focused surveys for California gnatcatchers.**

B-7f **Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat.**

B-9f **Perform construction outside of breeding and lambing period.**

State or Federal Species of Special Concern

Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants (Class II)

Plants. Construction of the Devers-Valley No. 2 Alternative would permanently and temporarily remove potentially suitable habitat for 44 species of sensitive plants that potentially occur along the length of the Devers-Valley No. 2 Alternative. Permanent removal of the vegetation at the locations of the tower footings and along he access and spur roads will occur. In addition, the construction areas around the tower sites may be temporarily disturbed, depending on the amount of area necessary for ongoing maintenance. The sensitive plants that could potentially occur along this alternative are listed below (refer to Table D.2-4 for specific details).

- White-bracted spineflower
- chaparral sand-verbena
- Yucaipa onion
- Jaeger's milk vetch
- Parry's spineflower
- cliff spurge
- little San Bernardino Mountains gilia
- slender woolly-heads
- Plummer's mariposa lily
- Intermediate mariposa lily
- South coast saltscale
- Parish's chaenactis
- Rock draba
- Leafy buckwheat
- Mission Canyon bluecup
- Adder's mouth
- San Felipe monardella
- White-margined oxytheca
- California beardtongue
- Cliff cinquefoil
- Southern skullcap
- Southern jewel-flower
- Woven-spored lichen
- Smooth tarplant
- Long-spined spineflower
- Southern California black walnut
- Robinson's pepper-grass
- ocellated Humboldt lily
- Parish's bush mallow
- Hall's monardella
- California muhly
- Fish's milkwort
- Engelmann oak
- Coulter's matilija poppy
- San Miguel savory
- San Bernardino aster
- Parish's brittlescale
- Adram's spurge
- Arizona spurge
- Flat-seeded spurge/sandmat
- Foxtail cactus
- California bedstraw
- Spearleaf
- Little mousetail
- Sonoran maiden fern

As described in Section D.2.6.1.7, to reduce potential impacts to sensitive plants SCE would implement APM B-8 (Pre-construction Surveys) and APM B-9 (Transplant Sensitive Cactus) which provides for detailed surveys of tower locations prior to construction. If sensitive plant species are located at the site, SCE has indicated that tower locations would be adjusted to reduce impacts. In order to reduce potential impacts to a less than significant level, Mitigation Measure B-8a (Conduct surveys for listed plant species) would be implemented.

Mitigation Measure for Impact B-8: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plant species

B-8a **Conduct surveys for listed plant species.**

Wildlife

Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II and Class III)

Invertebrates. Construction of the portion of the Devers-Valley No. 2 Alternative between the Devers Substation and the foothills of the San Jacinto Mountains would result in the temporary and permanent removal of suitable habitat for Coachella Valley giant sand-treader cricket and Coachella Valley Jerusalem cricket. As described in the Environmental Setting (Section D.2.3), these two species potentially occur in dune habitats and ephemeral sand fields in the Coachella Valley. These two species do not have any State or federal sensitive designations but they are covered species under the Draft Coachella Valley MSHCP. If the Draft MSHCP is not finalized, then impacts to these species would not be significant and would not require mitigation. If the Draft MSHCP is finalized, then mitigation will be required to avoid significant impacts (Class II) resulting from temporary and permanent loss of habitat for these species. Mitigation would include conducting focused surveys for these species prior to construction to determine presence or absence and biological monitoring during construction. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-9a (Conduct pre-construction surveys), and B-9b (Conduct biological monitoring) would reduce the impacts to sensitive amphibians, if present, to less than significant.

Fish. This alternative does not contain standing water and the area does support populations of rare fish. Impacts sensitive fishes would be considered less than significant (Class III) and no additional mitigation is proposed.

Amphibians. Two sensitive amphibian species, the coast range newt and western Spadefoot toad, have a moderate to high potential to occur along this alternative because suitable habitat is present in portions of the ROW. Construction of the Devers-Valley No. 2 Alternative would have the potential to adversely impact western Spadefoot toad as a result of the permanent removal of suitable habitat and vehicle traffic. This is a highly cryptic species that breed in the ephemeral pools that form during the short but intense rainfall events that occur in this region. Because this species is rarely seen it is difficult to determine the presence of this species until after rain events. The coast range newt potentially occurs in the scrub and chaparral habitats surrounding drainages that receive seasonal flows and that provide suitable pools for breeding. This species may occur in the higher elevations in the San Jacinto Mountains. The removal of habitat and construction of the towers and laydown areas may result in the direct mortality of this species through mechanical crushing or habitat degradation. This potential impact would be considered significant (Class II). To reduce potential impacts to this species SCE would implement pre-construction surveys of the project area and conduct routine inspections of the ROW by qualified environmental monitors. Implementation of Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/Compensation Plan), B-9a (Conduct pre-construction surveys), and B-9b (Conduct biological monitoring) would reduce the impacts to sensitive amphibians, if present, to less than significant.

Reptiles. Construction of the Devers-Valley No. 2 Alternative would result in potential impacts to the San Diego horned lizard and northern red diamond rattlesnake, two sensitive reptile species that are known to occur in and adjacent to the ROW. In addition, construction may potentially impact six other sensitive reptiles, including flat-tailed horned lizard, Belding's orange-throated whiptail, silvery legless lizard, coast patch-nosed snake, rosy boa, southern rubber boa, and two-striped garter snake. Suitable habitat for these species occurs in the native habitats that occur along the length of this alternative. No other sensitive reptile species that were determined to have a potential to occur along the alignment of the Proposed Project (Table D.2-5 in the Environmental Setting) would be expected to occur along this

alternative because of lack of suitable habitat or because this alternative lies outside of the range of these species. The temporary and permanent loss of habitat and potentially the loss of individuals of the sensitive reptile species would be considered a significant impact (Class II). Implementation of APMs and Mitigation Measures B-9b (Conduct biological monitoring) and B-9d (Conduct pre-construction reptile surveys) would reduce potential impacts to sensitive reptiles to less than significant levels.

Birds. Construction of this alternative would cause direct and indirect impacts on sensitive bird species through permanent and temporary loss of suitable habitat and disturbance related to construction activities. Construction activities and the increased presence of humans may result in direct or indirect impacts to sensitive birds that potentially occur in the vicinity. Construction of this alternative would result in the permanent and temporary removal of suitable desert scrub habitat where two sensitive bird species (Le Conte's thrasher and loggerhead shrike) are known to occur. These two species have been observed in the areas around the Devers Substation. In addition, burrowing owls have also been observed in the areas between Devers Substation and Highway 111.

Suitable habitat for 14 other sensitive bird species also occurs along the length of the alternative (See Table D.2-5 for details). These species include:

- Cooper's hawk
- ferruginous hawk
- golden eagle
- northern harrier
- prairie falcon
- white-tailed kite
- brown-crested flycatcher
- vermillion flycatcher
- mountain plover
- California horned lark
- Yellow warbler
- Southern California rufous-crowned sparrow
- Bell's sage sparrow
- long-eared owl

This temporary and permanent loss of potential habitat would be considered a significant impact (Class II). Implementation of APMs and Mitigation Measures B-1a (Prepare and implement a Habitat Restoration/ Compensation Plan), B-5a (Conduct pre-construction surveys and monitoring for breeding birds), and B-9e (Conduct pre-construction surveys and owl relocation) would reduce impacts to sensitive birds to less than significant levels.

Mammals. Construction of the Devers-Valley No. 2 Alternative would result in potential impacts to, or remove habitat for, a variety of sensitive mammal species that potentially occur along the route of the alternative. These species include:

- pallid bat
- western mastiff bat
- pocketed free-tailed bat
- California leaf-nosed bat
- Townsend's big-eared bat
- Western yellow bat
- spotted bat
- Arizona myotis
- fringed myotis
- Yuma myotis
- cave myotis
- big free-tailed bat
- northwestern San Diego pocket mouse
- Pallid San Diego pocket mouse
- Palm Springs pocket mouse
- Los Angeles pocket mouse
- San Diego black-tailed jackrabbit
- American badger

Disturbance to habitat would be similar to that described for the listed species. Construction activities would result in the removal of habitat that could support populations of these species. The loss of this habitat could affect foraging opportunities for small rodents and bats. However, many of these species are wide ranging

and forage across a large geographic area. Construction-related impacts to bat species could potentially occur in the hilly regions of the San Jacinto Mountains. Roosting or hibernacula sites have been identified in old buildings at the Potrero Conservation Unit site. Construction of the transmission line would be limited to daylight hours. Pallid bats could be impacted by night time travel on the existing access roads. These species are also very susceptible to disturbance and even hiking can result in the abandonment of roosts (Pierson and Brown, 1992). The permanent and temporary loss of habitat and potentially the loss of individuals would be considered a significant impact (Class II). Implementation of Mitigation Measure B-9h (Conduct pre-construction surveys for roosting bats) would reduce potential impacts to a less than significant level. Impacts to American badger are addressed in Section D.2.6.1.8.

Mitigation Measures for Impact B-9: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan.**

B-5a **Conduct pre-construction surveys and monitoring for breeding birds.**

B-9a **Conduct pre-construction surveys.**

B-9b **Conduct biological monitoring.**

B-9d **Conduct pre-construction reptile surveys.**

B-9e **Conduct pre-construction surveys and owl relocation.**

B-9h **Conduct pre-construction surveys for roosting bats.**

State and Federal Jurisdictional Habitats

Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands (Class II)

Although a formal jurisdictional delineation was not conducted, numerous desert washes, ephemeral drainages, and several large drainage features (San Gorgonio Creek, Whitewater River, Scott Creek, and San Jacinto River) are located along the length of the Devers-Valley No. 2 Alternative. Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APMs B-7 and B-21 Avoid impacts to Wetland and Riparian Habitats), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the ACOE, increased sedimentation in the drainages (either directly deposited or through runoff), and/or obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Therefore, any impact to jurisdictional waterways would be significant (Class II). Impacts to jurisdictional waters and wetlands would be reduced to less than significant levels with the implementation of Mitigation Measure B-1a (Prepare and implement a Habitat Restoration/Compensation Plan).

Mitigation Measure for Impact B-10: The Proposed Project would result in adverse effects to Jurisdictional Waters and Wetlands

B-1a **Prepare and implement a Habitat Restoration/Compensation Plan**

Wildlife Corridors and Nursery Sites

Impact B-11: The alternative would adversely affect the movement of fish, wildlife movement corridors, or native wildlife nursery sites (No Impact)

The drainages along the route of this alternative consist of either dry desert washes that carry only intermittent or ephemeral flows in response to seasonal rain events or larger drainages that generally do not support perennial flows, except in exceptional rainfall years. The washes and drainages do not contain perennial flows that would be expected to support fish and other species that are dependent on permanent water sources. There are no known native wildlife nursery sites along the route of this alternative. Therefore, no impacts would be expected to the movement of fish and other species that are dependent upon water sources and no are expected to native wildlife nursery sites.

Impact B-12: The alternative would adversely affect linkages and wildlife movement corridors (No Impact)

Linkages and corridors facilitate regional animal movement, and are generally centered on waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Construction of this alternative is not expected to impact any specific linkages or wildlife movement corridors because no specific linkages are present along the route of this alternative. The Proposed Core Number 5 in the Western Riverside County MSHCP does not act as a specific linkage, rather it is a block of habitat that is situated between other important habitat areas.

Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources (Class II)

The Devers-Valley No. 2 Alternative, as an individual section of the project, would traverse the Cities of Palm Springs, Banning, Beaumont, and San Jacinto, and unincorporated Riverside County, as well as the jurisdictions of the BLM and U.S. Forest Service. The plans developed by these jurisdictions were assessed to determine if any biological resources policies would apply to the construction and operation of this alternative. The Policy Screening Report (Appendix 2) evaluated all applicable policies associated with this alternative and identified those policies that required further evaluation in this EIR/EIS. Policies from several of these plans that required further evaluation and that are also applicable to the Proposed Project are discussed in Table D.2-13 in Section D.6.2.1.11. The Devers-Valley No. 2 Alternative would be consistent with all of these policies, except the construction of the portion of the project in the San Gorgonio River/San Bernardino–San Jacinto Mountains Linkage would conflict with the provisions of the Western Riverside County MSHCP and this would be a potentially significant impact (Class II). Implementation of Mitigation Measures B-13a (Demonstrate compliance with the Western Riverside County MSHCP) and B-13b (Implement the Best Management Practices required by the Western Riverside County MSHCP) would result in compliance with the provisions of the Western Riverside County MSHCP.

Mitigation Measures for Impact B-13: Construction activities may conflict with local policies or ordinances protecting biological resources

B-13a **Demonstrate compliance with the Western Riverside County MSHCP.**

B 13b **Implement the Best Management Practices required by the Western Riverside County MSHCP.**

The Devers-Valley No. 2 Alternative would also traverse several jurisdictions, including San Bernardino National Forest, portions of unincorporated Riverside County, and the City of San Jacinto, that the

Proposed Project would not traverse. The plans developed by these jurisdictions were also assessed to determine if any biological resources policies would apply to the construction and operation of this alternative. Several policies were determined to require further analysis in this EIR/EIS, and these polices are identified and discussed below in Table D.2-13.

Table D.2-13. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
City of Palm Springs *Applicable Segment: Devers-Valley No. 2 Alternative*	City of Palm Springs General Plan (1993)		
	Policy 5.3.3: Encourage the preservation and maintenance of natural flood plain areas and the provision of development standards which will ensure the percolation of water runoff for the replenishment of the natural water table, proper drainage and the prevention of flood damage, and the preservation of plant and animal habitats.	Yes	The Devers-Valley No. 2 Alternative would not preclude the preservation and maintenance of natural flood plain areas. SCE would implement APMs B-19 and B-21, which would minimize disturbance to riparian areas, and would provide for the restoration of any affected areas. SCE would also implement APM B-7 and B-26, which prohibits project activities from occurring in wetland areas and would span wash communities. In addition, SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. Further, SCE would implement APMs W-2 and W-5, which would prevent construction equipment from being placed in stream channels and avoid active drainage channels.
	Policy 5.5.4: Encourage the preservation of ecologically important areas where surrounding wildlife and plant life are dependent on water. Watering holes, where appropriate, shall be maintained and supplemented with a permanent water supply, as such supply is available due to proximate of the animals during the dry summer season when the natural water supply may disappear. Except on the advice of a qualified biologist, grading shall not be allowed nor shall any structure be built within 100 yards of naturally occurring surface water that has been shown to persist for five or more months in any single year. A detailed hydrological study of any project that drills a well or utilizes any other natural water resource at any elevation higher than 600 feet above sea level shall be required.	Yes	The Devers-Valley No. 2 Alternative would not preclude the preservation of ecologically important areas within the City of Palm Springs, nor would it utilize natural water resources in the area. However, SCE would implement APMs B-19 and B-21, which would minimize disturbance to riparian areas, and would provide for the restoration of any affected areas. SCE would also implement APM B-7 and B-26, which prohibits project activities from occurring in wetland areas and would span wash communities. In addition, SCE would implement APMs B-1, B-8, B-12 and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities, or features. Further, SCE would implement APMs W-2 and W-5, which would prevent construction equipment from being placed in stream channels and avoid active drainage channels.

Table D.2-13. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	Policy 5.5.7: Native trees or plants should not be removed if such removal has a significant negative impact on soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff, and wildlife habitats. A native tree or plant may be removed if it interferes with the reasonable improvement of a site or the planned improvement of a street or access, if it is a hazard to pedestrian or vehicular travel, if it interferes with or is causing extensive damage to public services or facilities, or if it will sustain damage due to its location to an existing or proposed structure.	Yes	As part of the project, the final determination for new roads would avoid large trees and other natural features. In addition, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features.
	Policy 5.5.8: Plant species native to the immediate region shall be used in all landscaping located in or adjacent to natural open space areas. Exotic plant species, such as fountain grass, Tamarisk, the Mexican Fan Palm and exotic cactus species, shall be prohibited within 100 feet of undisturbed areas.	Yes	The Devers-Valley No. 2 Alternative would not plant vegetation, except during the restoration of disturbed areas. As part of project, SCE would implement Mitigation Measure B-1a, which would require restoration of disturbed areas, and would utilize a CPUC/BLM approved seed mix that most likely would consist of native plant species.
U.S. Forest Service	Forest Service, Pacific Southwest Region: Land Management Plan: Part 1 Southern California National Forests Vision		
Applicable Segment: Devers-Valley No. 2 Alternative	Goal 6.2. Provide ecological conditions to sustain viable populations of native and desired non native species.	Yes	The Devers-Valley No. 2 Alternative would not preclude the continued existence of viable populations of native and desired non native species. SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features.
U.S. Forest Service	Forest Service, Pacific Southwest Region: Land Management Plan: Part 2 San Bernardino National Forest Strategy		
Applicable Segment: Devers-Valley No. 2 Alternative	WL 2 – Management of Species of Concern Goal. Maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, management indicator species, and watch list species.	Yes	The Devers-Valley No. 2 Alternative would be located within an existing utility corridor (SCE Devers-Valley No. 1 500 kV) that was previously approved by the SBNF. However, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, SCE would also implement several APMs that would minimize impacts to listed species, including desert tortoise, least Bell's vireo, and Coachella Valley fringe-toed lizard, and California gnatcatcher and Stephen's kangaroo rat, which are either known to occur or have the potential to occur in the Devers-Valley No. 2 Alternative.

Table D.2-13. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
U.S. Forest Service	Forest Service, Pacific Southwest Region: Land Management Plan: Part 3 Design Criteria for the Southern California National Forests		
Applicable Segment: Devers-Valley No. 2 Alternative	Plan Standard S12: When implementing new projects in areas that provide for threatened, endangered, proposed, and candidate species, use design criteria and conservation practices (see Appendix H) so that discretionary uses and facilities promote the conservation and recovery of these species and their habitats. Accept short-term impacts where long-term effects would provide a net benefit for the species and its habitat where needed to achieve multiple-use objectives.	Yes	The Devers-Valley No. 2 Alternative would be located within an existing utility corridor (SCE Devers-Valley No. 1 500 kV). However, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, SCE would also implement several APMs that would minimize impacts to listed species, including desert tortoise, least Bell's vireo, and Coachella Valley fringe-toed lizard, and California gnatcatcher and Stephen's kangaroo rat, which are either known to occur or have the potential to occur in the Devers-Valley No. 2 Alternative.
	Plan Standard S18: Protect known active and inactive raptor nest areas. Extent of protection will be based on proposed management activities, human activities existing at the onset of nesting initiation, species, topography, vegetative cover, and other factors. When appropriate, a no-disturbance buffer around active nest sites will be required from nest-site selection to fledging.	Yes	No raptor nest areas have been documented in the SBNF portion of the Devers-Valley No. 2 Alternative. However, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, as part of the project, SCE would implement APM B-5a, which would require pre-construction surveys and monitoring for breeding birds to be performed. If breeding birds with an active nest was found, a 500-foot buffer would be established around the nest excluding all construction activities and placement of structures.
	Plan Standard S22: Except where it may adversely affect threatened and endangered species, linear structures such as fences, major highways, utility corridors, bridge upgrades or replacements, and canals will be designed and built to allow for fish and wildlife movement.	Yes	The Devers-Valley No. 2 Alternative would be located within an existing utility corridor (SCE Devers-Valley No. 1 500 kV); therefore the issue of fish and wildlife movement would have been considered at its establishment. However, SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. The siting of towers to avoid sensitive features would allow wildlife movement corridors to remain.

Table D.2-13. Consistency with Biological Resources Plans and Policies

Agency Regulating Land Use	Regulation or Policy	Project Consistent?	Basis for Consistency
	Plan Standard S31: Design new facilities or expansion of existing facilities to direct public use away from occupied habitat for threatened, endangered, proposed and candidate species.	Yes	The Devers-Valley No. 2 Alternative would not preclude the continued existence of viable populations of native and desired non native species. SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. These APMs would allow SCE to avoid identified sensitive natural resources when siting the towers. In addition, the Proposed Project identifies Mitigation Measure B-8a (SCE Shall Conduct Surveys for Listed Plant Species), which would identify and avoid locations of listed plant species; or, if necessary, transplant certain plant individuals.
Riverside County	Riverside County Comprehensive General Plan, Harvest Valley/Winchester Area Plan (2003)		
Applicable Segment: Devers-Valley No. 2 Alternative	HVWAP 19.3 Conserve existing populations of the California gnatcatcher and Bell's sage sparrow in the Harvest Valley/Winchester planning area, including locations in the North Domenigoni Hills. Conservation should focus on coastal sage scrub and grassland patches in addition to riparian habitats associated with upper Warm Springs Creek.	Yes	The Devers-Valley No. 2 Alternative would not preclude the conservation of California gnatcatcher and Bell's sage sparrow. SCE would implement APM B-37, which would require avoidance of suitable California gnatcatcher habitat, and restoration and/or participation in a land set-aside program if this is not possible. However, SCE would also implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. Also implementation of APM B-21 would require the avoidance of riparian habitats.
	HVWAP 19.7 Conserve and maintain vernal pool complexes and hydrology that supports Riverside fairy shrimp and other rare, threatened and endangered species known to exist within the Harvest Valley/Winchester planning area to promote genetic diversity through wildlife movement.	Yes	SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, implementation of APMs B-7 and B-21 would minimize disturbance to wetland and riparian areas. No Riverside fairy shrimp are known to occur or have the potential to occur within the project area.
City of San Jacinto	City of San Jacinto Draft General Plan (2006)		
Applicable Segment: Devers-Valley No. 2 Alternative	Policy 1.3: Conserve and protect important plant communities and wildlife habitats, such as riparian areas, wetlands, vernal pools, oak woodlands and other significant tree stands, and rare and endangered species.	Yes	SCE would implement APMs B-1, B-8, B-12, and B-13, which would require the completion of surveys to identify sensitive features sites, provide for the avoidance of any highly sensitive features, and provide for the siting of towers to avoid sensitive plants/plant communities and other features. In addition, implementation of APMs B-7 and B-21 would minimize disturbance to wetland and riparian areas. As part of the project, various other APMs, such as APMs B-3, B-4, B-22, B-24, and B-27 through B-39, minimize issues to specific species, including desert tortoise, California gnatcatcher, and least Bell's vireo.

As part of the larger project, this alternative would follow the same route and would traverse the same jurisdictions as the Proposed Project from MP 0 to Devers Substation. Section D.2.6.1.11 discusses the biological policies from these jurisdictions along the remainder of the proposed route that were evaluated further in this EIR/EIS. The Devers-Valley No. 2 Alternative would be consistent with all the policies developed by these other jurisdictions.

Impact B-14: Operation of the transmission line may result in electrocution of listed bird species (Class III)

Potential impacts to birds from electrocution are discussed in Section D.2.6.2 and would be the same as the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV and "the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low" (APLIC, 1996) and would be considered a less than significant impact (Class III).

Impact B-15: Operation of the transmission line may result in line collisions by listed bird species (Class II)

Bird collisions with power lines would be the same as the Proposed Project. It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the vicinity of the alternative. These data are not available for the alternative transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest. The operation of the alternative may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). Implementation of Mitigation Measure B-15a (Utilize collision-reducing techniques in installation of transmission lines) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less than significant level.

Mitigation Measure for Impact B-15: Operation of the transmission line may result in line collisions by listed bird species

B-15a Utilize collision-reducing techniques in installation of transmission lines.

Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers (Class II)

Common ravens are known to nest on transmission towers and they are also known to be opportunistic and will prey upon wildlife species in the vicinity of perching and nesting sites. Common ravens are known to prey upon wildlife species that may be listed or may be considered sensitive. The increase in the number of towers that will result from the transmission facilities associated with the alternative will result in an increase in potential nesting sites for common ravens. APM B-20 states that "all transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS Division of ~~Law Enforcement~~ Migratory Birds to "take" common ravens or their nests." This APM partially reduces the impacts of common ravens on listed and sensitive wildlife species. However, the impacts may still remain significant (Class II) if SCE does not check the towers and remove nests on a regular basis and if SCE removes other nests that are actively utilized by other raptors. Mitigation Measure B-16a (Prepare and implement a raven control plan) would minimize the impacts of ravens on listed and sensitive wildlife species to less than significant levels.

Mitigation Measure for Impact B-16: Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers

B-16a Prepare and implement a raven control plan.

Impact B-17: Wildlife mortality resulting from traffic on access roads (Class III)

Operation of the Devers-Valley No. 2 Alternative will require regular maintenance of the various facilities associated with the project. Maintenance activities require the use of access and spur roads by vehicles and equipment. The operations and maintenance activities will be conducted at about the same frequency as currently exists for the DPV1 transmission line. SCE has indicated that vehicle speeds would be limited to a maximum of 25 mph in desert tortoise habitat (APM B-29). The implementation of this APM, and the approximate same level of use of the roads as currently exists for operation and maintenance activities, will result in a similar impact to what currently exists. Although impacts to some wildlife from vehicle usage may occur on the access roads, this impact would be considered adverse but not significant (Class III).

Impact B-18: The Project would result in disturbance to Management Indicator Species (Class II and Class III)

Management Indicator Species

Management Indicator Species (MIS) are likely to be subject to various levels of disturbance from implementation of the Devers-Valley No. 2 Alternative on NFS lands. Although discussed below, many of the SBNF MIS are State or federally listed species and have been previously addressed in detail in this EIS/EIR. MIS are listed according to the habitat type or management issue for which they are assigned.

Healthy Diverse Habitats (mule deer). Impacts to mule deer could be caused by construction activities, which could cause individuals near the construction area to temporarily abandon their territories due to disturbance from noise and increased human activity (see Impact B-4). The noise from helicopters and other construction equipment may also reduce the day-time movement of mule deer along the ridge. Mule deer are most vulnerable to construction-related disturbances during their breeding seasons. Mule deer in the vicinity of the Devers-Valley No. 2 Alternative may be disturbed or scared off as a result of the construction noise, but these impacts would be temporary and limited to the construction phase of the project. To reduce potential impacts, construction vehicles would remain on established roads except for tower construction in order to avoid unnecessary disturbances to wildlife (see APM B-3), and vehicles would be required to drive at low speeds on NFS lands (see APM A-5). Although construction may result in temporary disturbance to this species, the impact would be considered adverse but not significant (Class III).

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

Noise, dust, visual disturbance from increased human activity, and exhaust emissions from heavy equipment during construction could result in native habitats adjacent to the construction zone being temporarily unattractive to wildlife, such as the mountain lion. Construction could impact this MIS in adjacent habitats by interfering with breeding or foraging activities, altering movement patterns, or causing

animals to temporarily avoid areas adjacent to the construction zone. However, this species is rarely seen and would likely move to areas outside the construction corridor if human activities are present. In addition, this species is primarily nocturnal and often hunts during dawn and dusk periods when construction activities would be limited. Likewise, most construction within the Forest would occur along the ridge tops where limited foraging potential for mountain lions occurs.

The SBNF has indicated the greatest concern to the mountain lion is loss of habitat and connectivity between home ranges (USDA, 2005). Construction of the Devers-Valley No. 2 Alternative would result in some loss of habitat as a result of tower footings, access roads, and construction staging areas. However, much of this would be temporary and only a small percentage of regional habitat would be permanently removed at each tower location. In addition, the Devers-Valley No. 2 Alternative would not create a physical barrier to dispersal or limit the connectivity between core habitat areas. Although construction may result in temporary impacts to mountain lions, impacts would be considered adverse but not significant (Class III).

Montane Conifer Forest (California spotted owl, California black oak, and white fir). Spotted owls may include portions of the corridor within their home ranges as foraging habitat but are not expected to nest in areas subject to project disturbance. Currently the SBNF identifies the greatest threat to this MIS to be the loss of habitat from large stand replacement wildfires (USDA, 2005). Conifer stand and oak woodlands utilized by this species would not be impacted by the Devers-Valley No. 2 Alternative. White fir and black oak are not present in the corridor for the Devers-Valley No. 2 Alternative. Impacts to these MIS would not occur.

Riparian Habitat (song sparrow). The primary threat to song sparrows and other riparian birds is the destruction of riparian habitat and loss of water (USDA, 2005). Numerous small intermittent drainages on the SBNF may support riparian habitat, and construction in riparian areas could result in potentially significant impacts to song sparrows and other riparian birds during construction and operation (Class II). Impacts to these species would be reduced to less than significant levels with implementation of Mitigation Measures B-5a (presented above) and B-18a (below). Mitigation Measure B-5a would require that the Devers-Valley No. 2 Alternative span drainages, avoid impacts to riparian vegetation and riparian conservation areas, and travel would be restricted to existing roads in these sensitive areas. In addition, impacts to song sparrow and other listed riparian bird species (Impact B-5) would be reduced to a less-than-significant level (Class II) with the implementation of Mitigation Measure B-5a (Conduct Pre-construction Surveys and Monitoring for Breeding Birds). To comply with the National Forest Land Management Plan (Forest Plan) no construction would occur in Riparian Conservation Areas (RCA's). On NFS lands Mitigation Measure B-18a (No Activities in Riparian Conservation Areas) would be implemented to comply with the Forest Plan. This mitigation measure is required in addition to APMs and mitigation measures described above.

Mitigation Measure for Impact B-18: The Project would result in impacts to Management Indicator Species

B-5a **Conduct Pre-construction Surveys and Monitoring for Breeding Birds**

B-18a **No Activities in Riparian Conservation Areas.** The final project design will include protective measures that prohibit construction activities on NFS lands in Riparian Conservation Areas in compliance with the Forest Plan. Examples of activities that will NOT be allowed include ground disturbance, adding potable water to these areas while implementing erosion control measures, and removing water from the waterways.

Aquatic Habitat (Arroyo toad). The arroyo toad is not expected to occur on the designated utility corridor on NFS lands. This species may be present at Whitewater Canyon which is on non-NFS lands. This species is not expected to be affected by the Devers-Valley No. 2 Alternative. Impacts to this MIS would not occur.

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak, valley oak, and Engleman oaks were not identified in the proposed utility corridor and would not be impacted by project construction. Impacts to these MIS would not occur.

Bigcone Douglas-fir Forest (Bigcone Douglas-fir). This MIS is not present in the designated utility corridor for the Devers-Valley No. 2 Alternative. Impacts to this MIS would not occur.

Coulter Pine Forest (Coulter pine). Coulter pine is a major component of lower montane forests which are not present in the designated utility corridor for the Devers-Valley No. 2 Alternative. Impacts to this MIS would not occur.

D.2.9 Environmental Impacts of the No Project Alternative

The No Project Alternative is defined in Section C.6. The No Project Alternative includes the assumption that existing transmission lines and power plants would continue to operate. The effects that these facilities cause on the existing environment would not change, so no new impacts would occur from continuing operation of the existing transmission lines and power plants. Also, under the No Project Alternative, the proposed DPV2 project would not be constructed, so the impacts associated with construction and operation of the project (e.g., placement of new transmission towers and removal of existing towers, construction of new access roads and improvements to existing roads, and work at conductor tensioning/splicing and staging/laydown areas) would not occur. Avoided impacts would include temporary disturbance and/or permanent loss of sensitive vegetation communities and listed and sensitive plant and animal species.

The first component of the No Project Alternative is the continuation of ongoing demand-side actions, including energy conservation and distributed generation. These actions would result in a shift in energy use to off-peak periods, and the installation of distributed generation systems for small business and retail customers of electricity. The construction and operation of these future distributed generation systems would potentially require the removal of habitat that could result in the direct mortality of listed and sensitive wildlife and plant species.

The second component of the No Project Alternative is the continuation of supply-side actions, resulting in potentially increased generation within California or increased transmission into California to serve anticipated growth in electricity consumption. The impacts of new power plants and new transmission lines to biological resources would be similar to the Proposed Project. Depending on the location of new generation and transmission infrastructure, listed and sensitive wildlife and plant species would be impacted during construction and operational activities. If new facilities require the removal of existing vegetation and disturbance of surface soils, construction of these facilities would negatively affect various habitats, special status species, and special management areas. At this time, there is no specific proposal or assumption regarding the amount of generation or the location of the generation under the No Project Alternative.

D.2.10 Mitigation Monitoring, Compliance, and Reporting Table

Table D.2-14 presents the mitigation monitoring table for Biological Resources

Table D.2-14. Mitigation Monitoring Program – Biological Resources

IMPACT B-1	**Construction activities would result in temporary and permanent loss of native vegetation**
MITIGATION MEASURE	**B-1a: Prepare and implement a Habitat Restoration/Compensation Plan.** SCE shall restore all areas disturbed by project construction, including temporary disturbance areas around tower construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations that are removed during construction of the Proposed Project. Where onsite restoration is planned for mitigation of temporary impacts to sensitive vegetation communities, SCE shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC/BLM. Hydroseeding, drill seeding, or an otherwise proved restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC/CDFG/ADGF/FWS and BLM ~~(on BLM lands)~~. SCE shall flag the limits of disturbance at each construction site. The Plan shall incorporate the measures identified in the June 2006 Memorandum of Understanding regarding vegetation management along rights-of-way for electrical transmission and distribution facilities on Federal lands. In project areas that occur in the WRCMSHCP plan area, SCE shall use the applicable Best Management Practices identified in the WRCMSHCP. The creation or restoration of habitat shall be monitored for five years after mitigation site construction, or until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the CPUC/BLM.
Location	All areas disturbed by construction activities, including temporary disturbances.
Monitoring / Reporting Action	BLM and CPUC/CDFG to review findings and restoration success submitted by the approved Habitat Restoration Specialist.
Effectiveness Criteria	Temporary and permanently impacted native vegetation communities shall be restored to pre-construction conditions within 5 years as measured by compliance with success criteria.
Responsible Agency	BLM and CPUC.
Timing	Prior to and after construction, as appropriate.
MITIGATION MEASURE	**B-1b: Coordinate tower placement with USFWS/BLM.** Where the proposed route crosses the Kofa National Wildlife Refuge, SCE shall coordinate with the U.S. Fish and Wildlife Service, Division of Refuges' refuge management personnel to determine specific tower site and spur road locations in order to minimize habitat disturbance and/or the loss of valuable habitat features. SCE shall demonstrate compliance with this measure prior to construction.
Location	All locations of the proposed route within the Kofa National Wildlife refuge.
Monitoring / Reporting Action	Tower and spur locations to be submitted to and approved by the BLM and USFWS.
Effectiveness Criteria	Tower sites and spur roads are located in areas where habitat disturbance can be minimized.
Responsible Agency	BLM, CPUC and USFWS Division of Refuges.
Timing	Prior to construction.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

IMPACT B-2	**Construction activities would result in the introduction of invasive non-native or noxious plant species**
MITIGATION MEASURE	**B 2a: Conduct invasive and noxious weed inventory.** SCE shall survey the project corridor, including access roads, for populations of invasive and noxious weeds prior to the start of construction. All populations of invasive and noxious weeds within 500 feet of each tower location shall be flagged prior to construction. The Applicant shall submit a Noxious Weed Control Plan to BLM, CPUC, ADGF, CDFG, and/or USFWS at least 60 days prior to the start of construction. The weed control plan shall specify the location of existing weed populations; measures to control introduction and spread of noxious weeds in the project corridor; worker training, specifications, and inspection procedures for construction materials and equipment used in the project corridor; post-construction monitoring for noxious weeds; and eradication and control methods. Known populations of invasive and noxious weeds in the project corridor shall be evaluated by BLM, CPUC, CDFG, and USFWS to identify candidates for eradication. Selected weed populations shall then be eradicated prior to construction. All seeds and straw material shall be certified weed free. All gravel and fill material used during project construction and maintenance shall be certified weed free by the local County Agriculture Commissioner's Office.
Location	All locations along the proposed route that occur on BLM land will be surveyed.
Monitoring / Reporting Action	Biological monitor to conduct pre-construction surveys, evaluate impacted areas and implement mitigation measures.
Effectiveness Criteria	Successful protection from the introduction or establishment of noxious weeds in post-construction areas.
Responsible Agency	BLM, CPUC, ADGF, CDFG, USFWS.
Timing	Prior to construction.
MITIGATION MEASURE	**B-2b: Implement control measures for invasive and noxious weeds.** SCE shall adhere to the BLM management guidelines for reducing the potential for the introduction of noxious weeds and invasive, non-native plant species ~~on the BLM lands~~ by implementation of the following standards: • **Wash all equipment and vehicles.** Vehicles and all equipment must be washed BEFORE AND AFTER entering all project sites unless otherwise directed in writing by the BLM. This includes wheels, undercarriages, bumpers and all parts of the vehicle. In addition, all tools such as chain saws, hand clippers, pruners, etc., must also be washed BEFORE AND AFTER entering all project ~~sites~~areas. For example, vehicles traveling into contaminated areas are the main dispersal mechanism for yellow star-thistle. All washing must take place where rinse water is collected and disposed of in either a sanitary sewer or a landfill. • **Keep written logs.** When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used and staff present. The log shall contain the signature of the responsible crewmember. • **Written logs will be available** for CPUC/BLM inspection and shall be turned in to BLM on a weekly basis. • **Post-construction weed abatement on the Coachella Valley Preserve.** Post-construction follow-up weed abatement will be conducted on the work areas within the Coachella Valley Preserve and Kofa National Wildlife Refuge. Weed abatement will be conducted during the spring following construction and prior to when the weeds establish flowers or produce seeds.
Location	Entire project area within BLM land.
Monitoring / Reporting Action	Biological monitor to evaluate impacted areas and implement mitigation measures.
Effectiveness Criteria	Successful protection from the introduction or establishment of noxious weeds in post-construction areas.
Responsible Agency	BLM and CPUC.
Timing	Prior to and during construction.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

IMPACT B-5	**Construction activities during the breeding season would result in a potential loss of nesting birds**
MITIGATION MEASURE	**B-5a: Conduct pre-construction surveys and monitoring for breeding birds.** SCE shall conduct protocol level surveys for nesting birds if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, and access road/spur road locations. SCE shall be responsible for designating a CPUC/BLM-approved qualified biologist who can conduct pre-construction surveys and monitoring for breeding birds. If breeding birds with active nests are found, a biological monitor shall establish a 500-foot buffer around the nest and no activities will be allowed within the buffer until the young have fledged from the nest or the nest fails. The biological monitor shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the 500-foot buffer until the nesting cycle is complete or the nest fails. The biological monitor shall be responsible for documenting the results of the surveys and the ongoing monitoring.
Location	Entire project area.
Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring, and if necessary, ensure compliance with mitigation measures.
Effectiveness Criteria	Successful avoidance of breeding birds.
Responsible Agency	BLM, FWS, CDFG and CPUC.
Timing	Prior to and during construction, as appropriate.
IMPACT B-6	**Construction activities would result in indirect or direct loss of listed plants**
MITIGATION MEASURE	**B-6a: Develop a transplanting plan.** In coordination with the BLM, SCE shall prepare a transplanting plan in compliance with both Arizona and California laws and regulations regarding native and sensitive plants, prior to project construction activities. The plan will provide details on the plants being transplanted, including which species and how many individuals of each species; where the plants will be transplanted; how the plants will be transplanted; how the plants will be maintained during the transplanting efforts; and if the plants will be used to re-vegetated disturbed areas of the construction site. As a condition of the plan, a pre-construction survey will be conducted to mark (using bright-colored flagging) all plants that will be transplanted. Some cacti will need to be transplanted facing the same direction as they currently face (in other words, the north side of the plant must stay facing the north); these cacti will be identified in the plan and appropriately marked to identify which side faces north. For listed plant species SCE shall identify if the plants can be avoided. If avoidance is not possible, SCE shall purchase off site mitigation in coordination with the USFWS and CDFG.
Location	In both Arizona and California portions of the project.
Monitoring / Reporting Action	Transplanting plan will be submitted for approval and executed accordingly.
Effectiveness Criteria	Successful transplantation of listed plants.
Responsible Agency	BLM and CPUC.
Timing	Prior to, during, and after construction, as appropriate.
IMPACT B-7	**Construction activities would result in indirect or direct loss of listed wildlife or habitat**
MITIGATION MEASURE	**B-7a: Avoid Colorado River.** All tower pads, equipment laydown areas, and pulling sites would be located outside flowing portions of the Colorado River and flowing tributaries of the river.
Location	Colorado River area.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

Monitoring / Reporting Action	Biological monitor shall ensure all construction related activities avoid the Colorado River and all flowing tributaries.
Effectiveness Criteria	Successful avoidance of the Colorado River.
Responsible Agency	BLM and CPUC.
Timing	Prior to construction.
MITIGATION MEASURE	**B-7b: Conduct pre-construction tortoise surveys.** Prior to construction, SCE shall survey the transmission line corridor for desert tortoise burrows and pallets within fourteen (14) days preceding construction. Tortoise burrows and pallets encountered within the construction zone (if any) will be conspicuously flagged by the surveying biologist(s) and avoided during all construction activities. • During construction activities, SCE shall inspect under equipment and vehicles prior to moving equipment. If tortoises are encountered, the vehicle will not be moved until such animals have voluntarily moved to a safe distance away from the parked vehicle or a qualified biologist moves the tortoise. • SCE shall monitor construction activities in all areas with the potential to support desert tortoise. • Desert tortoises will be handled only by a FWS/CDFG permitted and authorized tortoise handler and only when necessary. New latex gloves will be used when handling each desert tortoise to avoid the transfer of infectious diseases between animals. Desert tortoises will be moved the minimum distance possible within appropriate habitat to ensure their safety. In general, desert tortoises will not be moved in excess of 1,000 feet for adults and 300 feet for hatchlings. • Desert tortoises that are found above ground and need to be moved will be placed in the shade of a shrub. All desert tortoises removed from burrows will be placed in an unoccupied burrow of approximately the same size as the one from which it was removed. All excavation of desert tortoise burrows will be done using hand tools, either by, or under the direct supervision of, an authorized tortoise handler. If an existing burrow is unavailable, an authorized tortoise handler will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original burrow. Desert tortoises moved during inactive periods will be monitored for at least two days after placement in the new burrows to ensure their safety. An authorized tortoise handler will be allowed some judgment and discretion to ensure that survival of the desert tortoise is likely. • If desert tortoises need to be moved at a time of the day when ambient temperatures could harm them (less than 40 degrees F or greater than 90 degrees F), they will be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of an authorized tortoise handler under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes will be appropriately discarded after one use. • All desert tortoises moved will be marked for future identification. An identification number using the acrylic paint/epoxy covering technique should be placed on the fourth costal scute. No notching would be authorized.
Location	All locations along the proposed route that support desert tortoise.
Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring, and if necessary, ensure compliance with mitigation measures.
Effectiveness Criteria	Successful avoidance of tortoise impacts.
Responsible Agency	BLM, CPUC, USFWS, and CDFG.
Timing	Prior to and during construction, as appropriate.
MITIGATION MEASURE	**B-7c: Purchase mitigation lands for impacts to tortoise habitat.** Following construction, SCE shall acquire lands to compensate for the loss of tortoise habitat within the Category II and III management areas in Arizona and California. The amount of land to be acquired will depend on the acreage of disturbance within these management areas. Acquired lands will be in a nearby area of good tortoise density and within tortoise habitat. BLM and SCE shall conduct a field inspection of the disturbed areas after completion of construction of the transmission line to determine the exact acreage required for compensation. The lands purchased will be transferred to the United States and be administered by the BLM. Land may be transferred to the BLM and/or incorporated into an existing management area.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

Location	All locations along the proposed route.
Monitoring / Reporting Action	BLM and SCE will assess amount of land to be acquired based on acreage of disturbance.
Effectiveness Criteria	Purchased land successfully transferred to BLM or an existing management plan.
Responsible Agency	BLM and CPUC.
Timing	After construction.
MITIGATION MEASURE	**B-7d: Purchase mitigation lands for impacts to fringe-toed lizard habitat.** SCE shall purchase or enhance lands for all permanent loss of habitat that are within the Coachella Valley fringe-toed lizard Critical Habitat unless otherwise directed by the USFWS Biological Opinion for the Proposed Project. Mitigation Lands shall be determined in consultation with the USFWS, CDFG, and CPUC. **Clearing work areas of CVFTL in the Coachella Valley Preserve.** A temporary fence or other effective barrier that does not allow lizards to enter the work areas shall be constructed around the perimeter of each of the work areas in the refuge. Any lizards found within the barrier shall be relocated outside of the work areas. **Duration of Surveys for fringe-toed lizard and flat-tailed horned lizard.** Surveys for CVFTL and FTHL shall be conducted during the appropriate seasons (May 1 through the end of summer) and conditions for species identification. The duration of the surveys shall coincide with the duration of construction activities in potential habitat for these species (particularly on the Coachella Valley Preserve) that occurs during the summer season. For any areas of suitable habitat, this measure shall apply. Construction shall not occur on the Preserve or in other potential habitat areas outside of the detection period for FTHL.
Location	All locations of the proposed route within the Coachella Valley fringe-toed lizard Critical Habitat that experienced permanent loss due to construction activities.
Monitoring / Reporting Action	USGWS, CDFG, and CPUC will determine amount of land to be mitigated.
Effectiveness Criteria	Land successfully purchased or enhanced and transferred to BLM or an existing management plan.
Responsible Agency	BLM, CDFG, USGWS, and CPUC.
Timing	After construction.
MITIGATION MEASURE	**B-7e: Conduct focused surveys for California gnatcatchers.** SCE shall conduct protocol level surveys for California Gnatcatchers in all areas supporting suitable coastal sage or Riversidean sage scrub habitats that may be affected by the project (San Bernardino to Vista Substation and San Bernardino Junction to San Bernardino Substation). This will include a minimum 300 foot buffer around construction areas. Presence/absence of this species shall be determined prior to construction activities. If direct impacts to coastal California gnatcatcher occupied habitat cannot be avoided, then impacts to this species shall be addressed through either the Section 7 or Section 10(a)(1)(B) Process under the Federal Endangered Species Act of 1973, as amended and consistent with the WRCMSHCP. SCE shall complete compliance with the Federal Endangered Species Act prior to Project construction. After definition of suitable habitat, the following requirements apply: • Construction activities shall be restricted within coastal sage scrub habitat during the gnatcatcher breeding season (March 15 July 31); • SCE shall implement the applicable Best Management practices in the WRSMSHCP; • SCE shall restore, create, or enhance on site coastal sage scrub habitat; and/or • SCE shall purchase land or mitigation bank credits at an appropriate ratio to offset impacts to gnatcatchers and their habitat.
Location	All locations of the project area that support suitable coastal sage scrub habitat.
Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring, and if necessary, ensure compliance with mitigation measures.
Effectiveness Criteria	Successful avoidance or mitigation of California gnatcatcher impacts.
Responsible Agency	BLM, CDFG, USFWS, and CPUC.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

Timing	Prior to and during construction, as appropriate.
MITIGATION MEASURE	**B-7f: Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat.** Prior to the implementation of construction in areas that support suitable habitat for Stephens' kangaroo rat and San Bernardino kangaroo rat (Calimesa and San Timoteo Canyon). SCE shall conduct focused surveys to determine if sign (burrows, scat, and etc.) of these species is present in all areas within 100 feet that would be permanently or temporarily affected by construction activities. All surveys shall be conducted by a qualified biologist who holds the appropriate Federal FWS permits to conduct trapping surveys for these species. If sign is found to be present, then SCE shall conduct focused trapping surveys according to accepted protocols to determine presence/absence of these species. If these species are found, then SCE shall implement measure to avoid direct impacts, including the placement of exclusion fencing around work areas where impacts will occur, trapping of animals from inside impact areas, and placement of those animals outside of exclusion fencing until construction is completed. A qualified biological monitor shall be present during construction to ensure that animals are not harmed. Following completion of construction, SCE shall remove all exclusion fencing and recontour the soils to the pre-construction condition.
Location	All locations of the project area that support suitable habitat for Stephan's kangaroo rat and San Bernardino kangaroo rat.
Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring, and if necessary, ensure compliance with mitigation measures.
Effectiveness Criteria	Successful avoidance of Stephens' kangaroo rat and San Bernardino kangaroo rat impacts.
Responsible Agency	BLM, CDFG, USFWS, and CPUC.
Timing	Prior to and during construction, as appropriate.
IMPACT B-8	**Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive plants ~~(Class III)~~**
MITIGATION MEASURE	**B-8a: Conduct surveys for listed plant species.** SCE shall conduct focused surveys for listed and sensitive plants prior to construction, Surveys shall be conducted during the appropriate floristic period necessary for the identification of sensitive plant species in all suitable habitat located within the Project ROW and within 100' of all surface disturbing activities. Populations of sensitive plants shall be flagged and mapped prior to construction. If listed plants are located during the focused surveys, then modification of the placement of towers, access roads, laydown areas, and other ground disturbing activities would be implemented in order to avoid listed plants. If listed plants cannot be avoided, SCE shall be responsible for the translocation of plants and/or collection of seeds from existing populations that would be impacted and the planting/seeding of these plants in adjacent suitable portions of the ROW that would not be affected by Proposed Project construction or maintenance activities. Impacts to listed plant species would addressed through the context of a biological opinion.
Location	All areas with the potential to be disturbed by construction activities.
Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring, and if necessary, ensure compliance with mitigation measures. Impacts will be assessed by a biological opinion.
Effectiveness Criteria	Successful avoidance of impacts to all listed plants.
Responsible Agency	BLM, CDFG, ADFG, USFWS, and CPUC.
Timing	Prior to, during, and after construction, as appropriate.
IMPACT B-9	**Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife**
MITIGATION MEASURE	**B-9a: Conduct pre-construction surveys.** SCE shall conduct pre-construction surveys for sensitive wildlife in any area subject to project disturbance. Surveys shall be conducted during a time of year when these species are known to be active. The location of sensitive species identified during the pre-construction surveys shall be identified on project maps.
Location	All areas with the potential to be disturbed by construction activities.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring and report findings to BLM and CPUC.
Effectiveness Criteria	Successful identification and avoidance of all sensitive wildlife that may be impacted by construction activities.
Responsible Agency	BLM and CPUC.
Timing	Prior to construction.
MITIGATION MEASURE	**B-9b: Conduct biological monitoring.** SCE shall conduct biological monitoring of the project area including the laydown, staging, access roads, and any area subject to project disturbance. The biological monitor shall look for sensitive wildlife species (including forest watchlist animals and Forest Service Region 5 sensitive species) that may be located within or immediately adjacent to the construction areas. If sensitive species are found, the biological monitor shall move them out of harm's way (listed species require take authorization) to avoid direct impacts to these species. In the event that the wildlife species may cause harm to the biologist, the biologist shall notify the construction crews and monitor the species until it moves out of harms way. The results of all monitoring shall be recorded in daily monitoring notes that shall be included as part of the required monitoring reports for the project. The SCE shall notify the CPUC/BLM if any sensitive species are located during construction of the project. The SCE shall notify the Forest Service of all sensitive species found on Forest Service land.
Location	Entire project area.
Monitoring / Reporting Action	Biological monitor shall oversee monitoring activities and report findings to BLM and CPUC and when necessary ensure compliance with mitigation measures. The Forest Service shall be notified of any reported sightings of Region 5 and forest watchlist animals on Forest Service Lands.
Effectiveness Criteria	Successful avoidance of impacts to all sensitive wildlife.
Responsible Agency	BLM and CPUC.
Timing	During construction.
MITIGATION MEASURE	**B-9c: Implement a Worker Environmental Awareness Program.** A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist(s) provided by SCE and approved by the CPUC/BLM prior to the commencement of construction activities. Training materials and briefings shall include but not be limited to, discussion of the Federal and State Endangered Species Acts, the consequences of noncompliance with these acts, identification and values of sensitive plant and wildlife species and significant natural plant community habitats, fire protection measures, sensitivities of working on forest service lands and identification of Forest Service sensitive species and MIS wildlife species, hazardous substance spill prevention and containment measures, and review of mitigation requirements. Training materials and a course outline shall be provided to the CPUC and BLM for review and approval at least 30 days prior to the start of construction. Training materials and updates of training materials shall also be provided to the Forest Service for review and participation in the WEAP. SCE shall provide to the CPUC and BLM a list of construction personnel who have completed training, and this list shall be updated by SCE as required when new personnel start work. No construction worker may work in the field for more than 5 days without receiving the WEAP.
Location	Entire project area.
Monitoring / Reporting Action	A qualified biological shall oversee implementation of the WEAP and submit copies of all documentation and training materials.
Effectiveness Criteria	Successful training of all new workers within the first 5 days of work.
Responsible Agency	BLM and CPUC.
Timing	Prior to and during construction.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

MITIGATION MEASURE	**B-9d: Conduct pre-construction reptile surveys.** Prior to construction, SCE shall conduct surveys in areas of suitable habitat for Sonoran desert tortoise, common chuckwalla, banded Gila monster, and desert rosy boa within 48 hours prior to the start of construction activities. If common chuckwallas, banded Gila monsters and/or desert rosy boas are found on the construction site, they will be relocated to nearby suitable habitat outside the construction area. Following the clearance surveys, exclusion fencing will be erected or a biological monitor will be onsite during construction activities. • If potentially suitable burrows or rock piles are found, they will be checked for occupancy. Occupied burrows will be flagged and avoided (employing a 50 foot buffer) during construction. If the burrow cannot be avoided, it will be excavated and the occupant relocated to an unoccupied burrow outside the construction area and of approximately the same size as the one from which it was removed. If an existing burrow is unavailable, the biologist will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original. Trenches, holes, or other excavations will be examined for banded Gila monster prior to filling. If individuals are found, the biological monitor will relocate them to nearby suitable habitat. • During construction, if a common chuckwalla, banded Gila monster, and/or desert rosy boa occur on the project site, construction activities adjacent to the individual's location will be halted and the animal will be allowed to move away from the construction site. If the individual is not moving, a qualified biologist will relocate it to nearby suitable habitat outside the construction area. It shall be placed in the shade of a shrub. The Forest Service will be notified of any sensitive wildlife identified on NFS lands. Also during construction, if a Sonoran desert tortoise occurs on the project site, construction activities adjacent to the individuals location will be halted and the *Guidelines for Handling Sonoran Desert Tortoises Encountered During Construction Projects* will be followed by qualified personnel.
Location	All project areas that may support sensitive reptiles.
Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring, and if necessary, ensure compliance with mitigation measures.
Effectiveness Criteria	Successful avoidance of impacts to chuckwallas.
Responsible Agency	BLM and CPUC.
Timing	Prior to and during construction.
MITIGATION MEASURE	**B-9e: Conduct pre-construction surveys and owl relocation.** Prior to construction, SCE shall conduct pre-construction surveys for the western burrowing owl. Surveys shall be conducted prior to ground disturbance activities in appropriate areas within the potential impact areas of the project to determine the presence of burrowing owls and to ensure clearance of these areas. If active owl burrows are discovered during pre-construction surveys, owls would be evicted from the burrows using either active or passive techniques as recommended by the BLM and Burrowing Owl Consortium. Owl relocation, as well as discouragement of owls from returning to the site, will occur in the following manner: • During the non-breeding season (September 1 through January 31), burrowing owls occupying the Proposed Project site will be evicted by passive relocation. Passive relocation would include installation of one-way doors on burrow entrances that would let owls out of the burrow but would not let them back in. • If construction is to occur during the breeding season (February 1 through August 31) and prior to the relocation of the owls, 75 meter (246 foot) protective buffers would be maintained around burrows occupied by owls until a BLM approved biologist approves other action. Other actions could include passive relocation if it is determined that owls have not begun laying eggs or postponement of construction in the area until the young are fledged and no longer dependent upon the nest burrow. • Once fledglings are capable of independent survival and adult non-breeding owls have successfully been relocated offsite, potential owl habitat (squirrel burrows) would be collapsed in order to keep the owls from returning. Ground squirrels would be removed from the site by trapping and relocation or by other approved means. Following squirrel removal, existing ground squirrel burrows would be destroyed.
Location	All project areas with suitable burrowing owl habitat.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

Monitoring / Reporting Action	Biological monitor shall oversee surveys and monitoring, and if necessary, ensure compliance with mitigation measures.
Effectiveness Criteria	Successful avoidance of impacts to burrowing owls.
Responsible Agency	BLM and CPUC.
Timing	Prior to and during construction.
MITIGATION MEASURE	**B-9f: Perform construction outside of breeding and lambing period.** Construction activities conducted within suitable habitat near Burnt Mountain, Harquahala Mountain, and Kofa NWR shall not occur during the period of the year when bighorn sheep are lambing (from January 1 to April 30). A pre-construction survey for bighorn sheep shall be conducted on Forest Service lands prior to construction and maintenance of the transmission lines. If bighorn sheep are found, then SCE shall consult with the Forest Service, USFWS, and Bighorn Institute to identify appropriate avoidance measures.
Location	All locations on BLM land and Forest Service lands where bighorn sheep breeding or lambing may occur.
Monitoring / Reporting Action	Biological monitor shall oversee monitoring, and if necessary, ensure compliance with mitigation measure. Biological Monitor shall notify BLM, CPUC, and Forest Service of the findings of the pre-construction surveys.
Effectiveness Criteria	Successful avoidance of impacts to bighorn sheep.
Responsible Agency	BLM, USFWS, and CPUC.
Timing	Prior to and during construction.
MITIGATION MEASURE	**B-9g: Conduct pre-construction surveys and relocation for American badger.** Prior to construction, SCE shall conduct pre-construction surveys for American Badger. Surveys will be conducted prior to ground disturbance activities in areas that contain habitat for this species. Badger dens located outside the project area shall be flagged for avoidance. Unoccupied dens located in the right of way shall be covered to prevent the animal from re-occupying the den prior to construction. ~~Occupied~~ If occupied dens are identified in the area of the ROW that must be disturbed, the CDFG/BLM/Forest Service shall be consulted regarding options for action. Hand-excavation is an option if occupied dens cannot be avoided, but alternatives shall be considered due to potential danger to biologists. ~~hand-excavated if avoidance is not possible~~. Dens shall only be hand–excavated before or after the breeding season (February 1–May 30). Any relocation of badgers shall take place after consultation with the BLM, Forest Service, and CDFG.
Location	All locations where construction activities would occur near or on suitable habitat for the American badger.
Monitoring / Reporting Action	BLM and CPUC to verify documentation of survey and avoidance or excavation documentation.
Effectiveness Criteria	Identification and avoidance of American badger dens.
Responsible Agency	CPUC and BLM
Timing	Prior to construction.
MITIGATION MEASURE	**B-9h: Conduct pre-construction surveys for roosting bats.** SCE shall conduct surveys focused surveys for suitable roosting habitat or nursery sites for sensitive bats at the tower location, access/spur roads, and laydown/staging areas that occur in rocky areas or in areas where caves or old mines are present. If suitable roosting/nursery sites are found, then focused surveys shall be conducted to determine if the sites support sensitive bat species. If sensitive bat species occur at these sensitive roosting/nursery sites, then tower-specific adjustments and adjustments of the locations of access/spur roads and laydown/staging areas shall be made to avoid these sites. If towers, access/spur roads, and/or laydown/staging areas cannot avoid these sites, then construction of the towers, roads, and establishment of laydown/staging areas shall be delayed until the breeding cycles for the sensitive bats are completed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the sensitive bats are completed. SCE shall document the results of the surveys and any avoidance of roosting/ nursery sites for sensitive bats.
Location	All locations where construction activities would occur near rocky areas, caves or old mines.

Table D.2-14. Mitigation Monitoring Program – Biological Resources

Monitoring / Reporting Action	BLM and CPUC to review survey and avoidance documentation.
Effectiveness Criteria	Identification and avoidance of suitable roosting habitat or nursery sites for sensitive bats.
Responsible Agency	CPUC and BLM Phoenix.
Timing	Prior to construction.
MITIGATION MEASURE	**B-9i: Schedule construction when the Coachella Valley round-tailed squirrel is dormant.** SCE shall conduct pre-construction surveys for Coachella Round Tailed Squirrels prior to construction to identify locations of nesting colonies. Placement of footings, roads, and laydown areas shall avoid nesting colonies of this species. If this species is identified within the ROW, construction activities shall be scheduled only during periods when this species is dormant (between August 1 and February 28).
Location	All locations where construction activities would occur.
Monitoring / Reporting Action	BLM and CPUC to verify that construction activities are not scheduled between March 1 and July 31 in areas where Coachella Valley round-tailed squirrel nesting colonies have been identified.
Effectiveness Criteria	Identification and avoidance of Coachella Valley round-tailed squirrel nesting colonies.
Responsible Agency	CPUC and BLM
Timing	Prior to construction.
IMPACT B-11	**Construction activities would result in adverse effects to the movement of fish, wildlife movement corridors, or native wildlife nursery sites**
MITIGATION MEASURE	**B-9f: Perform construction outside of breeding and lambing period** (See above).
Location	See above.
Monitoring / Reporting Action	See above.
Effectiveness Criteria	See above.
Responsible Agency	See above.
Timing	See above.
MITIGATION MEASURE	**B-9h: Conduct pre-construction surveys for roosting bats** (See above).
Location	See above.
Monitoring / Reporting Action	See above.
Effectiveness Criteria	See above.
Responsible Agency	See above.
Timing	See above.
IMPACT B-13	**Construction activities may conflict with local policies or ordinances protecting biological resources**
MITIGATION MEASURE	**B-13a: Demonstrate compliance with the Western Riverside County MSHCP.** SCE shall provide documentation that it has complied with the provisions of the MSHCP.
Location	All locations ROW within the Western Riverside MSHCP boundaries.
Monitoring / Reporting Action	BLM and CPUC to review submitted compliance documentation.
Effectiveness Criteria	Confirmation of compliance with Western Riverside MSHCP provisions.
Responsible Agency	CPUC
Timing	During construction.
MITIGATION MEASURE	**B-13b: Implement the Best Management Practices required by the Western Riverside County MSHCP.** SCE shall provide documentation that is has implemented the Best Management Practices set forth in Appendix C of the Western Riverside MSCHP.

Table D.2-14. Mitigation Monitoring Program – Biological Resources	
Location	All locations within the Western Riverside MSHCP boundaries where construction activities would occur.
Monitoring / Reporting Action	BLM and CPUC to review submitted documentation.
Effectiveness Criteria	Confirmation of implementation of Best Management Practices in the Western Riverside MSHCP.
Responsible Agency	CPUC
Timing	During construction.
IMPACT B-15	**Operation of the transmission line may result in collisions by listed bird species**
MITIGATION MEASURE	**B-15a: Utilize collision-reducing techniques in installation of transmission lines.** SCE shall install the transmission line utilizing APLIC standards for collision-reducing techniques as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994 (APLIC, 1996)." • Placement of towers and lines will not be located significantly above existing transmission line towers and lines, topographic features, or tree lines to the maximum extent practicable. • Overhead lines that occur significantly above the above-mentioned features and that are located in highly utilized avian flight paths will be marked utilizing aerial marker spheres, swinging plates, spiral vibration dampers, bird flight diverters, avifauna spirals, or other diversion device as to be visible to birds and reduce avian collisions with lines.
Location	All locations along the ROW where potential avian collisions could occur.
Monitoring / Reporting Action	BLM and CPUC to verify the placement of towers and lines, and the existence of collision-reducing devices on towers and lines located above existing structures/features.
Effectiveness Criteria	SCE has located towers and level with or below existing structures/features, or has installed collision-reducing devices on tower and lines.
Responsible Agency	CPUC and BLM.
Timing	During construction.
IMPACT B-16	**Operation of the transmission line may result in increased predation of listed and sensitive wildlife species by ravens that nest on transmission towers**
MITIGATION MEASURE	**B-16a: Prepare and implement a raven control plan.** SCE shall prepare a common raven control plan that identifies the purpose of conducting raven control, provides training in how to identify raven nests and how to determine whether a nest belongs to a raven or a different raptor species, describes the seasonal limitations on disturbing nesting raptors species (excluding ravens), describes the procedure for obtaining a permit from the USFWS's ~~Law Enforcement~~ Division of Migratory Birds, and describes procedures for documenting the activities on an annual basis. SCE shall gain approval of the plan from the USFWS's ~~Law Enforcement~~ Division of Migratory Birds. SCE shall provide this raven control plan to all transmission line companies that conduct operations within the ROW.
Location	All locations along ROW that support desert tortoise.
Monitoring / Reporting Action	CPUC/BLM monitor verifies that SCE submitted raven control plan and all SCE and other transmission line companies operating in ROW receive proper training
Effectiveness Criteria	USFWS approves raven control plan. SCE and other transmission line companies operating in the ROW are informed of the purposes of raven control, and receive training on the procedures of raven identification, permitting, and documentation.
Responsible Agency	CPUC; BLM Phoenix, Yuma, and Palm Springs Field Offices; USFWS ~~Law Enforcement~~ Division of Migratory Birds
Timing	Prior to the completion of construction for preparation and approval of the raven control plan and training of SCE and other companies employees; and ongoing, as needed, throughout operation for training of new employees

Table D.2-14. Mitigation Monitoring Program – Biological Resources

IMPACT B-18	The Project would result in disturbance to Management Indicator Species
MITIGATION MEASURE	**B-5a: Conduct pre-construction surveys and monitoring for breeding birds.**
Location	See above
Monitoring / Reporting Action	See above
Effectiveness Criteria	See above
Responsible Agency	See above and San Bernardino National Forest
Timing	See above
MITIGATION MEASURE	**B-18a: No Activities in Riparian Conservation Areas.** The final project design will include protective measures that prohibit construction activities on NFS lands in Riparian Conservation Areas in compliance with the Forest Plan. Examples of activities that will NOT be allowed include ground disturbance, adding potable water to these areas while implementing erosion control measures, and removing water from the waterways.
Location	All locations within the San Bernardino National Forest.
Monitoring / Reporting Action	CPUC/BLM monitor verifies that construction does not occur in Riparian Conservation Areas.
Effectiveness Criteria	SBNF approves construction plan. SCE and construction contractors have no construction activities in Riparian Conservation Areas.
Responsible Agency	San Bernardino National Forest
Timing	Prior to the start of construction

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D.3 Visual Resources

D.3.1 Regional Setting and Approach to Data Collection

D.3.1.1 Regional Setting

The eastern portion of the Proposed Project (east of Desert Center) is located within the Basin and Range physiographic province including sections of the Sonoran Desert. This area is characterized by rough, rocky mountains formed by northerly trending fault blocks. Typical of this province are desert basins and jagged ranges along with desert alluvial slopes (bajadas) and wide valleys that are interconnected across low divides (Hunt, 1974). Vegetation varies depending on landforms, and ranges from creosote flats to saguaro forests (SCE, 2005a). Views from travel routes within the eastern portion of the study area tend to encompass broad, sweeping desert expanses bordered by rugged mountain ranges. The western portion of the project area extends into the Transverse Ranges section of the Pacific Border Province. Here, the project passes through arid and semi-arid landscapes at the base of the east-west trending San Jacinto and San Bernardino Mountains into the more urbanized and rapidly developing residential, commercial, and industrial environs of west Riverside and San Bernardino Counties of Southern California. The Palm Springs and San Gorgonio Pass area is notable for the extensive wind farm development and concentration of energy infrastructure that dominate much of the landscape. Within this regional setting, the study area for the visual resources analysis was defined by the numerous viewpoints from which the Proposed Project would be seen. The viewshed is extensive given the relative openness of much of the landscape, the height of the proposed structures, and the availability of viewing opportunities from travel routes, recreational use areas, and nearby residential and commercial areas.

D.3.1.2 Methodology

Adding to the diversity of landscapes through which the Proposed Project would pass, are numerous jurisdictions to which the project would be subject. In general, the Visual Resources technical approach was differentiated according to: (1) federal lands administered by the United States Department of Interior Bureau of Land Management (BLM), and (2) other federal (non-BLM), non-federal public and private lands (see Table D.3-1). The technical approach for that portion of the project where lands are subject to administration by the BLM was based on the BLM's Visual Resource Management (VRM) system. This is a system that BLM requires for use on BLM-administered lands (located primarily along the eastern portion of the Proposed Project) but cannot be applied to non-BLM lands because the designations of visual character of land areas do not exist. The non-BLM portions of the project were analyzed using the Visual Sensitivity–Visual Change system. The results for both methodologies are summarized and presented as a series of foldout tables at the end of the Visual Resources section in Appendix VR-1 (see enclosed CD).

Table D.3-1. Visual Resources Approach

Land Category	BLM Visual Resource Management (VRM) Methodology	Visual Sensitivity – Visual Change Methodology
Federal Lands Administered by BLM	×	
Federal Lands not Administered by BLM (e.g., Kofa National Wildlife Refuge)		×
Native American Lands		×
State and Local Public Lands		×
Private Lands		×

Although both methods share similarities (comparing anticipated change to existing sensitivity) there are differences in both approach and terminology. The following sections describe the two methods.

BLM Visual Resource Management (VRM) Approach

Public lands crossed by the Proposed Project and administered by the BLM have a variety of visual values. These lands are subject to visual resource management objectives as developed using the BLM Visual Resource Management (VRM) System (BLM, 1984, 1986a, 1986b) and presented in the Resource Management Plan for a given unit. The BLM system identifies four VRM Classes (I through IV) with specific management prescriptions for each class. The system is based on an assessment of scenic quality, viewer sensitivity and viewing distance zones.

Scenic Quality

Scenic Quality is a measure of the overall impression or appeal of an area created by the physical features of the landscape, such as natural features (landforms, vegetation, water, color, adjacent scenery and scarcity), and built features (roads, buildings, railroads, agricultural patterns, and utility lines). These features create the distinguishable form, line, color, and texture of the landscape composition that can be judged for scenic quality using criteria such as distinctiveness, contrast, variety, harmony, and balance. Table D.3-2 presents the VRM scenic quality rating characteristics that are evaluated to arrive at one of three scenic quality ratings (A, B, or C) for a given landscape. The three scenic quality ratings can be described as follows:

- **Scenic Quality Class A** – Landscapes that combine the most outstanding characteristics of the region.
- **Scenic Quality Class B** – Landscapes that exhibit a combination of outstanding and common features.
- **Scenic Quality Class C** – Landscapes that have features that are common to the region.

Viewer Sensitivity

Viewer Sensitivity is a factor used to represent the value of the visual landscape to the viewing public, including the extent to which the landscape is viewed. For example, a landscape may have high scenic qualities but be remotely located and, therefore, seldom viewed. Sensitivity considers such factors as visual access (including duration and frequency of view), type and amount of use (See Table D.3-3), public interest, adjacent land uses, and whether the landscape is part of a special area (e.g., California Desert Conservation Area or Area of Critical Environmental Concern). The three levels of viewer sensitivity can generally be defined as follows:

- **High Sensitivity.** Areas that are either designated for scenic resources protection, or receive a high degree of use (includes areas visible from roads and highways receiving more than 45,000 visits [vehicles] per year). Typically within the foreground/middleground viewing distance (see Table D.3-4).
- **Medium Sensitivity.** Areas lacking specific, or designated, scenic resources protection, but are located in sufficiently close proximity to be within the viewshed of the protected area. Includes areas that are visible from roads and highways receiving 5,000 to 45,000 visits (vehicles) per year. Typically within the background viewing distance.
- **Low Sensitivity.** Areas that are remote from populated areas, major roadways, and protected areas or are severely degraded visually. Includes areas that are visible from roads and highways receiving less than 5,000 visits (vehicles) per year.

Table D.3-2. Visual Resource Management (VRM) Scenic Quality Rating

Component	Scenic Quality Rating		
Landform	High vertical relief (prominent cliffs, spires, or massive rock outcrops); severe surface variation, highly eroded formations (major badlands or dune systems); detail features dominant and exceptionally striking/ intriguing. 5	Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features, which are interesting though not dominant or exceptional. 3	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features 1
Vegetation	A variety of vegetative types as expressed in interesting forms, textures, and patterns. 5	Some variety of vegetation, but only one or two major types. 3	Little or no variety or contrast in vegetation. 1
Water	Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape. 5	Flowing, or still, but not dominant in the landscape. 3	Absent or present, but not noticeable. 0
Color	Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water or snow fields. 5	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element. 3	Subtle color variations, contrast, or interest; generally mute tones. 1
Influence of Adjacent Scenery	Adjacent scenery greatly enhances visual quality. 5	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element. 3	Adjacent scenery has little or no influence on overall visual quality. 0
Scarcity	One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc. 5	Distinctive, though somewhat similar to others within the region. 3	Interesting within its setting, but fairly common within the region. 1
Cultural Modifications	Modifications add favorably to visual variety while promoting visual harmony. 2	Modifications add little or no visual variety to the area, and introduce no discordant elements. 0	Modifications add variety but are very discordant and promote strong disharmony. -4
Scenic Quality Rating:	**A = 19 or more**	**B = 12 to 18**	**C = 11 or less**

Table D.3-3. Amount of Use Classifications

Type Area	High	Moderate	Low
Roads & Highways	More than 45,000 visits/yr	5,000 to 45,000 visits/yr	Less than 5,000 visits/yr
Rivers & Trails	More than 20,000 visits/yr	2,000-20,000 visits/yr	Less than 2,000 visits/yr
Recreation Sites	More than 10,000 visitor-days/yr	2,000-10,000 visitor-days/yr	Less than 2,000 visitor-days/yr

It should be noted that all of the BLM lands within the study area in California east of the Coachella Valley are located within the California Desert Conservation Area (CDCA). This designation imparts a High rating for Viewer Sensitivity for all lands within the CDCA.

Viewing Distance Zones

Landscapes are generally subdivided into three distance zones based on relative visibility from travel routes or observation points. The foreground/middleground (f/m)

Table D.3-4. Distance Zones

f/m (foreground/middleground) ..... 0 to 3–5 miles
b (background) ..... 5-15 miles
s/s ..... seldom seen areas

zone includes areas that are less than three to five miles from the viewing location. The foreground/middle-ground zone defines the area in which landscape details transition from readily perceived, to outlines and patterns. The background (b) zone is generally greater than 5, but less than 15, miles from the viewing location. The background zone includes areas where landforms are the most dominant element in the landscape, and color and texture become subordinate. In order to be included within this distance zone, vegetation should be visible at least as patterns of light and dark. The seldom-seen zone (s/s) includes areas that are usually hidden from view as a result of topographic or vegetative screening or atmospheric conditions. In some cases, atmospheric and lighting conditions can reduce visibility and shorten the distances normally covered by each zoned (BLM, 1986b).

Visual Resource Management Classes

The VRM Class for a given area is typically arrived at through the use of a classification matrix similar to that presented in Table D.3-5. By comparing the scenic quality, visual sensitivity, and distance zones, the specific VRM class can be determined. The exception to this process is the Class I designation, which is placed on special areas where management activities are restricted (e.g., wilderness areas).

Table D.3-5. Visual Resource Management (VRM) Classification Matrix

Visual Sensitivity Levels		High			Medium			Low
Special Areas		I	I	I	I	I	I	I
Scenic Quality	A	II	II	II	II	II	II	II
	B	II	III IV	III	III	IV	IV	IV
	C	III	IV	IV	IV	IV	IV	IV
Distance Zones		f/m	b	s/s	f/m	b	s/s	s/s

The objectives of each VRM classification as stated in the BLM VRM *Visual Resource Inventory Manual* are as follows:

- **VRM Class I.** The objective is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
- **VRM Class II.** The objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- **VRM Class III.** The objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate or lower. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
- **VRM Class IV.** The objective is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

VRM Classes have been established in existing Resource Management Plans for all of the BLM lands crossed by the Proposed Project and alternatives in Arizona. Along the California portion of the project, VRM Classes have been established in existing BLM Plans only in a portion of the Coachella Valley. VRM classifications have not been established in Resource Management Plans for BLM lands east of Coachella Valley to the California-Arizona border. For those lands, Interim VRM Classes were developed using the above methodology. Scenic Quality Field Inventories for each Scenic Quality Rating Unit are presented in Appendix VR-2 (see enclosed CD).

As previously stated, all lands within the California Desert Conservation Area are assigned a High Visual Sensitivity Level. All of the inventoried lands are also within the foreground/middleground (f/m) viewing distance zone of one or more public viewing points or access roads. As a result, the Interim VRM Classes were tied directly to the Scenic Quality Classes. Areas with Class B Scenic Quality were assigned an Interim VRM Class II. Areas with Class C Scenic Quality were assigned an Interim VRM Class III. The VRM Class matrices for each Scenic Quality Rating Unit are presented in Appendix VR-3 (see enclosed CD).

Visual Sensitivity – Visual Change Methodology

Initially, the proposed and alternative routes were viewed from various public roads and vantage points to develop an overall assessment of the existing landscape character, visual quality, and viewing conditions by segment. In consultation with CPUC and BLM staff, a number of representative Key Viewpoints (KVPs — also commonly referred to as Key Observation Points [KOPs] under the BLM methodology) were established to assess the various factors that are considered in the evaluation of a landscape's existing visual resources. Key Viewpoints or KVPs are representative locations from which the visual analysis is focused and are generally selected to be representative of the most critical locations from which the project would be seen. KVPs are often located in an effort to evaluate existing landscapes and potential impacts on visual resources with various levels of sensitivity, in different landscape types and terrain, and from various vantage points. Typical KVP locations for the present project include (1) along major or significant travel corridors or points of visual access; (2) at key vista points; (3) at significant recreation areas; (4) in residential areas; and (5) at locations that provide good examples of the existing visual context. At each key viewpoint, the existing landscape was characterized and photographed. Each of the factors considered in the evaluation of the existing landscape under the Visual Sensitivity–Visual Change Methodology is generally expressed as low, moderate, or high as discussed in the following paragraphs.

Visual Quality is a measure of the overall impression or appeal of an area as determined by the particular landscape characteristics such as landforms, rockforms, water features, and vegetation patterns, as well as associated public values. The attributes of variety, vividness, coherence, uniqueness, harmony, and pattern contribute to visual quality classifications of indistinctive (low), common (moderate), and distinctive (high). Visual quality is studied as a point of reference to assess whether a given project would appear compatible with the established features of the setting or would contrast noticeably and unfavorably with them.

Viewer Concern addresses the level of interest or concern of viewers regarding an area's visual resources and is closely associated with viewers' expectations for the area. Viewer concern reflects the importance placed on a given landscape based on the human perceptions of the intrinsic beauty of the existing landforms, rockforms, water features, vegetation patterns, and even cultural features.

Viewer Exposure describes the degree to which viewers are exposed to views of the landscape. Viewer exposure considers landscape visibility (the ability to see the landscape), distance zones (proximity of

viewers to the subject landscape), number of viewers, and the duration of view. Landscape visibility can be a function of several interconnected considerations including proximity to viewing point, degree of discernible detail, seasonal variations (snow, fog, and haze can obscure landscapes), time of day, and presence or absence of screening features such as landforms, vegetation, and/or built structures. Even though a landscape may have highly scenic qualities, it may be remote, receiving relatively few visitors and, thus, have a low degree of viewer exposure. Conversely, a subject landscape or project may be situated in relatively close proximity to a major road or highway utilized by a substantial number of motorists and yet still result in relatively low viewer exposure if the rate of travel speed on the roadway is high and viewing times are brief, or if the landscape is partially screened by vegetation or other features. Frequently, it is the subject area's proximity to viewers or *distance zone* that is of particular importance in determining viewer exposure. Landscapes are generally subdivided into three or four distance zones based on relative visibility from travel routes or observation points. Distance zones typically include foreground, middleground, and background. The actual number of zones and distance assigned to each zone is dependent on the existing terrain characteristics and public policy and is often determined on a project by project basis.

Overall Visual Sensitivity is a concluding assessment as to an existing landscape's susceptibility to an adverse visual outcome. A landscape with a high degree of visual sensitivity is able to accommodate a lower degree of adverse visual change without resulting in a significant visual impact. A landscape with a low degree of visual sensitivity is able to accommodate a higher degree of adverse visual change without resulting in a significant visual impact. Overall visual sensitivity is derived from a comparison of existing visual quality, viewer concern, and viewer exposure.

D.3.2 Environmental Setting for the Proposed Project – Devers-Harquahala

The eastern portion of the Proposed Project from Devers Substation to Harquahala Switchyard is characterized by rough, rocky mountains with jagged ridgelines bordering desert basins and alluvial slopes. The wide, flat valley floors are typically interconnected across low divides. Vegetation throughout this portion of the study area varies depending on landforms, ranging from creosote flats to saguaro forests (SCE, 2005a). The western-most portion of this area, in the Coachella Valley, is rapidly developing with extensive residential subdivisions and golf courses approaching much of the Proposed Project right-of-way. Project viewing opportunities within the eastern portion of the study are numerous and include Interstate 10 (I-10), State highways, and local roads, 4WD access roads on public lands, recreational and visitor areas, and residential developments. The following sections provide descriptions of each of the sub-segments within the eastern study area. Within each sub-segment, one or more Key Viewpoints (KVPs) have been established from which detailed setting characterizations have been developed to represent the typical visual resources along that sub-segment. The location of each KVP is shown on Figures D.3-1A through D.3-1F (see enclosed CD).

D.3.2.1 Harquahala to Kofa National Wildlife Refuge

This portion of the Proposed Project extends from Harquahala Switchyard to the eastern boundary of the Kofa National Wildlife Refuge. Heading east and then north from Harquahala Switchyard, the route passes through State and private lands on the arid Harquahala Plain. This relatively flat, desert landscape supports a low diversity of vegetation, composed primarily of short grass and shrubs. Passing to the north of I-10, the route enters public lands administered by the BLM before turning west to pass through a gap between Burnt Mountain on the south and the more visually dominant Big Horn Mountains to the

north. The route continues north across the flat Harquahala Plain crossing Salome Highway and eventually converging on and then crossing to the south side of I-10 approximately 19 miles west of Burnt Mountain. The route continues to the southwest before turning to the west at the north end of the Eagletail Mountains. From here, the route continues west-southwest across the flat and equally visually non-distinct Ranegras Plain to the eastern border of Kofa Wildlife Refuge, approximately 18 miles west of the Eagletail Mountains.

Views of the Proposed Project would be available from I-10, Salome Highway, Avenue 75 East, Hovatter Road, Vicksburg Road, and numerous 4WD access roads on public lands. The landscape of the Harquahala and Ranegras Plains is very flat with the occasional low, isolated desert hill. The plains are surrounded by prominent, rugged mountain ranges including Saddle Mountain and the Eagletail Mountains to the south and the Big Horn Mountains Harquahala Mountains and Little Harquahala Mountain to the north. The area is relatively undeveloped and the linear form of I-10 is the prominent built feature in the landscape. The other notable built feature is the existing Devers–Palo Verde 1 500 kV Transmission Line (DPV1) with its prominent vertical structural forms and lines, which the proposed Devers–Palo Verde No. 2 (Proposed Project) would parallel.

Three areas of potential visual sensitivity were selected for detailed analysis: (1) views of Big Horn Mountain from just south of Big Horn Mountains Wilderness and north of I-10, (2) the crossing of I-10 as viewed from I-10, and (3) views from the points of access to the north end of the Eagletail Mountains and Wilderness (south of I-10). Therefore, three KVPs were selected to represent the visual setting along this route segment. The location of each of these KVPs is shown on Figure D.3-1A (see enclosed CD). The results of the visual analysis are summarized in table format in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for each KVP is presented in the following paragraphs.

After each viewpoint heading, one of the following notations is made: (VRM) or (VS-VC). This designation indicates the methodology to which that particular viewpoint is subject — either the BLM's Visual Resource Management methodology or the Visual Sensitivity–Visual Change methodology.

Key Viewpoint 1 – Big Horn Mountains (VRM)

Key Viewpoint 1 was established on a 4-wheel drive (4WD) access road south of the Big Horn Mountains, immediately west of Burnt Mountain and north of I-10 (see Figure D.3-2A[1]; see enclosed CD). Viewing to the north-northwest toward the existing DPV1 line and the proposed route, this location was selected to generally characterize the existing landscape north of I-10 and immediately adjacent and to the south of the Big Horn Mountains Wilderness. Views to the north from the access roads in this area encompass a predominantly natural setting with the notable exception of the existing DPV1 line. The foreground landform of the Harquahala Plain appears flat and horizontal. The rugged, angular form of Big Horn Mountain provides a dramatic contrast to the Plain it backdrops. Landform colors range from tan to lavender and bluish hues at distance, while landform textures appear smooth to granular. Vegetation is patchy, consisting of low-growing grasses and shrubs with irregular to distinct forms (where defined by the floor of the plain). Vegetation colors include tans to pale yellow for grasses with muted greens for the shrubs. Vegetation exhibits a matte texture. The view from KVP 1 encompasses existing

[1] Figures showing existing setting are presented in Section D.3.6, along with simulations of the Proposed Project components.

DPV1 Towers A358 through A362.[2] At a viewing distance of approximately 2.75 miles, the DPV1 lattice structures are less discernible than the lighter-colored curvilinear arcs of the transmission line conductors. To the extent that they are noticeable, the lattice structures appear geometric and complex. Structural features appear gray in color and smooth in texture. The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is III as identified in the Lower Gila Resource Area Management Plan. The VRM Class III Management Objective is as follows:

> ***VRM Class III.*** *To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management Activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.*

Key Viewpoint 2 – Interstate 10 Crossing/Harquahala Plain (VS-VC)

Key Viewpoint 2 was established on westbound I-10, approximately 1.5 miles west of Avenue 75E and approximately 0.9 miles east of the Proposed Project's western crossing of I-10 on the Harquahala Plain (see Figure D.3-3A; see enclosed CD). Viewing to the west toward the existing DPV1 line (Towers A310 through A314) and the proposed route, this location was selected to generally characterize the existing landscape in the vicinity of the two I-10 crossings on the Harquahala Plain.

Visual Quality. Low-to-moderate. The foreground to background views from I-10 encompass a broad, open and predominantly undeveloped landscape consisting of a relatively non-descript, flat, grass-and shrub-covered plain, punctuated by the prominent vertical forms of utility towers with industrial character, and bisected by the prominent linear feature of I-10. Distant mountain ranges with undulating forms and irregular lines appear low on the horizon and add only slightly to the landscape's visual interest.

Viewer Concern. Moderate. Travelers on I-10 are provided panoramic views across a broad, flat plain with few distinctive features to distant mountain ranges. Although some travelers may anticipate the occasional energy infrastructure, any addition of industrial character to the predominantly natural appearing landscape or blockage of views to more valued landscape features (distant mountains) would be seen as an adverse visual change.

Viewer Exposure. High Lacking foreground screening features or background blending opportunities, the proposed route would be highly visible in the foreground of views from KVP 2 as it converges on and then crosses I-10. The number of viewers would be high and the duration of view would be extended given that the gradual convergence on (and divergence from) I-10 would result in several towers remaining within the primary cone of vision (45 degrees either side of the primary direction of view) for a considerable distance on approach to the crossing from either west- or eastbound I-10.

Overall Visual Sensitivity. Moderate. For travelers on I-10 in the vicinity of the crossings, the low-to-moderate visual quality, moderate viewer concern, and high viewer exposure lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

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[2] Tower numbers are shown on detailed Devers-Harquahala maps in EIR/EIS Appendix 10 (included in the Draft EIR/EIS. Those maps are not included on the CDs with this Final EIR/EIS due to SCE security restrictions, but paper copies can be provided upon request).

Key Viewpoint 3 – Eagletail Mountains Access (VRM)

Key Viewpoint 3 was established on BLM access road YE047 at the north end of the Eagletail Mountains, approximately four miles south of I-10 (see Figure D.3-4A; see enclosed CD). Viewing to the northwest toward the existing DPV1 line and the proposed route, this location was selected to generally characterize the existing landscape at the north end of the Eagletail Mountains, immediately adjacent to the Eagletail Mountains Wilderness. Views to the north from the access road in this area encompass a predominantly natural setting with the notable exception of the existing DPV1 line. The foreground landform of the Harquahala Plain appears flat and horizontal with an occasional isolated low, rounded hill. In the background to the north and sitting relatively low on the horizon are the horizontal, irregular forms of the distant Harcuvar Mountains and Harquahala Mountains. Landform colors vary from tan to lavender and bluish hues at greater distance, while landform textures are smooth to granular. Vegetation is patchy, consisting of low-growing grasses and shrubs with irregular to distinct forms (where defined by the floor of the plain). Vegetation colors include tans to pale yellow for grasses with muted greens for the shrubs. Vegetation exhibits a matte texture. The view from KVP 3 encompasses existing DPV1 Towers A422 through A303. At a viewing distance of approximately 0.67 miles, the lattice structures are prominent vertical features with a noticeably complex, industrial character. Structural features appear gray in color and smooth in texture. The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is III as identified in the existing Resource Management Plan.

D.3.2.2 Kofa National Wildlife Refuge

This portion of the Proposed Project encompasses the segment of the project within the Kofa National Wildlife Refuge. From the eastern boundary of the Refuge, the Proposed Project would extend west approximately 25 miles through the northern portion of the Refuge along an existing pipeline road and adjacent to the existing DPV1 line. The route through the refuge passes through a rugged, desert canyon landscape of sparse vegetation and jagged ridgelines that confine views to the north or south. Views of the Proposed Project would be available from the pipeline access road entering from the east and Crystal Hill Road entering from the west off of U.S. 95. The existing DPV1 line is a prominent built feature in an otherwise natural-appearing landscape.

One KVP was selected to represent the visual setting along this route segment. The location of KVP 4 is shown on Figure D.3-1B (see enclosed CD). The results of the visual analysis for this segment are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for the selected KVP is presented in the following paragraph.

Key Viewpoint 4 – Crystal Hill Road – Kofa (VS-VC)

Key Viewpoint 4 was established on Crystal Hill Road in the Refuge, approximately 4.8 miles east of U.S. 95 (see Figure D.3-5A; see enclosed CD). Viewing to the southeast toward the existing DPV1 line (Towers A740 through A743) and the proposed route, this location was selected to characterize the existing landscape along the route within Kofa.

Visual Quality. Moderate. The foreground flat, desert landscape is sparsely vegetated but punctuated by the noticeable vertical forms of saguaro cacti and backdropped by the rugged, angular Livingston Hills with a very coarse texture. The existing DPV1 line with its contrasting industrial character compromises the otherwise natural appearing landscape, reducing landscape coherence and overall visual quality to a moderate level.

Viewer Concern. High. Travelers on Crystal Hill Road in Kofa National Wildlife Refuge are typically pursuing backcountry and off-highway recreation opportunities in a predominantly natural desert setting. Any addition of built industrial features to the landscape or blockage of views to higher quality landscape features (sky or Livingston Hills) would be perceived as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from Crystal Hill Road in general and KVP 4 specifically as the route parallels Crystal Hill Road and the pipeline access road through the Refuge. The number of viewers would be low though the duration of view would be extended given the close proximity of the project to the road and the prevalence of parallel "in-line" views of the route from the road (within the primary cone of vision of travelers on the road for considerable distances).

Overall Visual Sensitivity. Moderate-to-high. For travelers on Crystal Hill Road and the pipeline access road, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

D.3.2.3 Kofa National Wildlife Refuge to Colorado River

This portion of the Proposed Project extends through public lands administered by the BLM from the western boundary of the Kofa National Wildlife Refuge to the Colorado River. Heading northwest from Kofa, the Proposed Project would cross U.S. 95 and the flat, open La Posa Plain before entering the rugged Dome Rock Mountains through Copper Bottom Pass and La Paz Arroyo. The route would turn to the southwest and exit the north end of the Arroyo, approximately 1.5 miles south of I-10. From there, this segment would continue southwest for a distance of approximately 12.5 miles to the Colorado River, a popular recreational destination.

Views of the Proposed Project would be available from U.S. 95, the access road to Copper Bottom Pass, access roads into the Dome Rock Mountains from Ehrenberg and the Ehrenberg Sandbowl OHV Area, the east levee road along the east side of the Colorado River, and the Colorado River. In contrast to the flat, relatively non-descript open landscape of the La Posa Plain, the Dome Rock Mountains are rugged with views confined by steeply rising slopes. The landscape west of the Dome Rock Mountains again flattens out and is traversed by the meandering, linear form of the Colorado. The most notable built feature in the landscape along this route segment is the existing DPV1 line with its prominent vertical structural forms and lines which, the Proposed Project would parallel.

Three areas of potential visual sensitivity were selected for detailed analysis: (1) the crossing of U.S. 95 as viewed from the highway, (2) views in the vicinity of Copper Bottom Pass, an area popular with back country recreationists, and (3) views from the Colorado River. Therefore, three KVPs were selected to represent the visual setting along this route segment. The location of each of these KVPs is shown on Figure D.3-1B (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for each KVP is presented in the following paragraphs.

Key Viewpoint 5 – U.S. 95 Crossing–Kofa Entrance (VRM)

Key Viewpoint 5 was established on northbound U.S. 95, just south of the Crystal Hill Road entrance to Kofa National Wildlife Refuge (see Figure D.3-6A; see enclosed CD). Viewing to the north toward the existing DPV1 crossing and the proposed route, this location was selected to characterize the existing landscape on the La Posa Plain in the vicinity of the highway crossing. Views to the north from the highway in this area encompass the foreground flat, horizontal, non-descript landform of the La Posa

Plain. Landform colors vary from tan to lavender at distance, while landform textures are smooth to granular. Vegetation is patchy with some clumps, consisting of low-growing grasses and shrubs with irregular and complex lines. Vegetation colors include tans to pale yellow for grasses with muted greens for the shrubs. Vegetation exhibits a matte texture. The view from KVP 5 encompasses numerous, prominent built features including the linear form of U.S. 95, the complex industrial forms of the existing DPV1 lattice Towers A720 and A721, and a roadside H-frame transmission line and wood pole distribution line. Structural features appear light gray to brown in color and smooth in texture. The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is III as identified in the existing Resource Management Plan.

Key Viewpoint 6 – Copper Bottom Pass (VRM)

Key Viewpoint 6 was established on Pipeline Road, just south of Copper Bottom Pass in the Dome Rock Mountains (see Figure D.3-7A; see enclosed CD). Viewing to the east-southeast down the arroyo, this viewpoint was selected to characterize the existing landscape in the vicinity of Copper Bottom Pass where the proposed route would parallel Pipeline Road. The view down the arroyo encompasses the foreground flat horizontal to angular landforms of the arroyo floor and bordering rugged slopes. Landform colors vary from tan to lavender and bluish hues at distance, while landform textures are smooth to granular and coarse. Vegetation is patchy with some clumps to indistinct coverage, consisting of low-growing grasses and shrubs with irregular and complex lines to prominent linear lines defined by the access road cut. Vegetation colors include tans to pale yellow for grasses with muted greens for the shrubs. Vegetation exhibits a matte texture. The view from KVP 6 encompasses the prominent, complex industrial forms of the existing DPV1 lattice towers (Tower 493 is closest). Structural features appear dark gray in color and smooth in texture. The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is III as identified in the existing Resource Management Plan.

Key Viewpoint 7 – Colorado River (VRM)

Key Viewpoint 7 was established on the Colorado River, just north of the span between existing DPV1 Towers 4757 and B801 (see Figure D.3-8A; see enclosed CD). Viewing to the southwest down-river, this viewpoint was selected to represent views from the intensive water-based recreational uses on and bordering the river. The view down-river encompasses the foreground flat horizontal river- and landscape with the angular landforms of distant mountains, low on the horizon. Views from the river tend to be somewhat limited to foreground landscapes due to the bordering vegetation and levees. Landform colors vary from tan to lavender at distance, while landform textures are smooth to granular and coarse. The water appears blue in color and smooth in texture. Vegetation is continuous and distinct as defined by the waterline with horizontal to irregular lines. Vegetation colors are light to dark green with a matte texture. The view from KVP 7 encompasses the prominent, complex industrial forms of the existing DPV1 lattice Towers B801 and B802 on the east side of the river and Towers 4756 and 4757 on the west side of the river. Structural features appear gray in color and ~~provide a pleasing color contrast with the muted earth tones of the surrounding desert landforms~~ smooth in texture. The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is Class II inside the river/riparian corridor and Class III outside of the river corridor as identified in the existing Resource Management Plan. The VRM Class II management objective is as follows:

> ***VRM Class II.*** *To retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management Activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.*

D.3.2.4 Palo Verde Valley (Colorado River to Midpoint Substation)

This portion of the Proposed Project extends from the Colorado River to the proposed Midpoint Substation site. Entering California and heading due west from the Colorado River for approximately 11 miles, this route segment would pass through the private agricultural fields of Palo Verde Valley, south of Blythe, to the proposed Midpoint Substation site located on Palo Verde Mesa. The flat valley floor consists primarily of developed agricultural fields and scattered rural residences. The agricultural fields, orchards, irrigation canals, and roads impart a linear character to the valley floor landscape. Variations in landforms are limited and vegetation is seasonal, consisting primarily of row crops.

Views of the Proposed Project would be available from SR 78, several local roads and a few rural residences. The most prominent built feature in this agricultural setting, aside from the cultivated agricultural fields is the existing DPV1 line with its prominent vertical structural forms and lines, which the proposed DPV2 project (Proposed Project) would parallel.

The potential visual impact on local roads and the nearest residential community of Ripley were of greatest concern in consideration of key viewpoints along this route segment. As a result, one KVP was selected to represent the visual setting within the Palo Verde Valley. The location of KVP 8 is shown on Figure D.3-1C (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 8 is presented in the following paragraphs.

Key Viewpoint 8 – State Route 78 Crossing–Ripley (VS-VC)

Key Viewpoint 8 was established on SR 78, just north of the community of Ripley in Palo Verde Valley (see Figure D.3-9A; see enclosed CD). Viewing to the north toward the existing DPV1 line (Towers 4735XX and 4736XX), this location was selected to characterize the existing landscape along the route within the Palo Verde Valley.

Visual Quality. Low-to-moderate. The foreground to middleground flat, horizontal landform of the highly modified valley floor is comprised of irrigated agricultural fields, punctuated by the complex, vertical forms of the existing DPV1 line with its industrial character and roadside wood pole utility lines. The angular to low horizontal form of the distant Big Maria Mountains with the irregular, undulating ridgeline is a landform feature that adds additional visual interest.

Viewer Concern. High. Travelers on SR 78 just north of Ripley, and residents on the north side of Ripley anticipate the rural, agricultural character of the Palo Verde Valley landscape as well as the substantial presence of the existing electric transmission and roadside utility infrastructure. However, any increase in industrial character or blockage of higher value landscape features (sky and Big Maria Mountains) would be seen as an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from SR 78 in general and KVP 8 specifically as the route passes through agricultural fields north of the community of Ripley and spans SR 78. The number of viewers would be moderate and the duration of view would be moderate-to-extended.

Overall Visual Sensitivity. Moderate. For travelers on SR 78 and residents on the north side of the community of Ripley, the low-to-moderate visual quality, moderate-to-high viewer concern, and moderate-to-high viewer exposure lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

D.3.2.5 Midpoint Substation to Cactus City Rest Area

This portion of the Proposed Project extends through public lands administered by the BLM and private lands from Palo Verde Mesa to the Cactus City Rest Area at the west end of Shavers Valley. Midpoint Substation would be located at the southeastern end of Palo Verde Mesa adjacent to the DPV1 ROW, just west of the intersection of the DPV1 line and two 161 kV transmission lines. The substation site is on BLM lands characterized by open, flat and sparsely vegetated terrain with short grass and low-growing shrubs of muted colors. While the substation site is fairly remote, there is one residence approximately one mile from the site. However, the residence is located below a bluff with a partially screened view of the site (SCE, 2005a, p. 4-233).

Heading west from Palo Verde Mesa, the Proposed Project would cross the broad, open southern portion of the Chuckwalla Valley, a desert basin characterized by low-growing grasses and shrubs and surrounded by rugged, angular mountains. A portion of the route would parallel Chuckwalla Valley Road before turning to enter and pass through an area of interesting rock formations known as Alligator Rock Area of Critical Environmental Concern (ACEC), just south of Desert Center and I-10. To the north is the broad flat expanse of the central Chuckwalla Valley while to the south is the steeply rising, and rugged Chuckwalla Mountains. From Alligator Rock, the proposed route would continue west through the western extension of Chuckwalla Valley, generally paralleling I-10 but at a variable distance to the south of approximately one-half to one mile.

As the route ascends Chiriaco Summit and descends into Shavers Valley, views become more confined by the Eagle Mountains and Cottonwood Mountains to the north of I-10 and the Orocopia Mountains to the south of I-10. The proposed route would cross to the north side of I-10, approximately two miles east of the Cactus City Rest Area. Throughout this portion of the study area, there is minimal development, with limited commercial and traveler services at Desert Center, Chiriaco Summit, and Cactus City. The existing DPV1 transmission line is a noticeable built feature with industrial character when viewing opportunities are sufficiently close. At greater distances, the lattice design of the structures enable the line to blend fairly effectively with background terrain. However, on open valley floors or where structures pass over ridges and raised alluvial fans, structure skylining can occur (extending above the horizon line) which increases structure visibility and prominence.

Views of the Proposed Project along this route segment would be available from numerous paved roads including I-10, Wiley Well Road, Chuckwalla Valley Road, Box Canyon Road, and Cottonwood Springs Road; unpaved 4WD access roads including Graham Pass Road, Dupont Road, Corn Springs Road, Red Cloud Road, Summit Road, and Red Canyon Trail; commercial and tourist service stops including Desert Center, Chiriaco Summit, and Cactus City Rest Area; and Alligator Rock ACEC.

Several areas of potential visual sensitivity were selected for detailed analysis along this route segment including: (1) the crossing Chuckwalla Valley as viewed from I-10, (2) views from Alligator Rock ACEC, (3) views of the Orocopia Mountains from I-10, and (4) views of the Orocopia Mountains as visitors leave Joshua Tree National Park. The location of each KVP selected to evaluate these views is shown on Figures D.3-1C (KVPs 9 and 10) and D.3-1D (KVPs 11 and 12), both on the enclosed CD. The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for each KVP is presented in the following paragraphs.

Key Viewpoint 9 – Chuckwalla Valley (VRM)

Key Viewpoint 9 was established on eastbound I-10, at the end of the on-ramp from Corn Springs Road in Chuckwalla Valley (see Figure D.3-10A on enclosed CD). Viewing to the east-southeast toward the existing DPV1 line and the proposed route, this location was selected to generally characterize the existing landscape of the vast Chuckwalla Valley. The landform in the central-eastern portion of the Chuckwalla Valley floor is flat and exhibits a prominent horizontal line. More distant, angular mountain ranges (McCoy Mountains to the north and Chuckwalla Mountains to the south) do provided limited backdrops of visual interest. Landform colors are tan to lavender and bluish hues for the more distant mountains. Vegetation is characterized by grass and low-growing shrubs with patchy to continuous distributions. Vegetative lines are irregular to distinct where defined by the line of the valley floor. Vegetation colors range from tan to pale yellow for grasses and muted to dark greens for shrubs. Overall, the natural landscape is relatively non-descript and is notably influenced by the dominant presence of existing utility infrastructure with its industrial character and Interstate 10. The view from KVP 9 encompasses existing DPV1 Towers 4546XX through 4549. Structural features appear light to dark gray in color and smooth in texture. The Interim Scenic Quality classification is Class C and Viewer Sensitivity is high because of its status within the Desert Conservation Area. Combined with the foreground to middleground viewing opportunities, the resulting VRM Class Rating is III (see Appendix VR-3 on enclosed CD).

Key Viewpoint 10 – Alligator Rock ACEC (VRM)

Key Viewpoint 10 was established on an access road within the Alligator Rock ACEC, south of I-10 and Desert Center (see Figure D.3-11A on enclosed CD). Viewing to the east-southeast toward the existing DPV1 line and the proposed route, this location was selected to generally characterize the existing landscape within the Alligator Rock ACEC. The foreground landform of the valley floor is horizontal with the prominent, angular form and jagged line of the steeply rising Chuckwalla Mountains providing a backdrop of added visual interest. Landform colors are tan to lavender and bluish hues for the more distant mountains. Vegetation is characterized by grass and low-growing shrubs with patchy to continuous distributions. Vegetative lines are irregular to indistinct except where better defined by the line of the valley floor. Vegetation colors range from tan to pale yellow for grasses and muted to dark greens for shrubs. Overall, the natural landscape consists of a visually interesting assemblage of flat valley floor punctuated by unusual rock formations and backdropped by rugged desert mountain slopes. The view from KVP 10 also encompasses existing DPV1 Towers 4515X through 4518XX. These built structural features appear geometric and complex (lattice towers) to simple linear (conductors) in form with vertical and diagonal lines for the structures and curvilinear lines for the conductors. Structures appear light to dark gray in color and smooth in texture. The existing DPV1 structures are prominent features in the landscape but pass south of most of the rock formations and blend effectively with the background rocky slopes when viewed from more distant viewpoints. The Interim Scenic Quality classification is Class B and Viewer Sensitivity is high because of its status within the Desert Conservation Area and the ACEC. Combined with the foreground to middleground viewing opportunities, the resulting VRM Class Rating is II (see Appendix VR-3 on enclosed CD).

Key Viewpoint 11 – Interstate 10–Orocopia Mountains (VRM)

Key Viewpoint 11 was established on eastbound I-10, approximately 0.9 miles west of Hayfield Road (see Figure D.3-12A on enclosed CD). Viewing to the southeast toward the existing DPV1 line and the proposed route, this location was selected to characterize the existing landscape to the south of I-10 in the vicinity of the Orocopia Mountains. The foreground landform of the western extension of Chuck-

walla Valley is horizontal, transitioning to gently sloping alluvial fans, backdropped by the rugged, angular forms of the Orocopia Mountains. The irregular and jagged lines of the ridges add visual interest to the landscape. Landform colors are tan to lavender and bluish hues for the more distant mountains. Vegetation includes grass and low-growing shrubs with patchy to irregular distributions. Vegetative lines are irregular to indistinct except where better defined by the line of the valley floor. Vegetation colors range from tan to pale yellow for grasses and muted to dark greens for shrubs. The view from KVP 11 also encompasses existing DPV1 Towers 4423 and 4424X as well as a wood pole utility line and roadside fence line. These built structural features appear geometric and complex to simple linear in form with vertical and diagonal lines for the structures and curvilinear lines for the conductors. Structures appear gray to dark brown in color and smooth in texture. While the visual variety of the landscape is enhanced by the variation in terrain characteristics, the overall scenic quality is compromised by the substantial presence of utility and roadside infrastructure. The resulting Interim Scenic Quality classification is Class C and Viewer Sensitivity is high because of its status within the Desert Conservation Area. Combined with the foreground to middleground viewing opportunities, the resulting VRM Class Rating is III (see Appendix VR-3 on enclosed CD).

Key Viewpoint 12 – Cottonwood Springs Road–Joshua Tree National Park (VRM)

Key Viewpoint 12 was established on southbound Cottonwood Springs Road, just south of the entrance to Joshua Tree National Park (see Figure D.3-13A on enclosed CD). Viewing to the south-southeast across Shavers Valley to the Orocopia Mountains and the existing DPV1 line (and the proposed route), this location was selected to characterize the existing landscape visible to visitors leaving Joshua Tree National Park. The foreground landform of the valley floor is horizontal, transitioning to the rugged, angular forms of the Orocopia Mountains. The irregular and jagged lines of the ridges add visual interest to the landscape. Landform colors are tan to lavender and bluish hues for the more distant mountains. Vegetation on the valley floor includes grass and low-growing shrubs but appears continuous and uniform with some angular clumps at this viewing distance. Vegetative lines are irregular to indistinct except where better defined by the line of the valley floor. Vegetation colors range from tan to pale yellow for grasses and muted to dark greens for shrubs. The view from KVP 12 encompasses existing DPV1 Towers 4349X through 4401. However, at a viewing distance of approximately two miles, the complex lattice structures appear indistinct against the mottled landform background. To the extent that structures are visible, they appear as indistinct vertical features, dark gray in color and smooth in texture. The overall scenic quality of Shavers Valley is somewhat compromised by the utility infrastructure that pass down both sides of the valley and I-10 running down the center of the valley. The resulting Interim Scenic Quality classification is Class C and Viewer Sensitivity is high because of its status within the Desert Conservation Area. Combined with the foreground to middleground viewing opportunities, the resulting VRM Class Rating is III (see Appendix VR-3 on enclosed CD).

D.3.2.6 Cactus City Rest Area to Devers Substation

This portion of the Proposed Project extends from Cactus City Rest Area to Devers Substation at the northern end of the Coachella Valley. Although most of this route segment passes through private lands, there is a scattering of BLM-administered public lands along the route. Heading west from Cactus City Rest Area, the Proposed Project would cross alluvial fans emanating from the Little San Bernardino Mountains to the north and begin its descent into the Coachella Valley, a desert basin rapidly transforming into a suburban environment with large-scale residential subdivisions, golf courses and commercial development. The northern end of the valley is also notable for the large wind farm

developments in the vicinity and to the east of San Gorgonio Pass. Serving the wind energy developments are numerous electric transmission lines that interconnect at Devers Substation. The Proposed Project would parallel the existing DPV1 line, as it passes to the immediate north of several new residential developments and crosses the Coachella Valley Preserve in the Indio Hills. While the valley is bordered on the north by the Little San Bernardino Mountains and Indio Hills, and the Santa Rosa Mountains to the south, the dominant landscape feature in the region is Mount San Jacinto, rising abruptly from the desert valley floor to an elevation of 10,834 feet.

Views of the Proposed Project along this route segment would be available from numerous roads including I-10, Dillon Road, Thousand Palms Canyon Road, Varner Road and other local roads. The Proposed Project would also be visible from numerous residential developments north of I-10 as well as the Coachella Valley Preserve.

Two areas of potential visual sensitivity were selected for detailed analysis along this route segment and included: (1) views from residential developments north of I-10 (KVP 13) and (2) views from the Coachella Valley Preserve (KVP 14). The locations of these two KVPs are shown on Figure D.3-1D (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for each KVP is presented in the following paragraphs.

Key Viewpoint 13 – Terra Lago in Indio (VS-VC)

Key Viewpoint 13 was established within the Terra Lago residential and golf development (see Figure D.3-14A on enclosed CD). Viewing to the north toward the existing DPV1 line (Towers 4236X through 4238X), this location was selected as representative of the existing residential views of the landscape along the proposed route north of I-10.

Visual Quality. Moderate. The foreground landscape consists of a highly maintained golf course with vibrant green color that provides a sharp contrast to the muted earth tones of the background hills and mountains. The vertical forms of the existing DPV1 line with its complex structural forms and industrial character are visible through they are able to blend somewhat with the background landform of the Indio Hills, thereby reducing structural prominence.

Viewer Concern. High. Residents of, and visitors to, the Terra Lago development anticipate a highly landscaped environment that exhibits natural and designed vegetative characteristics. The introduction of any additional, industrial character or view blockage of higher value landscape features including the background hills and mountains would be perceived as an adverse visual change.

Viewer Exposure. High. The proposed route would be highly visible in the foreground of views from the Terra Lago development in general and KVP 13 specifically as the route passes adjacent and immediately to the north of the development. The number of viewers would be moderate but the duration of view would be extended for both residents and golfers.

Overall Visual Sensitivity. Moderate-to-high. For residents and golfers at Terra Lago, the moderate visual quality, high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 14 – Coachella Valley Preserve (VRM)

Key Viewpoint 14 was established on an access trail in the Coachella Valley Preserve, just west of the trailhead on Thousand Palms Canyon Road (see Figure D.3-15A on enclosed CD). Viewing to the south

toward the existing DPV1 line and the proposed route, this location was selected to characterize the view from the Coachella Valley Preserve. The foreground to middleground landform of the Coachella Valley floor appears flat and horizontal. In the background to the south is the horizontal form of the Santa Rosa Mountains with an irregular and undulating ridgeline. Landform colors vary from tan to lavender and bluish hues for the more distant mountains, while landform textures are smooth to granular and coarse. Vegetation appears continuous to irregular with some clumping and consists of low-growing grasses and shrubs with irregular to distinct lines except where defined by the horizontal boundary of the valley floor. Vegetation colors include tans for grasses with gray and light to dark greens for the shrubs. Vegetation exhibits a matte texture. The view from KVP 14 encompasses existing DPV1 Towers 4202 and 4203 as well as the lattice structures for two additional adjacent transmission lines. At a viewing distance of approximately 0.39 miles, the lattice structures are prominent vertical features with a noticeably complex, industrial character, particularly when slightly backlit by the morning light. Structural features appear light to dark gray in color and smooth in texture. The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is II as identified in the existing Resource Management Plan.

D.3.3 Environmental Setting for the Proposed Project – West of Devers

The portion of the Proposed Project west of Devers Substation transitions from a desert basin environment bordered by rough, rocky mountain ranges with jagged ridgelines, to semi-arid rolling terrain at the base of the east-west trending San Jacinto and San Bernardino Mountains, into the more urbanized and rapidly developing western sections of Riverside and San Bernardino Counties dominated by mixed use developments of residential, commercial, and industrial uses. Natural vegetation throughout this portion of the study area consists primarily of desert scrub (creosote), coastal scrub (sumac and buckwheat), mixed chaparral (scrub oak), grasses and suburban agriculture (SCE, 2005a, p. 4-186). Project viewing opportunities within the western portion of the study are numerous and include roads (Interstate 10, State Scenic Highway 62, Whitewater Canyon Road, San Timoteo Canyon Road, and local roads within existing suburbs); recreational facilities and parks; and rural residences and suburban residential developments. The following sections provide descriptions of each of the sub-segments within the western study area. Within each sub-segment, one or more Key Viewpoints (KVPs) have been established from which detailed setting characterizations have been developed to represent the typical visual resources and views along that sub-segment. The location of each KVP is shown on Figures D.3-1E and D.3-1F (see enclosed CD).

D.3.3.1 Devers Substation to East Border of Banning

This portion of the Proposed Project extends from Devers Substation to the east border of the City of Banning. With the notable exception of the Morongo Reservation, most of this route segment passes through private lands. Heading west from Devers Substation, the Proposed Project would pass through existing wind farm developments before crossing State Scenic Highway 62 and passing south of the Painted Hills rural residential area through more wind farm developments. Continuing west, the route would span Whitewater Canyon south of the community of Bonnie Bell before passing through the West Palm Springs Village rural residential area. Approximately one mile further west, the route would pass out of the California Desert Conservation Area and into lands alternating between private holdings and those of the Morongo Reservation in San Gorgonio Pass until reaching the eastern border of the City of Banning near the western end of the Pass. Throughout the length of this route segment, the arid landscape is dominated by the imposing Mount San Jacinto located immediately to the south of San Gorgonio Pass. The Proposed Project would parallel the existing DPV1 line and two other transmission lines.

Views of the Proposed Project along this route segment would be available from roads including I-10, SR 62, Dillon Road, Painted Hills Road, Whitewater Canyon Road, and other local roads. The Proposed Project would also be visible from several residential developments north of I-10 including Painted Hills and West Palm Springs Village. The Proposed Project would also be visible from the Morongo Community Center and the Outlet Mall at Cabazon.

Five areas of potential visual sensitivity were selected for detailed analysis along this route segment and included: (1) State Scenic Highway 62 (KVP 15), (2) the Painted Hills residential area west of SR 62 (KVP 16), (3) Whitewater Canyon Road south of Bonnie Bell (KVP 17), (4) views from West Palm Springs Village residential area (KVP 18), and (5) the Morongo Community Center (KVP 19). The locations of these five KVPs are shown on Figure D.3-1E (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for each KVP is presented in the following paragraphs.

Key Viewpoint 15 – State Route 62 Scenic Highway (VS-VC)

Key Viewpoint 15 was established on southbound SR 62, just north of the crossing of SR 62 (see Figure D.3-16A on enclosed CD). Viewing to the south-southeast toward proposed tower location 207, this location was selected to represent the existing view from the State Scenic Highway.

Visual Quality. Low-to-moderate. The foreground to middleground desert landform is dominated by a profusion of energy infrastructure consisting of the predominantly vertical forms of wind turbines and electric transmission line towers. This highly industrial-appearing landscape is backdropped by Mount San Jacinto rising dramatically from the desert floor. The vertical forms of the existing DPV1 line and two adjacent transmission lines are able to blend somewhat with the surrounding wind generation facilities, thereby reducing structural prominence of the transmission lines.

Viewer Concern. High. Travelers on a State Scenic Highway typically have expectations for views of notable scenic quality. Although the foreground views from this portion of the Scenic Highway are somewhat overwhelmed by the profusion of wind turbines, Mount San Jacinto is still the dominant landscape feature and commands viewers' attention by its sheer scale. Although local travelers on SR 62 would anticipate the prominent energy infrastructure, the introduction of any additional, noticeable industrial character or view blockage of the background mountains would be perceived as an adverse visual change.

Viewer Exposure. High. The proposed route would be highly visible in the foreground of views from SR 62 in general and KVP 15 specifically as the route approaches and then spans the highway. The number of viewers would be high and the duration of view would be moderate-to-extended.

Overall Visual Sensitivity. Moderate-to-high. For travelers on SR 62, the low-to-moderate visual quality, high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 16 – Painted Hills Road Neighborhood (VS-VC)

Key Viewpoint 16 was established on eastbound Painted Hills Road, just east of the intersection with Country View Road (see Figure D.3-17A on enclosed CD). Viewing to the south-southeast toward proposed tower location 209, this location was selected to represent the existing views from the Painted Hills rural residential area.

Visual Quality. Low-to-moderate. The foreground to middleground desert landform is dominated by a profusion of energy infrastructure consisting of the predominantly vertical forms of wind turbines and electric transmission line towers. This highly industrial-appearing landscape is backdropped by Mount San Jacinto rising dramatically from the desert floor. The vertical forms of the existing DPV1 line and two adjacent transmission lines are able to blend somewhat with the surrounding wind generation facilities, thereby reducing structural prominence of the transmission lines.

Viewer Concern. High. Residential viewers in the Painted Hills Road neighborhood would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky, ridges, and Mount San Jacinto) an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from numerous residences in the Painted Hills Road residential area. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For residents in the Painted Hills Road neighborhood, the low-to-moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 17 – Whitewater Canyon Road (VS-VC)

Key Viewpoint 17 was established on southbound Whitewater Canyon Road, just south of the rural residential community of Bonnie Bell (see Figure D.3-18A on enclosed CD). Viewing to the southeast toward proposed tower location 215, this viewpoint was selected to represent the existing view that travelers and Bonnie Bell residents would experience when traveling south on Whitewater Canyon Road.

Visual Quality. Moderate. Although the photograph presented in Figure D.3-18A (see enclosed CD) only captures a small portion of Mount San Jacinto because the view direction is oriented more toward the east canyon wall, the mountain, rising abruptly from the desert floor, dominates all other features of the desert river canyon landscape and is situated within the primary cone of vision of southbound travelers on Whitewater Canyon Road. Other notable landscape features are the numerous vertical forms of wind turbines located on the canyon rim and further out into the valley. Less prominent are the complex industrial forms of lattice transmission line structures on the rim of the canyon and the curvilinear form of the less distinct conductors spanning the canyon. The contrast of Mount San Jacinto's vertical scale with the surrounding flat desert landscape, which is framed by desert canyon walls creates a mosaic of natural features that partially overshadows the adverse visual characteristics of the existing energy infrastructure, and contributes substantially to an overall moderate rating for visual quality.

Viewer Concern. High. Travelers on Whitewater Canyon Road (including residents from Bonnie Bell) would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky, ridges, and Mount San Jacinto) an adverse visual change.

Viewer Exposure. Moderate-to-high. The placement of the Proposed Project's structures on the rim of the canyon and conductor span of Whitewater Canyon would be highly visible in the foreground of views from Whitewater Canyon Road. Although the number of viewers would be low-to-moderate, the duration of view would be extended for southbound viewers.

Overall Visual Sensitivity. Moderate-to-high. For travelers on Whitewater Canyon Road, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 18 – Haugen-Lehmann Way–West Palm Springs Village Residential Area (VS-VC)

Key Viewpoint 18 was established on Haugen-Lehmann Way, just south of the intersection with Amethyst Drive, in the West Palm Springs Village residential community (see Figure D.3-19A on enclosed CD). Viewing to the west toward proposed tower location 226, this location was selected to represent the existing views from the West Palm Springs Village residential area.

Visual Quality. Low-to-moderate. The foreground rural residential desert landscape is dominated by the vertical forms of utility poles and lattice transmission line towers because of the relatively close proximity of residential viewers to the utility infrastructure. Views to the north from south of the proposed route (as illustrated with this viewpoint) are backdropped by a low range of rolling hills and angular ridges with muted earth tone colors. Conversely, residents north of the proposed route viewing south would have Mount San Jacinto as a backdrop for the numerous utility lines.

Viewer Concern. High. Residential viewers in the West Palm Springs Village neighborhood would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky, ridges, and Mount San Jacinto) an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from residences and travelers on the local roads. Although the number of viewers would be low, the duration of views would be extended.

Overall Visual Sensitivity. Moderate-to-high. For residents in the West Palm Springs Village neighborhood, the low-to-moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 19 – Morongo Community Center (VS-VC)

Key Viewpoint 19 was established at the Morongo Community Center at 13000 Fields Road, just north of I-10 (see Figure D.3-20A on enclosed CD). Viewing to the southwest toward proposed tower location 256, this location was selected to represent the existing views from the Morongo Community Center. This view can also be considered somewhat representative of the views of travelers on southbound Fields Road as they leave the Reservation.

Visual Quality. Low-to-moderate. Foreground views to the southwest from the Community Center are dominated by the flat arid landscape of San Gorgonio Pass and the prominent presence of energy transmission infrastructure (structures and conductors), paved parking surfaces and I-10 immediately to the south. Views to the north and south are backdropped (and confined) by the steeply rising ridges and mountains that define the pass between the arid desert to the east and the urban basin to the west.

Viewer Concern. High. Visitors to the Community Center would consider any visible increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky, ridges, and Mount San Jacinto) an adverse visual change.

Viewer Exposure. High. Proposed Project structures would be highly visible in the center of foreground of views from the Community Center (and Fields Road). Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For visitors to the Community Center, the low-to-moderate visual quality, high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

D.3.3.2 Banning and Beaumont

This portion of the Proposed Project extends through the Cities of Banning and Beaumont. Continuing west along the foothills of the San Bernardino Mountains in the established transmission line corridor with three existing transmission lines, the route would pass adjacent to numerous existing and new residential developments. The landscape along the majority of this route segment is decidedly suburban with well-defined residential developments, interspersed with occasional park and recreation facilities and backdropped to the north by the San Bernardino Mountains.

Views of the Proposed Project along this route segment would be available from local roads paralleling and crossing under the corridor, residential areas adjacent to the corridor, and park facilities either crossed by or adjacent to the existing transmission lines.

Four areas of potential visual sensitivity were selected for detailed analysis along this route segment and included (1) views from residential areas in the north portion of Banning (KVP 20), (2) views from residential areas in Beaumont (KVPs 21 and 22), and (3) views from existing park and recreational facilities (KVP 24). The locations of these four KVPs are shown on Figures D.3-1E (KVP 20) and D.3-1F (KVP 21 through KVP 23) on the enclosed CD. The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for each KVP is presented in the following paragraphs.

Key Viewpoint 20 – Murray Street in the City of Banning (VS-VC)

Key Viewpoint 20 was established on Murray Street, just north of Summit Drive and one block east of North San Gorgonio Avenue (see Figure D.3-21A on enclosed CD). Viewing to the northeast toward proposed tower locations 102 and 103, this location was selected to represent the existing views from potentially affected residential areas in Banning.

Visual Quality. Low-to-moderate. The foreground semi-arid landscape is dominated by the foothills of the San Bernardino Mountains. Landscape colors of subdued tans and greens are characteristic of the short grass and shrub vegetation common to the area. Scattered rural residences are visible in the distance at the base of the rolling to angular foothills and mountains. The existing lattice and wood-pole transmission line structures are prominently visible on nearby ridge tops where structure skylining (extending above the skyline) increases structure prominence and visual contrast with the horizontal forms of the more natural appearing background landscape. However, the neutral gray and tan colors of the structures along with the semi-transparent design of the lattice towers enables at least portions of the facilities to blend with background hills and mountains, thereby reducing structure prominence somewhat.

Viewer Concern. High. Residential viewers in the adjacent residential area would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky, hills, ridges and mountains) an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from residences and travelers on the local roads. Although the number of viewers would be low, the duration of views would be extended.

Overall Visual Sensitivity. Moderate-to-high. For residents in the adjacent neighborhood, the low-to-moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 21 – Cedar Hollow Road in the City of Beaumont (VS-VC)

Key Viewpoint 21 was established on Cedar Hollow Road off of Cherry Avenue and immediately south of Beaumont High School in the City of Beaumont (see Figure D.3-22A on enclosed CD). Viewing to the west-southwest toward proposed tower locations 127 and 128, this location was selected to represent the existing views from residences facing the proposed route in Beaumont.

Visual Quality. Low-to-moderate. The foreground newer suburban residential landscape of one and two-story single-family homes is generally lacking distinctive landscape features or elements of visual interest and is visually dominated by the adjacent energy transmission infrastructure (towers and conductors) that is substantially skylined throughout the corridor.

Viewer Concern. High. Residential viewers in the adjacent residential area would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky) an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from residences facing onto the corridor. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For residents in the adjacent neighborhood, the low-to-moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 22 – Stargazer Street and Rose Avenue in the City of Beaumont (VS-VC)

Key Viewpoint 22 was established at the intersection of Stargazer Street and Rose Avenue in The Estates residential subdivision in the City of Beaumont (see Figure D.3-23A on enclosed CD). Viewing to the east-southeast toward proposed tower locations 129 and 130, this location was selected to represent the existing views from residential neighborhoods that back onto the proposed route in Beaumont.

Visual Quality. Moderate. The foreground suburban residential landscape of one-story, single-family homes is generally lacking distinctive landscape features or elements of visual interest. However, unlike KVP 21, The Estates' residences back onto the corridor and other homes help block portions of the existing transmission structures. Equally visually beneficial is the blockage of views down the corridor, thereby reducing the number of visible utility structures from any given viewpoint. Therefore, although the adjacent energy transmission infrastructure (towers and conductors) are still prominent features in the landscape, they are somewhat less dominant than the structures visible from KVP 21.

Viewer Concern. High. Residential viewers in the adjacent residential area would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky) an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from residences and local streets adjacent to the corridor. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For residents in the adjacent neighborhood, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 23 – Oak Valley Golf Course in the City of Beaumont (VS-VC)

Key Viewpoint 23 was established on the Oak Valley Golf Course in the City of Beaumont (see Figure D.3-24A on enclosed CD). Viewing to the east toward proposed tower locations 130 and 131, this location was selected to represent the existing views from recreational facilities adjacent to the Proposed Project.

Visual Quality. Moderate. Much of the landscape visible from this location consists of foreground highly manicured lawns bordered by trees designed to provide aesthetic appeal and screening of the adjacent utility corridor. While the sculpted landscape exhibits some degree of intactness and coherence of vegetative form and character, the adjacent residential development and utility infrastructure are prominent features in the landscape. It is these built features (and particularly the existing transmission line corridor) that diminish the scenic integrity of the existing landscape and reduce what would otherwise be a moderate-to-high level of visual quality.

Viewer Concern. High. Visitors to the golf course expect to see a landscape with high aesthetic appeal and characterized by a mosaic of natural vegetative forms. Although the existing transmission line facilities are also part of a repeat visitor's expectations, any additional intrusion of built structures with industrial character or blockage of views from any of the golf course grounds would be perceived as an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed towers would be highly visible in the foreground of views from KVP 23 and the golf course fairways as the corridor passes. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For visitors to Oak Valley Golf Course in general and KVP 23 specifically, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

D.3.3.3 Calimesa and San Timoteo Canyon

This project segment crosses the southern portion of the City of Calimesa and Interstate 10 (which is eligible for State Scenic Highway status along this segment) before passing though San Timoteo Canyon to San Bernardino Junction. The landscape along this route segment is predominantly rural residential, particularly in the San Timoteo Canyon area. Though new residential developments are beginning in the southern end of the canyon, open views of canyon slopes and rolling foothills are still available to residents and travelers on San Timoteo Canyon Road. For the most part, the Proposed Project would parallel existing transmission lines across the rolling foothills of the San Jacinto Mountains bordering the south side of the canyon.

Views of the Proposed Project along this route segment would be available from I-10 at the freeway span, San Timoteo Canyon Road, local roads paralleling and crossing under the corridor, and rural residences.

The rural residences within San Timoteo Canyon (KVP 24) were selected for detailed analysis along this route segment. The location of KVP 24 is shown on Figure D.3-1F (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 24 is presented in the following paragraphs.

Key Viewpoint 24 – Pilgrim Road in San Timoteo Canyon (VS-VC)

Key Viewpoint 24 was established on Pilgrim Road, off of San Timoteo Canyon Road in San Timoteo Canyon (see Figure D.3-25A on enclosed CD). Viewing to the west-southwest toward proposed tower locations 183 and 184, this location was selected to represent the existing views from rural residences in San Timoteo Canyon.

Visual Quality. Moderate. Much of the landscape visible from this location consists of a foreground rural residential landscape of rolling grass-covered hills with limited visual variety. Although the landscape exhibits a predominantly rural character, the existing energy infrastructure corridor with its complex vertical forms and industrial character substantially influence overall visual quality. Although the lattice structures blend effectively with background landforms and vegetation, they become more conspicuous and prominent where structure skylining occurs, resulting in a reduction of scenic integrity.

Viewer Concern. High. Nearby residents expect to see a rural landscape with a predominantly natural character. Although the existing transmission line facilities are also part of a resident's expectations, any additional intrusion of built structures with industrial character or blockage of views of higher quality landscape features (sky, hills, or ridgelines) would be considered an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed towers would be highly visible in the foreground of views from KVP 24 and nearby residences. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For rural residents in San Timoteo Canyon (and travelers on San Timoteo Canyon Road) in general and KVP 24 specifically, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

D.3.3.4 San Bernardino Junction to Vista Substation

This portion of the Proposed Project extends from San Bernardino Junction west through the Cities of Loma Linda, Colton and Grand Terrace before terminating at Vista Substation. The transmission line corridor along this segment contains several lattice structure transmission lines. The landscape along this route segment transitions from the undeveloped, rolling, grass-covered hills of southern Loma Linda to that of a typical suburban landscape with a mix of new and older residential neighborhoods in Colton and Grand Terrace. From the residential neighborhood in Grand Terrace, the route spans Interstate 215 to Vista Substation, which is a visually complex facility, serving numerous transmission lines and exhibiting substantial industrial character.

Views of the Proposed Project along this route segment would be available from local roads paralleling and crossing under the corridor and residential neighborhoods adjacent to the transmission line corridor.

The residential neighborhoods adjacent to the project route (KVP 25) were selected for detailed analysis along this route segment. The location of KVP 25 is shown on Figure D.3-1F (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 25 is presented in the following paragraphs.

Key Viewpoint 25 – Canyon Vista Drive and Chase Canyon Lane in the City of Colton (VS-VC)

Key Viewpoint 25 was established at the intersection of Canyon Vista Drive and Chase Canyon Lane in the City of Colton (see Figure D.3-26A on enclosed CD). Viewing to the west toward existing Towers M42-T2 and M42-T3, this location was selected to represent the existing views from residential neighborhoods adjacent to the Proposed Project in the Cities of Colton and Grand Terrace.

Visual Quality. Moderate. The foreground suburban residential landscape consists of newer, two-story, single-family homes. The contrast of green vegetation against red-tiled roofs adds visual interest to the landscape. Views to the south and west within the neighborhood are backdropped by rolling grass-covered hills that support several existing electric transmission lines with contrasting complex vertical forms and industrial character. The skylined nature of the structures increases structural prominence.

Viewer Concern. High. Although energy transmission infrastructure features prominently in the foreground views from the adjacent residential area, residential viewers would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky or hills) an adverse visual change.

Viewer Exposure. Moderate-to-high. The proposed route would be highly visible in the foreground of views from residences and local streets adjacent to the corridor. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For residents in the adjacent neighborhood, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

D.3.3.5 San Bernardino Junction to San Bernardino Substation

This portion of the Proposed Project extends from San Bernardino Junction north through the Cities of Loma Linda and Redlands before terminating at San Bernardino Substation. The transmission line corridor along this segment contains two lattice structure transmission lines. The landscape along this route is suburban in character with numerous residential developments, parks and commercial developments in close proximity to the corridor.

Views of the Proposed Project along this route segment would be available from local roads paralleling and crossing under the corridor, residential neighborhoods adjacent to the transmission line corridor, parks within the corridor right-of-way, and I-10 where the transmission lines span the freeway.

Although the parks within the right-of-way (KVP 26) were selected for detailed analysis along this route segment, the visual setting described for KVP 26 would also be somewhat representative of views of the project route from adjacent residences. The location of KVP 26 is shown on Figure D.3-1F (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 26 is presented in the following paragraphs.

Key Viewpoint 26 – Right-of-Way Park off Beaumont Avenue in Loma Linda (VS-VC)

Key Viewpoint 26 was established at the southern end of the right-of-way park near Beaumont Avenue in the City of Loma Linda (see Figure D.3-27A on enclosed CD). Viewing to the north toward existing Towers M2-T4, this location was selected to represent the existing views available to park users. However, it also useful in illustrating the close proximity of adjacent residential developments from where the transmission structures would also be prominently visible.

Visual Quality. Low-to-moderate. The foreground suburban right-of-way park landscape is dominated by the overhead electric transmission line infrastructure (towers and conductors). Also, visible is a limited amount of park landscaping and play structures. The corridor is bordered by trees along the perimeter of adjacent residential developments. In the background, though mostly obscured by haze, are the San Gabriel Mountains. The skylined nature of the structures increases structural prominence.

Viewer Concern. High. Although energy transmission infrastructure features prominently in the foreground views from the adjacent residential area, residential viewers would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (such as background sky or mountains) an adverse visual change.

Viewer Exposure. High. This portion of the route would be highly visible in the foreground of views of park visitors and adjacent residences and local streets adjacent to the corridor. The number of viewers would be moderate and the duration of view would be extended.

Overall Visual Sensitivity. Moderate-to-high. For park users and residents in the adjacent neighborhood, the low-to-moderate visual quality, high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

D.3.4 Applicable Regulations, Plans, and Standards

Table D.3-6 identifies the various plans and policies that pertain to Visual Resources. For each relevant policy or directive identified in the table, the Proposed Project's consistency is identified and discussed.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
U.S. Bureau of Land Management Phoenix District	**Phoenix South Resource Management Plan**		
	VRM Classifications are specified (Classes II through IV in the project study area) in the Resource Management Plan. The **VRM Class II Management Objective** requires that a project or action retain the existing character of the landscape. The level of change to the landscape should be low. Activities may be seen but should not attract attention of the casual observer. Changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. The **VRM Class III Management Objective** requires that a project or action partially retain the existing character of the landscape. The level of change to the landscape should be moderate. Activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. The **VRM Class IV Management Objective** allows a project or action to make high levels of change to the characteristic landscape. Activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.	Yes	The Proposed Project would cross BLM Phoenix District lands with VRM Class III designations south of the Big Horn Mountains. The very low level of change that would be caused by the project would meet the VRM Class III objective of a moderate (or lower) degree of visual change. While the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line. Although the project would be visible, it would not dominate the view of the casual observer. See Figures D.3-2A (existing view) and D.3-2B (simulation) for views of Big Horn Peak (both on CD).

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
U.S. Bureau of Land Management Yuma District	**Lower Gila South Resource Management Plan**		
	VRM Classifications are specified (Classes II and III in the project area) in the Resource Management Plan ***(see above for description of Class II and Class III management objectives)***.	Yes	The Proposed Project would span the Colorado River, which is assigned a VRM Class II from riparian border to riparian border. The visual change associated with the conductor span only would be low and would meet the VRM Class II objective of a low degree of visual change. The Proposed Project would also cross BLM Yuma District lands with VRM Class III designations in the following areas: (a) north of the Eagletail Mountains, (b) across the Ranegras and La Posa Plains, and (c) through Copper Bottom Pass in the Dome Rock Mountains to the Colorado River. The low-to-moderate levels of change that would be caused by the project in these areas would meet the VRM Class III objective of a moderate (or lower) degree of visual change. While the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line. Although the project would be visible, it would not dominate the view of the casual observer. See Figures D.3-7A and D.3-7B for views of La Posa Plain, and Figures D.3-8A (existing view) and D.3-8B (simulation) for views of the Colorado River crossing (all on CD).
U.S. Fish and Wildlife Service Kofa National Wildlife Refuge	**Kofa National Wildlife Refuge & Wilderness and New Water Mountains Wilderness Interagency Management Plan and EA, 1996. Page 29, Management Strategy, Objective 1: Preservation of Wilderness Values.**		
	Objective 1: Preservation of Wilderness Values	No	The Proposed Project would result in the placement of new structures within the Refuge, which would adversely affect views from Crystal Hill Road and Pipeline Road. The new structures would cause a noticeable increase in structure prominence and industrial character and would result in a moderate-to-high degree of additional view blockage of the background Livingston Hills. The construction of new or use of existing access and spur roads may also result in increased land scarring. Therefore, the project would not be consistent with the objective of maintaining or enhancing the wilderness values of naturalness by minimizing visual impacts of development. See Figures D.3-5A (existing view) and D.3-5B (simulation) for views of the Kofa NWR (both on enclosed CD).
U.S. Bureau of Land Management California Desert District	**California Desert Conservation Area (CDCA) Plan-1980 as amended.**		
	Interim VRM Class II Designations. In the absence of established Visual Resource Management (VRM) Classes in the CDC Plan, Interim VRM Classes have been developed for those BLM lands within the Alligator Rock ACEC ***(see above for description of Class II management objectives)***.	No	The Proposed Project would cross BLM lands in the Alligator Rock ACEC with an interim VRM Class II designation. The moderate levels of visual change that would be caused by the project in these areas would not meet the VRM Class II objective of a low degree of visual change. The new line would not retain the existing character of the landscape nor would it repeat the basic elements (form, line, color, and texture) of the existing natural features in the landscape. See Figures D.3-11A (existing view) and D.3-11B (simulation) for views of the Alligator Rock ACEC (on enclosed CD).

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Interim VRM Class III Designations. In the absence of established Visual Resource Management (VRM) Classes, Interim VRM Classes have been developed for those BLM lands crossed by the project in the Chuckwalla and Shavers Valleys not covered by the Coachella Valley Plan Amendment ***(see above for description of Class III management objectives)***.	Yes	The Proposed Project would cross BLM lands with interim VRM Class III designations in the Chuckwalla and Shavers Valleys. The low-to-moderate levels of change that would be caused by the project in these areas would meet the VRM Class III objective of a moderate (or lower) degree of visual change. While the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line. Although the project would be visible, it would not dominate the view of the casual observer. See Figures D.3-12A (existing view) and D.3-12B (simulation) for views of the Chuckwalla Valley (on enclosed CD).
	Record of Decision for California Desert Conservation Area Plan Amendment for the Coachella Valley, Page 1, Plan Amendment Decision 2: Designate Visual Resource Management Classes on public lands.		
	VRM Classifications in the Plan Amendment are specified (Class II) for the Coachella Valley Preserve.	Yes	The Proposed Project passes through portions of the Coachella Valley Preserve subject to VRM Class II management objectives. The low level of visual change that would be caused by the project in this area would meet the VRM Class II objective of a low degree of visual change. While the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing three lattice tower transmission lines. Also, the additional structures would not dominate the view of, nor attract the attention of, the casual observer. See Figures D.3-15A (existing view) and D.3-15B (simulation) for views of the Coachella Valley Preserve (on enclosed CD).
Maricopa County, Arizona	**Maricopa County 2020 Comprehensive Plan, Page 98, Open Space Goal: Maintain and, where necessary, encourage expanding the open space system for Maricopa County to address public access, connectivity, education, preservation, buffering, quantity, quality, and diversity for regionally significant open spaces.**		
	Open Space Objective 01: Promote development that is compatible with the visual character and quality of the site. Policy 01.1: Encourage efforts to protect and improve access to open space resources.	Yes (with APMs & mitigation)	The Proposed Project would require the construction of new access and spur roads in Maricopa County. These roads would likely improve some access in the vicinity of the project. Therefore, the project would be consistent with the access focus of this Open Space goal. However, the new access and spur roads also have the potential to create additional visual contrast from unnatural vegetative lines and exposed soils, which would not be consistent with Objective 01/Policy 01-1. Implementation of the Applicant's APMs and Mitigation Measures V-2a through V-2c should achieve development that is compatible with Objective 01/Policy 01-1. Therefore, the Proposed Project, with mitigation, would be consistent with this policy. See Figures D.3-2A/B and D.3-3A/B for views within Maricopa County (on enclosed CD).

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Open Space Objective 01: Protect and enhance environmentally sensitive areas, including mountains and steep slopes; rivers and significant washes; historic, cultural, and archaeological resources; view corridors; sensitive desert; and significant wildlife habitat and ecosystems. Policy O4.1: Conserve mountainous areas that contain important wildlife habitats, cultural resources, and scenic areas.	Yes	As the Proposed Project exits the Harquahala Switchyard east to the east side of Salome Highway, southbound views from Salome Highway would be adversely affected resulting in significant (Class II) visual impacts. Effective implementation of Mitigation Measures V-6a through V-6c and V-35 would reduce the visual impacts to levels that would be less than significant. Passing south of the Big Horn Mountains, the Proposed Project would cause an adverse but less than significant (Class III) visual impact on views of the Big Horn Mountains from some 4WD access roads south of the Big Horn Mountains and north of I-10. Also, implementation of Mitigation Measure V-3a would help to avoid any unnecessary adverse visual impacts. In both of the above cases, the project would not be located on any steep mountain slopes or otherwise impact any mountainous areas.
	Open Space Objective 05 Encourage appropriate open space between communities and land uses. Policy 05.3: Protect view corridors through buffering, screening, and other development standards.	Yes	This policy pertains primarily to the establishment and protection of view corridors relative to developed communities. The Proposed Project does not pass near any developed communities in Maricopa County nor adversely affect any view corridor from an established community. Although some views from local roads in proximity to the project (West Courthouse Road, Salome Highway, I-10) would be adversely affected by the project, the resulting visual impacts would be adverse but not significant (Class III). Also, implementation of Mitigation Measure V-3a would help to avoid any unnecessary adverse visual impacts.
	Maricopa County 2020 Tonopah-Arlington Area Plan. Goal 1: Promote development that considers adverse environmental impacts on the natural and cultural environment, preserves highly valued open space, and remediates areas contaminated with hazardous materials.		
	Objective 1: Encourage developments that are compatible with natural environmental features and which do not lead to their destruction. Policy E1.2 – Encourage land uses and development designs that are compatible with environmentally sensitive areas such as parks, open space, floodplains, hillsides, wildlife habitat, scenic areas, and unstable geologic and soil conditions.	Yes (with APMs & mitigation)	The Proposed Project would require the construction of new access and spur roads in Maricopa County. The new access and spur roads have the potential to create additional visual contrast from unnatural vegetative lines and exposed soils, which would not be consistent with Objective 1/Policy E1.2. Implementation of the Applicant's APMs and Mitigation Measures V-2a through V-2c should achieve development that is compatible with Objective 1/Policy E1.2. Therefore, the Proposed Project, with mitigation, would be consistent with this policy. See Figures D.3-2A/B and D.3-3A/B for views within Maricopa County (on enclosed CD).

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
Riverside County, California	**Land Use Element: Project Design, pp LU-22 and LU-23.**		
	Policy LU 4.1 – Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts: a. Compliance with the design standards of the appropriate area plan land use category. I. Mitigate noise, odor, lighting, and other impacts on surrounding properties.	Yes (with mitigation)	There are no aesthetic design standards pertaining to high-voltage transmission lines in the Land Use Element. However, the Proposed Project would include facilities that would require night lighting with the potential to impact surrounding areas. However, with implementation of Mitigation Measure V-6c, night lighting impacts would be mitigated to a level that would be less than significant (Class III).
	Policy LU 6.1 – Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts.	Yes	The Proposed Project would be located within an established utility corridor, which would avoid the proliferation of additional utility facilities across the landscape with the potential for land use compatibility impacts. Furthermore, implementation of the APMs identified in this document and the Mitigation Measures presented in following sections would serve to minimize the visual impacts of the Proposed Project.
	Policy LU 6.4 – Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.	Yes (with mitigation)	The Proposed Project would include facilities that might cause daytime glare and night lighting impacts on surrounding areas. However, with implementation of Mitigation Measures V-3a, V-6a, V-6c, and V-40a glare and night lighting impacts would be kept to levels that would be less than significant (Class III).
	Land Use Element: Hillside Development & Slope, Page LU-30.		
	Policy LU 11.1 – Apply the following policies to areas where development is allowed and that contain natural slopes, canyons, or other significant elevation changes, regardless of land use designation: a. Restrict development on visually significant ridgelines, canyon edges and hilltops through sensitive siting and appropriate landscaping to ensure development is visually unobtrusive.	No	The Proposed Project would cross several hilltops and ridgelines and would be located on canyon edges (Whitewater Canyon) in Riverside County. As a result, the transmission structures would cause additional skylining (extending above the horizon line) and appear more prominent and obtrusive. There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.
	Land Use Element: Scenic Corridors, Page LU-31.		
		Yes	The Proposed Project would be located within an existing utility corridor. Although some views from roads within Riverside County would be adversely affected, these visual impacts would be less than significant Class III). No designated scenic corridors within Riverside County would experience significant visual impacts from the Proposed Project.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Policy LU 13.3 – Ensure that the design and appearance of new landscaping, structures, equipment, signs, or grading within Designated and Eligible State and County scenic highway corridors are compatible with the surrounding scenic setting or environment.	Yes	Portions of the Proposed Project would cross designated (or eligible) scenic roads within Riverside County. However, the project would be located within an existing utility corridor and the proposed structures would match the design of existing structures within the corridor.
	Policy LU 13.4 – Maintain at least a 50-foot setback from the edge of the right-of-way for new development adjacent to Designated and Eligible State and County Scenic Highways.	Yes	Although the Proposed Project would affect views from designated (SR 62) and eligible (I-10, Dillon Road, Whitewater Canyon Road, San Timoteo Canyon Road, and Redlands Boulevard) scenic highways, structures would be located within an existing utility corridor and more than 50 feet from the edge of the scenic highway right-of-way. See Figures D.3-16A and D.3-17A (existing view) and D.3-16B and D.3-17B (simulation) for views at SR 62 (on enclosed CD).
	Land Use Element: Open Space Area Plan Land Use Designations: Recreation Page LU-52.		
	Policy LU 19.4 – Encourage that structures be designed to maintain the environmental character in which they are located.	Yes	The Proposed Project would be located within an established utility corridor, which would avoid the proliferation of additional utility corridors. The proposed transmission line structures would also match the same design as existing structures within the corridor. Therefore, the Proposed Project would not substantially alter the existing environmental character in which it would be located.
	Land Use Element: Open Space–Rural Land Use Designations, Page LU-52.		
	Policy LU 20.1 – Require that structures be designed to maintain the environmental character in which they are located.	Yes	The Proposed Project would be located within an established utility corridor, which would avoid the proliferation of additional utility corridors. The proposed transmission line structures would also match the same design as existing structures within the corridor. Therefore, the Proposed Project would not substantially alter the existing environmental character in which it would be located.
	Policy LU 20.2 – Require that development be designed to blend with undeveloped natural contours of the site and avoid an unvaried, unnatural, or manufactured appearance.	No	Although the Proposed Project would (a) be located within an established utility corridor, (b) have the same design as existing transmission line structures, and (c) have a lattice design that would help the structures blend with a background where one exists, the project would still exhibit an industrial, manufactured appearance. There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Policy LU 20.4 – Ensure that development does not adversely impact the open space and rural character of the surrounding area.	No	Although the Proposed Project would (a) be located within an established utility corridor, (b) have the same design as existing transmission line structures, and (c) have a lattice design that would help the structures blend with a background where one exists, the project would still exhibit an industrial, manufactured appearance and cause adverse visual impacts. There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment. However, this policy inconsistency is not considered significant given the project's location adjacent to other transmission line facilities of similar design and scale, within an established transmission line corridor.
	Land Use Element: Eastern Riverside County Desert Areas (Non-Area Plan) Policies, Page LU-72.		
	Policy LU 30.1 – Preserve the character of the Eastern Riverside County Desert Areas through application of those land use designations reflected on Figure LU-6, Eastern Riverside County Desert Areas Land Use Plan (on enclosed CD).	Yes	Within the Eastern Riverside County Desert Area, the Proposed Project would be located within an existing utility corridor and be the same design as existing facilities with the corridor.
	Circulation Element: Scenic Corridors, Page C-46.		
	Policy C 19.1 – Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan.	Yes	Although the Proposed Project would affect views from designated (SR 62) and eligible (I-10, Dillon Road, Whitewater Canyon Road, San Timoteo Canyon Road, and Redlands Boulevard) scenic highways, the project would (a) be located within an established utility corridor and (b) have the same design as existing transmission line structures. Also, the resulting visual impacts in the vicinity of these transportation corridors would be adverse but not significant (Class III).
	Circulation Element: Major Utility Corridors, Page C-55.		
	Policy C 25.2 – Locate new and relocated utilities underground when possible. All remaining utilities shall be located or screened in a manner that minimizes their visibility by the public.	No	The Proposed Project would be an aboveground facility. Although the project would be located within an existing corridor and have the same design as other facilities within the corridor, its location within an existing corridor would not minimize the project's visibility given the relatively close proximity of the utility corridor to major travel corridors (I-10), local roads, and development. There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.
	Multipurpose Open Space Element: Scenic Resources, Page OS-45.		
	Policy OS 21.1 – Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.	No	The Proposed Project would be located along a number of ridgelines and slopes that would result in additional skylining (extending above the horizon). There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Multipurpose Open Space Element: Scenic Corridors, Page OS-45.		
	Policy OS 22.1 – Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses.	Yes	Although the Proposed Project would affect views from designated (SR 62) and eligible (I-10, Dillon Road, Whitewater Canyon Road, San Timoteo Canyon Road, and Redlands Boulevard) scenic highways, the project would (a) be located within an established utility corridor and (b) have the same design as existing transmission line structures. Also, the resulting visual impacts in the vicinity of these transportation corridors would be adverse but not significant (Class III). See Figures D.3-16A and D.3-17A (existing view) and D.3-16B and D.3-17B (simulation) for views at SR 62 (see enclosed CD).
	Reche Canyon/Badlands Area Plan. Circulation Element: Scenic Highways, Page 36.		
	Policy RCBAP 11.1 – Protect the scenic highways in the Reche Canyon/Badlands area from change that would diminish the aesthetic value of adjacent properties through policies in the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	Yes	The reconductoring that would occur in this area under the Proposed Project would be minimally noticeable and would not result in significant adverse visual impacts. Also, implementation of Mitigation Measure V-3a would ensure that significant visual impacts do not occur.
	Reche Canyon/Badlands Area Plan. Multipurpose Open Space, Page 45.		
	Policy RCBAP 13.1 – Protect visual and biological resources in the Reche Canyon/Badlands area through adherence to General Plan policies found in the Multipurpose Open Space Element.	Yes	The reconductoring that would occur in this area under the Proposed Project would be minimally noticeable and would not result in significant adverse visual impacts. Also, implementation of Mitigation Measure V-3a would ensure that significant visual impacts do not occur.
	The Pass Area Plan. Circulation: Scenic Highways, Page 41.		
	Policy PAP 12.1 – Protect the scenic highways in the Pass from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	The Proposed Project would cause adverse but less than significant (Class III) visual impacts on views in the vicinity of San Timoteo Canyon Road. There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment. See Figures D.3-25A (existing view) and D.3-25B (simulation) for views in San Timoteo Canyon (see enclosed CD).
	Western Coachella Valley Area Plan. Land Use: Industrial Uses, Page 38.		
	Policy WCVAP 12.4 – Require the screening and/or landscaping of outdoor storage areas, such as contractor storage yards and similar uses.	Yes (with mitigation)	The Proposed Project would require the establishment of the Palm Springs Construction yard within the Western Coachella Valley Plan Area. However, implementation of Mitigation Measure V-1a would help to minimize the temporary visual impacts from construction and storage yards.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Western Coachella Valley Area Plan. Land Use: Light Pollution, Page 43.		
	Policy WCVAP 15.1 – Where outdoor lighting is proposed, require the inclusion of outdoor lighting features that would minimize the effects on the nighttime sky and wildlife habitat areas.	Yes (with mitigation)	Some project facilities (substations and construction yards) would include night lighting with the potential to impact the nighttime sky and adjacent wildlife habitat areas. However, implementation of Mitigation Measures V-1b and V-6c would ensure that night lighting impacts do not occur.
	Policy WCVAP 15.2 – Adhere to the lighting requirements of the County Ordinance Regulating Light Pollution for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.	Yes (with mitigation)	Some project facilities (substations and construction yards) would include night lighting with the potential to impact the nighttime sky and adjacent wildlife habitat areas. However, implementation of Mitigation Measures V-1b and V-6c would ensure that night lighting impacts do not occur.
	Western Coachella Valley Area Plan. Circulation: Scenic Highways, Page 48.		
	Policy WCVAP 18.1 – Protect the scenic highways in the Western Coachella Valley from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	The Proposed Project would result in an adverse but less than significant (Class III) visual impact on views from State-designated Scenic Highway SR 62. There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment. See Figures D.3-16A and D.3-17A (existing view) and D.3-16B and D.3-17B (simulation) for views at SR 62 (see enclosed CD).
	Western Coachella Valley Area Plan. Multipurpose Open Space, Page 55.		
	Policy WCVAP 19.1 – Protect visual and biological resources in the Western Coachella Valley through adherence to General Plan policies found in the Fish and Wildlife Habitat section of the Multipurpose Open Space Element.	No	The Proposed Project would affect visual resources within the Western Coachella Valley Planning Area. Visual impacts would be adverse but less than significant (Class III). There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.
	Eastern Coachella Valley Area Plan. Land Use: Light Pollution, Page 35.		
	Policy ECVAP 4.1 – Require the inclusion of outdoor lighting features that would minimize the effects on the nighttime sky and wildlife habitat areas.	Yes (with mitigation)	The Proposed Project would not include permanent facilities requiring night lighting within the Eastern Coachella Valley Planning Area. However, the project would include night lighting at the temporary Indio Construction Yard. Implementation of Mitigation Measure V-1b would ensure that night lighting impacts from construction facilities do not occur.
	Policy ECVAP 4.2 – Adhere to the County's lighting requirements for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.	Yes (with mitigation)	The Proposed Project would not include permanent facilities requiring night lighting within the Eastern Coachella Valley Planning Area. However, the project would include night lighting at the temporary Indio Construction Yard. Implementation of Mitigation Measure V-1b would ensure that night lighting impacts from construction facilities do not occur.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Eastern Coachella Valley Area Plan. Circulation: Scenic Highways, Page 47.		
	Policy ECVAP 14.1 – Protect the scenic highways in the Eastern Coachella Valley from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	The Proposed Project would affect views from county-eligible (I-10 and Dillon Road) scenic highways within the Eastern Coachella Valley Planning Area. The visual impacts would be adverse but less than significant (Class III). There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment. However, this policy inconsistency is not considered significant given the project's location adjacent to other transmission line facilities of similar design and scale, within an established transmission line corridor.
	Eastern Coachella Valley Area Plan. Open Space: Habitat Conservation/CVMSHCP, Page 55.		
	Policy ECVAP 15.1 – Protect visual and biological resources in the Eastern Coachella Valley through adherence to General Plan policies found in the Fish and Wildlife Habitat section of the Multipurpose Open Space Element, as well as policies contained in the Coachella Valley Multiple Species Habitat Conservation Plan, upon its adoption.	Maybe	The criteria for protection of visual resources in the Eastern Coachella Valley are not defined. However, the Proposed Project would result in adverse but less than significant (Class III) visual impacts in the Eastern Coachella Valley.
	Desert Center Area Plan. Land Use: Light Pollution, Page 27.		
	Policy DCAP 5.1 – When outdoor lighting is used, require the use of fixtures that would minimize effects on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.	Yes (with mitigation)	Some project facilities (California Series Capacitor and Desert Center Construction Yard) would include night lighting with the potential to impact the nighttime sky and adjacent wildlife habitat areas. However, effective implementation of Mitigation Measures V-1b and V-6c would ensure that night lighting impacts do not occur.
	Desert Center Area Plan. Circulation: Scenic Highways, Page 31.		
	Policy DCAP 9.1 – Protect the scenic highways within the Desert Center Area Plan from change that would diminish the aesthetic value of adjacent properties through adherence to the policies found in the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	The Proposed Project would adversely affect views from Interstate 10, a county-eligible scenic highway within the Desert Center Planning Area. The visual impacts would be adverse but less than significant (Class III). There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.
	Palo Verde Valley Planning Area. Circulation: Scenic Highways, Page 37.		
	Policy PVVAP 10.1 – Protect the scenic highways within the Palo Verde Valley planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	The Proposed Project would adversely affect views from Interstate 10, a county-eligible scenic highway within the Palo Verde Valley Planning Area. The visual impacts would be adverse but less than significant (Class III). There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
San Bernardino County	**General Plan, 1989 (Revised 1999). Natural Resources – Open Space/Recreation/Scenic: E. Scenic Resource Policies/Actions, Page II-C5-106.**		
	Policy OR-51 – Because the provision of scenic areas, trails and scenic highways is an integral part of the planning process, the County shall require the following:		
	b. Define the Scenic Corridor to extend 200 feet on either side of the designated route, measured from the outside edge of the right-of-way, trail or path. Development along scenic corridors shall be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.	b. Yes	b. The Proposed Project would traverse several ridges and hilltops and be visible from the following County Designated scenic highways: Barton Road, Beaumont Avenue, and San Timoteo Canyon Road. In each case the Proposed Project would be located within an existing transmission corridor, adjacent to other transmission facilities of similar design and scale.
	j. Control development on prominent ridgelines.	j. Yes	j. Although the Proposed Project would cross some prominent ridgelines, its location is being limited to similar tower locations within an existing transmission line right-of-way.
	k. Allow new regional and community infrastructure on hilltops only when no alternative sites are available.	k. Yes	k. The Proposed Project would cross several hilltops. However, the proposed facilities would be located within an existing transmission corridor with other similar facilities. Co-location of energy infrastructure within corridors helps to minimize the proliferation of rights-of-way across the landscape.
	l. R eview site planning, including architectural design, to prevent obstruction of scenic views and to blend with the surrounding landscape.	l. Yes	l. The Proposed Project would be of a design and scale similar to that of other facilities within the corridor. Structure placement would also be matched with existing facilities to minimize the occurrence of asynchronous conductor spans.
	Require compliance with grading and vegetation removal standards as set forth in the Scenic Routes Overlay District.		
	Policy OR-57 – Because the preservation of scenic qualities can in many cases be achieved only through the preservation of existing landform and natural features, the County shall require the following:	No	Although the Proposed Project would be consistent with existing utility infrastructure within the existing corridor, it would not be consistent with the visual characteristics of the surrounding natural features and would not serve to preserve the integrity and character of the hillside environment. There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment.
	c. Require that hillside development be compatible with natural features and the ability to develop the site in a manner which preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.		

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Policy OR-58 – Because the County desires to retain the scenic character of visually important roadways throughout the County, the County shall designate the following routes as scenic highways, and apply all applicable policies to development within the Scenic Corridor [partial list]: Loma Linda Planning Area: • Barton Road • Beaumont Avenue • San Timoteo Canyon Road	Maybe	Although the Proposed Project would be visible from the following County Designated scenic highways: Barton Road, Beaumont Avenue, and San Timoteo Canyon Road, the applicable policies referenced in Policy OR-58 are not specified. See Figures D.3-23A and D.3-24A (existing views) and D.3-23B and D.3-24B (simulations) for views in Beaumont (see enclosed CD).
City of Coachella	**General Plan 2020. Infrastructure and Public Services Element Policies, Page 111.**		
	Objective: The City shall ensure the adequate provision of private utilities to serve the needs of the community. Policy – The shared use of major transmission corridors and other appropriate measures shall be encouraged as a means of preserving the aesthetic resources of the City and to lessen the visual impacts of such development. The City shall work with the appropriate agencies in developing these corridors for recreational use.	Yes	The Proposed Project would include the construction of a new electric transmission line through the northern portion of the City of Coachella. The project would be co-located with other transmission facilities within an established corridor.
City of Desert Hot Springs	**Comprehensive General Plan: Community Design Element Policies, Pages III-118 and III-120.**		
	Policy 10: Lighting shall be limited to the minimum height, number and intensity of fixtures needed to provide security and identification in residential, commercial and industrial development, taking every reasonable measure to preserve the community's night skies.	Yes (with mitigation)	The Proposed Project would include facilities within the City of Desert Hot Springs that may require night lighting (Devers Substation modifications and Palm Springs Construction Yard at Devers Substation. However, effective implementation of Mitigation Measures V-1b and V-6c would ensure that night lighting impacts are minimized.
	Policy 14: Water wells, utility substations, switching and control facilities associated with it shall be screened to preserve scenic viewsheds and limit visual clutter.	Yes (with mitigation)	The Proposed Project would include both short-term construction facilities (Palm Springs Construction Yard) and long-term operational facilities (modifications to Devers Substation) within the City of Desert Hot Springs. However, effective implementation of Mitigation Measures V-1a~~,~~ and V-6a ~~and V-6b~~ would ensure that visual impacts from ancillary facilities are minimized.
	Policy 16: All grading and development proposed within scenic highway viewsheds, including hillsides, entry and focal points, shall be regulated to minimize adverse impacts to these viewsheds.	Yes	The Proposed Project would be located within the viewshed of SR 62, a State Designated Scenic Highway. However, the co-location of the Proposed Project within an existing corridor and the net reduction in transmission structures would minimize the visual impact experienced from SR 62.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Comprehensive General Plan: Water, Sewer & Utilities Element Policies, Page VI-8.		
	Policy 10: Major utility facilities shall be sited to ensure minimal impacts to the environment and the community, and minimize potential environmental hazards.	Yes	The Proposed Project would include the siting of facilities within the City of Desert Hot Springs with the potential to cause visual impacts. However, the co-location of the Proposed Project within an existing corridor adjacent to existing transmission structures of similar design and scale would minimize the potential for visual impacts.
	Comprehensive General Plan: Public Buildings and Facilities Element Policies, Page VI-36.		
	Policy 1: Coordinate with public utilities and special districts, utilities and other quasi-public entities to ensure the least intrusive and most compatible integration of related buildings and facilities into the land use pattern of the community. Program 1B – Integrate all new maintenance areas and utility substations with surrounding land uses, and regulate in order to maintain a compatible and aesthetically pleasing community through the use of appropriate buffers, architectural design and landscape, and signage.	Yes	The Proposed Project would include the siting of additional facilities within the existing transmission line corridor and adjacent to Devers Substation. In both cases, the new facilities would appear similar to existing structures and facilities in terms of design and scale and would appear compatible with the existing landscape character.
City of Loma Linda	**Draft General Plan (2004). Land Use Element: 2.2.3.1 Guiding Policy for the South Hills, Pages 2-12 and 2-13.**		
	Policy j: Development shall maintain appropriate horizontal and vertical setbacks from "primary ridgelines," which are the ridgelines mapped as part of a comprehensive Specific Plan for the South Hills having the following characteristics. • Ridges that have a significant difference in elevation from the valley or canyon floor, and are recognizable as ridgelines from the valley floor to the north. • Ridges that possess a prominent landform in the foreground and form a major skyline in the background. In some cases where layers of ridges may be visible into the distance, the objective of defining major ridgelines is to avoid the silhouetting of development along sky lines when viewed from preserved open space areas and valley areas to the south.	No	Although the policy statement does not specify appropriate setbacks, the Proposed Project would cross some ridges and would cause additional skylining or "silhouetting of development along sky lines." There is no mitigation available that would bring the project into consistency with this policy following the proposed alignment. Although shorter structures would result in less skylining, they would also necessitate shorter spans and a greater number of structures to maintain sufficient ground clearance, which would more than offset the benefit achieved from less skylining.

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
	Policy p: The overall scale and massing of structures shall respect the natural surroundings and unique visual resources of the area by incorporating designs which minimize bulk and mass, and minimize visual intrusion on the natural landscape.	Yes	The Proposed Project would add more conductors to the existing structures and the new conductors would appear similar to the existing conductors. As a result, the project's apparent bulk, mass and visual intrusion on the natural landscape would be minimized.
	Draft General Plan (2004). General Plan Implementation Programs, Page 11-5.		
	Policy d: Limit development on ridgelines.	No	The policy does not establish criteria that would define the limits to development on ridgelines. Therefore, since the Proposed Project would pass through portions of the South Hills in the City of Loma Linda, it is assumed that the project would be inconsistent with this policy.
	Draft General Plan (2004). Conservation and Open Space Element: 9.2.10.1 Guiding Policy for Visual Resources, Page 9-7.		
	Work with Southern California Edison to improve transmission line corridors with attractive, community-serving uses and to upgrade the appearance of the transmission line corridors in conjunction with an expansion or co-use of the corridor.	Yes	The Proposed Project would not affect any of the current park and recreation uses that are presently occurring within the transmission line right-of-way. Also, the additional conductors would not noticeably change the visual quality or character of the existing rights-of-way.
City of Redlands	**1995 General Plan. City Design and Preservation Element: Section 3.10 City Design – Guiding Policies.**		
	Policy 3.10e – Preserve the natural appearance of steep hillsides and ridges. Conservation, safety, and fiscal reasons justify preservation, but visual satisfaction is more widely appreciated.	No	The Proposed Project would cross several hillsides and ridges within San Timoteo Canyon in the City of Redlands. The resulting visual impacts would be adverse but less than significant (Class III). Therefore, the Proposed Project would not serve to preserve the natural appearance of the landscape.
	1995 General Plan. Land Use Element: Section 4.41 Southern Area Hills and Canyons – Implementing Policies.		
	Policy 4.41d – Major topographic features within the San Timoteo and Live Oak Canyon areas shall be preserved, maintained and where possible, enhanced. Major ridgelines should not be modified although development on a ridgeline may be allowed where there is offsetting need demonstrated.	Yes	The Proposed Project would cross several hillsides and ridges within San Timoteo Canyon in the City of Redlands. However, co-locating the Proposed Project within an existing transmission line corridor would be less visually impacting compared to creating an entirely new corridor and causing increased proliferation of energy infrastructure across the landscape.
	Policy 4.41e – Within the Live Oak Canyon and San Timoteo Canyon areas, the canyon walls immediately below major ridges and vegetation thereon shall be preserved and enhanced where appropriate. Slopes that are in excess of 50% shall be preserved intact except for public safety needs.	Yes	The Proposed Project would result in a net reduction of transmission line structures on slopes below major ridgelines within San Timoteo Canyon. See Figures D.3-25A (existing view) and D.3-25B (simulation) for views in San Timoteo Canyon (see enclosed CD).

Table D.3-6. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Project Consistent?	Method of Consistency
City of Calimesa	**General Plan: Land Use Element: Page 1-5, Rural Atmosphere and Quality of Life Policies.**		
	Policy 1.1 – Preserve the natural character and visual quality of the hillsides through sensitive site design and grading.	Yes	The Proposed Project would cross several hillsides to the north of San Timoteo Canyon in the City of Calimesa. However, along this route segment, the project would result in the removal of one transmission line, the rebuilding of a second transmission line to match a third transmission line, and the reconductoring of the third line. From most viewing locations the visual change would appear less industrially complex, resulting in an improvement of views.
	General Plan: Land Use Element: Page 1-8, Preservation of Natural Resources and Environmentally Sensitive Areas.		
	Policy 5.4 – Development shall be prohibited in areas containing sensitive biological resources and habitats, cultural resources, groundwater recharge areas, prominent ridgelines, unless adequate protection and/or preservation is provided.	Yes	The Proposed Project would cross several hillsides to the north of San Timoteo Canyon in the City of Calimesa. However, along this route segment, the project would result in the removal of one transmission line, the rebuilding of a second transmission line to match a third transmission line, and the reconductoring of the third line. From most viewing locations the visual change would appear less industrially complex, resulting in an improvement of views.
	General Plan: Resource Management Element: Page 14-5, Geologic Resources.		
	Policy 2.5 – Protect the City's scenic and visual resources by limiting ridgeline development and building heights.	Yes	The Proposed Project would cross several hillsides to the north of San Timoteo Canyon in the City of Calimesa. However, along this route segment, the project would result in the removal of one transmission line, the rebuilding of a second transmission line to match the design and height of a third transmission line, and the reconductoring of the third line. From most viewing locations the visual change would appear less industrially complex though the new tower would be taller than the structures being replaced. The result would be an improvement of views from most viewing locations. See Figures D.3-25A (existing view) and D.3-25B (simulation) for views in San Timoteo Canyon (see enclosed CD).
City of Grand Terrace	**General Plan: Aesthetic, Cultural, and Recreational Resources Element: Aesthetic Resources.**		
	Policy: Scenic resources should be protected from harmful impacts and maintained as community assets.	Yes	Within the context of the existing energy transmission corridors, the Proposed Project reconductoring within the City of Grand Terrace would appear minimally noticeable.
	Policy: Design of new development shall respect and preserve the view opportunities of existing development in the area.	No	Although the reconductoring of the Proposed Project within the City of Grand Terrace would appear minimally noticeable from most viewing locations, the addition of 6 new conductors to the Devers-Vista 1 & 2 transmission line, would adversely affect views from several residences along the north side of Vista Grande Way.
City of Palm Springs	**General Plan: Land Use, Page 1-19.**		
	3.1.7 Ensure that development does not overwhelm natural features, especially the washes and the views of mountains.	Yes	The Proposed Project would be located within an existing utility corridor adjacent to an existing transmission line of similar design and height. As a result, the Proposed Project would appear consistent with the existing character of the immediate landscape and would not overwhelm natural features.

D.3.5 Significance Criteria and Approach to Impact Assessment

This section explains how impacts are assessed in the Visual Resources section. Section D.3.5.1 presents the approach to visual impact assessment. Section D.3.5.2 presents the criteria that determine the significance of the anticipated impacts. In addition, Section D.3.5.3 lists the Applicant Proposed Measures relevant to Section D.3, and Section D.3.5.4 lists all impacts identified for the Proposed Project and alternatives, Sections D.3.6, D.3.7.

D.3.5.1 Approach to Impact Assessment

The factors considered in determining impacts on visual resources typically include: (1) scenic quality of the project site and vicinity; (2) available visual access and visibility, frequency and duration that the landscape is viewed; (3) viewing distance and degree to which project components would dominate the view of the observer; (4) resulting contrast of the proposed facilities or activities with existing landscape characteristics; (5) the extent to which project features or activities would block views of higher value landscape features; and (6) the level of public interest in the existing landscape characteristics and concern over potential changes.

An *adverse visual impact* occurs within public view when: (1) an action perceptibly changes existing features of the physical environment so that they no longer appear to be characteristic of the subject locality or region; (2) an action introduces new features to the physical environment that are perceptibly uncharacteristic of the region and/or locale; or (3) aesthetic features of the landscape become less visible (e.g., partially or totally blocked from view) or are removed. Changes that seem uncharacteristic are those that appear out of place, discordant, or distracting. The degree of the visual impact depends upon how noticeable the adverse change may be. The noticeability of a visual impact is a function of project features, context, and viewing conditions (angle of view, distance, primary viewing directions, and duration of view).

Impacts on visual resources within the study area could result from various activities including: structure and line construction, substation construction, establishment of construction staging areas and access roads, and project operation or presence of the built facilities. As stated in Section D.3.1.2 above, the Visual Resources technical approach utilizes two technical methodologies — the BLM's VRM methodology for BLM administered public lands east of Devers Substation and the Visual Sensitivity–Visual Change method for all other public and private lands throughout the study area. However, under both approaches, there are common steps in the impact assessment.

Initially, the proposed and alternative routes were viewed from various public roads and vantage points to develop an overall assessment of the potential impacts by segment. In consultation with the BLM and CPUC, a number of representative Key Viewpoints (KVPs — also commonly referred to as Key Observation Points [KOPs] under the BLM methodology) were established to assess the potential project impacts on sensitive visual resources (see discussion of KVPs in Section D.3.1.2 above). Detailed visual impact analyses were conducted at each of these key viewpoints and the necessary photo-documentation was obtained to serve as the foundation for photosimulations of the project features. The photosimulations are valuable tools in the evaluation of anticipated project effects.

The approach to impact assessment under each of the two methodologies used is discussed in the following sections. The results of the impact assessment under both methodologies are summarized and presented as a series of foldout tables at the end of the Visual Resources section in Appendix VR-1 (see enclosed CD).

BLM VRM Contrast Analysis Methodology

The key component of the impact assessment under the BLM's Visual Resource Management (VRM) methodology is the determination of visual contrast caused by a project's features or activities. Visual Contrast Ratings were conducted using the BLM's VRM system manuals (BLM, 1984, 1986a). The Visual Contrast Rating Forms are provided in Appendix VR-4 (see enclosed CD). Under the VRM system, the degree to which a project or activity affects the visual quality of a landscape depends on the visual contrast created between the project components and the major features, or predominant qualities, in the existing landscape. Visual contrast evaluates the project's consistency with the visual elements of form, line color and texture already established in the viewshed. In a sense, visual contrast describes a particular landscape's ability to absorb a project's components and location without resulting in an uncharacteristic appearance. Other elements that are considered in evaluating visual contrast include the degree of natural screening by vegetation and landforms, placement of structures relative to existing vegetation, landforms and other structures, distance from the point of observation, and relative size or scale. Once the degree of anticipated contrast is determined (ranging from none to strong), a conclusion on the overall level of change is made (ranging from very low to high) and compared to the applicable VRM Class objective for a determination of consistency with the management objectives and level of visual impact. For the present project, if a determination was made that the resulting level of change would be inconsistent with the VRM class objective for that location, and the inconsistency was considered a significant visual impact, the impact situation was further evaluated against the application of feasible mitigation measures in an effort to reduce the visual impact to a level of less than significant if possible. A final conclusion on impact significance was then reached.

Visual Sensitivity – Visual Change Methodology

Under the Visual Sensitivity–Visual Change method, field analysis at each KVP included assessment of visual contrast, project dominance, and view blockage. Subsequently, a conclusion was made regarding the extent of overall visual change, and taken together with the existing landscape's visual sensitivity, the level of probable visual impact significance was determined. A visual simulation was also prepared with which to further evaluate the preliminary impact determination. A conclusion on initial impact significance was then arrived at. If a determination was made that the resulting impact would be significant, the impact situation was further evaluated against the application of feasible mitigation measures in an effort to reduce the visual impact to a level of less than significant if possible. A final conclusion on impact significance was then reached.

Each of the key factors considered in the evaluation of visual change is generally expressed as low, low-to-moderate, moderate, moderate-to-high, or high and is discussed below.

Visual Contrast describes the degree to which a project's visual characteristics or elements (consisting of form, line, color, and texture) differ from the same visual elements established in the existing landscape. The degree of contrast can range from low to high. The presence of forms, lines, colors, and textures in the landscape similar to those of a Proposed Project indicates a landscape more capable of accepting those project characteristics than a landscape where those elements are absent. This ability to accept alteration is often referred to as visual absorption capability and typically is inversely proportional to visual contrast.

Project Dominance is a measure of a feature's apparent size relative to other visible landscape features and the total field of view. A feature's dominance is affected by its relative location in the field of view and the distance between the viewer and the feature. The level of dominance can range from subordinate to dominant.

View Blockage or Impairment describes the extent to which any previously visible landscape features are blocked from view as a result of the project's scale and/or position. Blockage of higher quality landscape features by lower quality project features causes adverse visual impacts. The degree of view blockage can range from none to high.

Overall Visual Change is a concluding assessment as to the degree of change that would be caused by a project. Overall visual change is derived from a comparison of resulting visual contrast, project dominance, and view blockage.

D.3.5.2 Significance Criteria

The criteria used to assess the significance of visual impacts resulting from a project take into consideration the factors described in Section D.3.5.1 above, as well as federal, State, and local policies and guidelines pertaining to visual resources. Appendix G of the CEQA Guidelines identifies the following four circumstances that can lead to a determination of significant visual impact:

- Project construction or the long-term presence of project components would cause a substantial effect on a scenic vista.
- Project construction or the long-term presence of project components would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within view of a State Scenic Highway.
- Project construction or the long-term presence of project components would substantially degrade the existing visual character or quality of the site and its surrounding landscape. [Note: Substantial degradation results from high levels of visual contrast, project dominance, and view blockage. Visual contrast relates to spatial characteristics, visual scale, texture, form, line, and color.]
- Project construction or the long-term presence of the Proposed Project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area or be hazardous to motorists or pedestrians.

Three additional criteria that can lead to a determination of significant visual impact for this Proposed Project include:

- The presence of the Proposed Project would result in a long-term (greater than three years) inconsistency with established (or interim) BLM Visual Resource Management Class objectives (applies only to public lands administered by the BLM). This would typically occur where a landscape with a relatively high visual quality and viewer concern is noticeably altered.
- Construction of the Proposed Project or the presence of project components would result in an inconsistency with local regulations, plans, and standards applicable to the protection of visual resources.
- The presence of the Proposed Project would add to a cumulative visual alteration.

It should be noted that the above criteria represent thresholds beyond which a determination of "significant" is likely though not certain due to specific site and viewing circumstances.

Under the **BLM's VRM methodology**, an adverse visual change was usually considered significant if it resulted in a long-term inconsistency with the applicable VRM Class management objectives. Again, specific site and viewing circumstances may warrant a different outcome.

Under the **Visual Sensitivity–Visual Change methodology**, the degree of impact significance is generally arrived at as a function of overall visual sensitivity and visual change. Table D.3-7 illustrates the general interrelationship between visual sensitivity and visual change and is used primarily as a consistency check between individual KVP evaluations. Actual parameter determinations (e.g., visual contrast, project dominance, and view blockage) are primarily based on analyst experience and site-specific circumstances.

Table D.3-7. Visual Sensitivity–Visual Change Guidance for Review of Impact Significance

OVERALL VISUAL SENSITIVITY	OVERALL VISUAL CHANGE				
	Low	Low to Moderate	Moderate	Moderate to High	High
Low	Not Significant[1]	Not Significant	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse but Less Than Significant
Low to Moderate	Not Significant	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse and Potentially Significant
Moderate	Adverse but Less Than Significant[2]	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse and Potentially Significant	Adverse and Potentially Significant
Moderate to High	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant[4]
High	Adverse but Less Than Significant	Adverse and Potentially Significant[3]	Adverse and Potentially Significant	Significant[4]	Significant

1 **Not Significant** impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.
2 **Adverse but Less Than Significant** Impacts are perceived as negative but do not exceed environmental thresholds.
3 **Adverse and Potentially Significant** impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances.
4 **Significant** impacts with feasible mitigation may be reduced to levels that are less than significant or avoided all together. Without mitigation, significant impacts would exceed environmental thresholds.

The interrelationships presented in Table D.3-7 are intended as guidance only, recognizing that site-specific circumstances may warrant a different outcome. However, it is reasonable to conclude that lower visual sensitivity ratings paired with lower visual change ratings will generally correlate well with lower degrees of impact significance when viewed onsite. Conversely, higher visual sensitivity ratings paired with higher visual change ratings will tend to result in higher degrees of visual impact.

Implicit in this rating methodology is the acknowledgment that, for a visual impact to be considered significant, two conditions generally exist: (1) the existing landscape is of reasonably high quality and is relatively valued by viewers; and (2) the perceived incompatibility of one or more Proposed Project elements or characteristics tends toward the high extreme, leading to a substantial reduction in visual quality.

D.3.5.3 Applicant Proposed Measures

Applicant Proposed Measures (APMs) were identified by SCE in its CPCN Application to the CPUC. Table D.3-8 presents the APMs that are relevant to visual resources. The impact analysis assumes that all APMs will be implemented as defined in the table. Additional mitigation measures are also recommended because it has been determined that the APMs do not fully mitigate the impacts for which they are presented.

Table D.3-8. Applicant Proposed Measures – Visual Resources

APM No.	Description
APM B-5	Removal of all construction debris from the area (Copper Bottom Pass) at the conclusion of the work.
APM B-14	Minimize the area needed for equipment operation and material storage and assembly.
APM B-15	In the vicinity of the Colorado River, existing tower spacings and conductor heights will be matched to the extent practical.
APM B-19	Restoration – Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored.
APM B-23	Minimize impact to or removal of creosote bush.
APM B-24	Avoid any alterations to the vegetation structure of Washington fan palm oases.
APM B-25	Avoid any alterations of mesquite hummock habitat.
APM B-30	Within tortoise habitat in California, spur roads shall not be bladed except where necessary to allow access for construction vehicles.
APM W-9 & 17	Cut and fill slopes will be minimized by a combination of benching and following natural topography where possible.
APM G-10	New access roads and soil disturbance will be avoided or minimized in all areas designated as having high erosion hazards or potential slope instability.
APM G-11 & 19	New access roads, which are required, will be designed to minimize ground disturbance from grading. They will follow natural ground contours as closely as possible and include specific features for road drainage.
APM V-1 (500 kV)	Non-specular conductors will be used [to reduce glare and visual contrast]. (BLM B-6.1)[4] [bracketed text added by SCE]
APM V-2 (500 kV)	For the proposed alignment, tower spacing will correspond to the spacing of the existing transmission line structures. Additionally, new tower heights will be adjusted such that the top elevations of each set of towers (new and existing) are horizontal with each other. This will coordinate perceptions of towers and conductors as one element. Site-specific conditions will determine when such mitigation is feasible. Other exceptions to these two measures are where towers will be sited to avoid sensitive features and/or to allow conductors to clearly span features. (BLM B-6.2) [PEA adds: "SCE will comply with the above mitigation measure to the extent possible. However, the ISO has specified that the capacity of the line be 2700 amps under normal conditions and 3600 amps under emergency conditions. This capacity rating is an increase from the 1988 DPV2 capacity rating. This capacity rating necessitates that the heights of some of the proposed Devers-Harquahala towers be slightly taller than [adjacent towers], and in some locations tower spacing may not correspond to the adjacent DPV1 structures, to provide adequate ground clearance." (PEA, p. 6-31)
APM V-3 (500 kV)	At all highway and recreation routes-of-travel crossings, including the Colorado River, towers will be placed at the maximum feasible distance, and when feasible, [except in locations where matching existing tower spacing is deemed appropriate]. (BLM B-6.3) [From "and where feasible," the BLM text reads "...at right angles, from the crossing." SCE has replaced this phrase in the bracketed text.]
APM V-4 (500 kV)	Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils. (BLM B-6.4)
APM V-5 (500 kV)	Standard tower spacing would be modified to correspond with spacing of existing transmission line towers where feasible and within limits of standard tower design to reduce visual contrast. (BLM B-6.8a)
APM V-6 (500 kV)	Towers would be placed so as to avoid features and/or to allow conductors to clearly span the feature (within limits of standard tower design) to minimize the amount of sensitive feature disturbed and/or reduce visual contrast (e.g., avoiding skyline situations through placement of tower to one side of a ridge or adjusting tower location to avoid highly visible locations and utilize screening of nearby landforms). (BLM B-6.8b)
APM V-7 (230 kV)	The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction. (SCE)
APM V-8 (230 kV)	Non-specular conductors would be used to reduce glare and resulting visual contrast. (SCE)
APM V-9 (230 kV)	Towers would be located adjacent to existing structures where feasible. Exceptions are at locations where the tower heights and/or spans would be modified based on terrain features allowing for adequate conductor clearance to ground and other facilities within the right-of-way. (SCE)
APM V-10 (230 kV)	At all highway and recreation routes-of-travel crossings, including the I-10 crossing, towers would be placed at the maximum feasible distance, except in locations where matching existing tower spacing is deemed appropriate, and when feasible, at 90 degree angles from the crossing. (SCE)

Table D.3-8. Applicant Proposed Measures – Visual Resources

APM No.	Description
APM L-1	Impacts in crossing of the Kofa NWR (Link 2) would be minimized through utilization of existing utility access (gas and transmission) roads during the construction and operational phases of the project. All vehicular traffic would be limited to approved access or spur roads.
APM L-3	New access road construction will be kept to a minimum. (BLM B-1.2).
APM L-4	Where feasible, the following additional mitigation measures would be implemented: • Matching of tower spans • Aligning towers adjacent to or parallel to agricultural field boundaries • Using tubular steel pole structures in agricultural fields instead of lattice steel towers to reduce the footprint of the structure • Specific tower placement to avoid span-sensitive features.
APM L-5	Along Link 10 in the Palo Verde Valley, H-frame structures, similar to the existing DPV1 structures, would be installed in this segment to reduce the amount of farmland permanently removed from production and minimize impacts to farm operations. Where feasible, additional mitigation measures would include matching tower spans, and aligning towers adjacent or parallel to field boundaries. (SCE)
APM L-9	Link 100 crosses the Pacific Crest National Trail, causing a potential temporary impact during construction. Temporary impacts also may occur where Link 102 crosses Noble Creek Regional Park and the Oak Valley Golf Course. Mitigation for construction includes avoiding high use periods and holidays. Mitigation for operation would require construction using structures placed parallel to existing structures to span and avoid displacement of recreational facilities. (SCE)

D.3.5.4 Impacts Identified

Table D.3-9 lists the impacts identified for the Proposed Project and alternatives, along with the significance of each impact. Detailed discussions of each impact and the specific locations where each is identified are presented in the following sections. Impacts are classified as Class I (significant, cannot be mitigated to a level that is less than significant), Class II (significant, can be mitigated to a level that is less than significant), Class III (adverse, but less than significant), and Class IV (beneficial).

Table D.3-9. Impacts Identified – Visual Resources

Impact No.	Description	Impact Significance
Proposed Project – Devers-Harquahala Segment		
V-1	Short-term visibility of construction activities, equipment and night lighting.	Class III
V-2	Long-term visibility of land scarring in arid and semi-arid landscapes.	Class II
V-3	Increased structure contrast when viewed from Key Viewpoint 1 south of the Big Horn Mountains.	Class III
V-4	Increased structure contrast, view blockage and skylining when viewed from Key Viewpoint 2 on Interstate 10 crossing the Harquahala Plain.	Class III
V-48	Impact V-48: Inconsistency of the Harquahala Mountain Telecommunication Facility with BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from Harquahala Mountains Wilderness (VRM Class I) and surrounding area (VRM Class II)	Class I
V-5	Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 3 at the north end of the Eagletail Mountains.	Class III
V-6	Increased structure contrast, industrial character, and skylining when viewing the Arizona Series Capacitor Bank from Pipeline Road.	Class III
V-7	Increased visual contrast, view blockage, and skylining when viewed from Key Viewpoint 4 on Crystal Hill Road in Kofa National Wildlife Refuge.	Class I
V-8	Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 5 on U.S. 95 near the Crystal Hill Road entrance to Kofa National Wildlife Refuge.	Class III

Table D.3-9. Impacts Identified – Visual Resources

Impact No.	Description	Impact Significance
V-9	Increased structure contrast, industrial character, and view blockage when viewed from Key Viewpoint 6 on Pipeline Road near Copper Bottom Pass.	Class III
V-10	Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 7 on the Colorado River.	Class III
V-11	Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 8 on SR 78 near Ripley.	Class III
V-12	Introduction of new structure contrast and industrial character when viewing the proposed Blythe Optical Repeater Station from nearby local roads.	Class III
V-13	Increased structure contrast, industrial character, view blockage, and skylining when viewing the Midpoint Substation site from the nearby BLM access road.	Class III
V-14	Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 9 on Interstate 10 in the eastern Chuckwalla Valley.	Class III
V-15	Inconsistency with Interim BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 10 in the Alligator Rock ACEC.	Class I
V-16	Increased structure contrast, view blockage, and skylining when viewing the Orocopia Mountains from Key Viewpoint 11 on Interstate 10, just west of Hayfield Road.	Class III
V-17	Increased structure contrast, industrial character, and skylining when viewing the proposed California Series Capacitor Bank from Interstate 10 or Red Cloud Road.	Class III
V-18	Increased structure contrast and view blockage when viewing the Orocopia Mountains from Key Viewpoint 12 on Cottonwood Springs Road, just south of the entrance to Joshua Tree National Park.	Class III
V-19	Increased structure contrast, industrial character, and view blockage when viewed from Key Viewpoint 13 in the Terra Lago golf and residential development.	Class III
V-20	Increased structure contrast, industrial character, and view blockage when viewing the Santa Rosa Mountains from Key Viewpoint 14 in the Coachella Valley Preserve, just west of Thousand Palms Canyon Road.	Class III
Proposed Project – West of Devers Segment		
V-21	Increased structure contrast and skylining when viewing the San Jacinto Mountains from Key Viewpoint 15 on southbound SR 62.	Class III
V-22	Increased structure contrast and skylining when viewed from Key Viewpoint 16 on Painted Hills Road in the Painted Hills rural residential community.	Class III
V-23	Increased structure contrast when viewing the east rim of Whitewater Canyon and Mount San Jacinto from Key Viewpoint 17 on southbound Whitewater Canyon Road.	Class III
V-24	Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 18 on Haugen-Lehmann Way in the West Palm Springs Village residential community.	Class III
V-25	Increased structure contrast, structure prominence, and skylining when viewed from Key Viewpoint 19 at the Morongo Community Center.	Class III
V-26	Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 20 on Murray Street in the City of Banning.	Class III
V-27	Beneficial impact from reduction in structure prominence and view blockage when viewed from Key Viewpoint 21 on Cedar Hollow Road in the City of Beaumont.	Class IV
V-28	Beneficial impact from reduction in structure prominence and view blockage when viewed from Key Viewpoint 22 at the intersection of Stargazer Street and Rose Avenue in the City of Beaumont.	Class IV
V-29	Beneficial impact from reduction in structure prominence and view blockage when viewed from Key Viewpoint 23 on the Oak Valley Golf Course in the City of Beaumont.	Class IV
V-30	Increased view blockage when viewed from Key Viewpoint 24 on Pilgrim Road in San Timoteo Canyon.	Class III
V-31	Increased view blockage when viewed from Key Viewpoint 25 at the intersection of Canyon Vista Drive and Chase Canyon Lane in the City of Colton.	Class III

Table D.3-9. Impacts Identified – Visual Resources

Impact No.	Description	Impact Significance
V-32	Increased view blockage when viewed from Key Viewpoint 26 in the right-of-way park just off Beaumont Avenue.	Class III
SCE Harquahala-West Alternative		
V-33	Inconsistency with BLM VRM Class III management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 27 on a BLM access road to Courthouse Rock and the Eagletail Mountains.	Class I
SCE Palo Verde Alternative		
V-34	Increased structure contrast and view blockage when viewing toward Saddle Mountain from Key Viewpoint 28 on Salome Highway.	Class III
Harquahala Junction Switchyard Alternative		
V-35	Increased structure contrast, industrial character, structure prominence, view blockage, and skylining when viewing the Harquahala Junction Switchyard Alternative site from Viewpoint 29 on Salome Highway.	Class II
DSWTP Alternative		
V-36	Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on eastbound Interstate 10.	Class I
Alligator Rock–North of Desert Center Alternative		
V-37	Inconsistency with Interim BLM VRM Class III management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing the Chuckwalla Mountains from Key Viewpoint 31 on southbound Kaiser Road, north of Desert Center.	Class I
Alligator Rock–Blythe Energy Transmission Alternative		
V-38	Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 32 on westbound Interstate 10, east of Desert Center.	Class I
Alligator Rock–South of I-10 Frontage Alternative		
V-39	Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on eastbound Interstate 10 *(Same as V-36)*.	Class I
Devers-Valley No. 2 Alternative		
V-40	Increased structure contrast and skylining when viewing the San Jacinto Mountains from Key Viewpoint 33 on the Pacific Crest Trail in the vicinity of the Snow Creek Village residential community.	Class I
V-41	Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing the San Jacinto Mountains from BLM-managed lands within the Santa Rosa and San Jacinto Mountains National Monument (in the vicinity of KVP 33).	Class I
V-42	Inconsistency with U.S. Forest Service Scenic Integrity Objective (SIO) due to introduction of structure contrast and industrial character	Class I
V-43	Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 34 in the residential community in Cabazon (VS-VC)	Class I
V-44	Increased structure contrast and skylining when viewing the San Jacinto Mountains and San Gorgonio Pass from Key Viewpoint 35 on southbound State Route 243	Class I
V-45	Increased structure contrast, skylining, and view blockage when viewed from residential areas in southern Banning and Beaumont	Class I
V-46	Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing from BLM-managed lands within the Potrero ACEC	Class I
V-47	Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 36 on Mapes Road	Class I

D.3.6 Environmental Impacts and Mitigation Measures for the Proposed Project – Devers-Harquahala

This section presents discussion of impacts and mitigation measures for the 500 kV portion of the DPV2 project. The discussion is divided into six geographic areas, three in Arizona and three in California. Within each area, both construction impacts and operational impacts are addressed.

D.3.6.1 Harquahala to Kofa National Wildlife Refuge

Construction Impacts

Impact V-1: Short-term visibility of construction activities, equipment, and night lighting (Class III)

Construction impacts on visual resources would result from the presence and visual intrusion of construction vehicles, equipment, materials, and work force at Harquahala Switchyard, two construction yards, and along the new transmission line route. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the right-of-way (ROW). Vehicles, heavy equipment, project components, and workers would be visible during switchyard modifications, access and spur road clearing and grading, structure erection, conductor stringing, and site/ROW clean-up and restoration.

Specific facilities that would be visible along this portion of the project (in addition to the transmission line) would include Harquahala Switchyard, Tonopah Construction Yard located northwest of the intersection of West Indian School Road and North 411th Avenue and Vicksburg Construction Yard located south of a fuel station on Vicksburg Road on the south side of I-10.

Construction equipment and activities would be seen by various viewers in close proximity to the switchyard, construction yards and ROW including rural residents along West Courthouse Road and travelers on highways and local roads (I-10, Salome Highway, West Courthouse Road, West Indian School Road, North 411th Avenue, and Vicksburg Road). View durations would vary from moderate to extended.

Night lighting impacts during construction could occur if lighting at construction and storage yards and staging areas is not appropriately controlled.

Due to the relatively short duration of project construction (approximately 24 months), project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. APMs B-5, B-14 and L-9 (presented in Table D.3-6 above) would help to minimize the impact at these sites. In addition, to ensure that viewers are not unnecessarily impacted during construction, Mitigation Measures V-1a and V-1b are recommended, but are not required because the impact is less than significant without mitigation. Please see the explanation of mitigation for less than significant impacts in Section D.1.2.

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.** Substation construction sites and all staging and material and equipment storage areas, including storage sites for excavated materials shall be appropriately located away from areas of high public visibility. If visible from nearby roads, residences, public gathering areas, or recreational areas, facilities, or trails,

construction sites and staging and storage areas shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Additionally, avoid construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use. This measure encompasses BLM permit requirements B-7.1 and B-7.2. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.

V-1b **Reduce construction night lighting impacts.** SCE shall design and install all lighting at construction and storage yards and staging areas such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Construction Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following:

- Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary
- All lighting shall be of minimum necessary brightness consistent with worker safety
- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

Land scarring from use of staging areas and construction yards, construction of new access and spur roads, and activities adjacent to construction sites and along the ROW can be long-lasting in arid and semi-arid environments where vegetation recruitment and growth is slow. In-line views of linear land scars or newly bladed roads are particularly problematic and introduce adverse visual change and contrast by causing unnatural vegetative lines and soil color contrast from newly exposed soils.

The longer duration of land scarring impacts would generally constitute potentially significant visual impacts that could be mitigated to levels that are less than significant (Class II). Implementation of Applicant Proposed Measures (APMs) presented in Table D.3-6 above that pertain to: (a) minimizing ground disturbance in general and the number of new access roads (B-14, B-30, W-9, W-17, G-10, G-11, G-19, V-4, and L-3; (b) minimizing loss or damage to vegetation (B-23-250); and (c) restoration and recontouring of disturbed areas (B-19) would reduce these impacts. However, Mitigation Measures V-2a through V-2c shall also be implemented in order to reduce impacts to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes

V-2a **Reduce in-line views of land scars.** Construct access or spur roads at appropriate angles from the originating, primary travel facilities to minimize extended, in-line views of newly graded terrain. Contour grading should be used where possible to better blend graded surfaces with existing terrain. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.

V-2b **Reduce visual contrast from unnatural vegetation lines.** In those areas where views of land scars are unavoidable, the boundaries of disturbed areas should be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for on-going operation, maintenance, or access shall be returned to pre-construction conditions. This measure partially encompasses BLM permit requirement BLM B-6.9. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.

V-2c **Reduce color contrast of land scars.** In those areas where views of land scars from sensitive public viewing locations are unavoidable, disturbed soils shall be treated with Eonite or similar treatments to reduce the visual contrast created by the lighter-colored disturbed soils with the darker vegetated surroundings. SCE will consult with the Authorized Officer on a site-by-site basis for the use of Eonite. This measure partially encompasses BLM permit requirement BLM B-6.4. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.

Operational Impacts

From Harquahala Switchyard to Kofa National Wildlife Refuge, the Proposed Project would result in adverse but less than significant (Class III) visual impacts as the project parallels the existing DPV1 transmission line. Long-term, operational visual impacts would be experienced by travelers on I-10 and Salome Highway and recreationists accessing BLM lands south of the Big Horn Mountains (north of I-10) and the Eagletail Mountains (south of I-10). Three representative Key Viewpoints (KVPs 1 through 3) were selected to characterize the visual impacts that would occur along this route segment.

Impact V-3: Increased structure contrast when viewed from Key Viewpoint 1, south of the Big Horn Mountains (VRM) (Class III)

Figure D.3-2A (see enclosed CD) presents the existing view to the northwest from Key Viewpoint 1 on a 4WD access road, just north of I-10 and west of Burnt Mountain. Figure D.3-2B (see enclosed CD) presents a visual simulation that depicts the addition of the DPV2 transmission line adjacent and slightly to the south of the existing DPV1 transmission line. The Proposed Project would be similar in scale and design to the DPV1 line. Towers would be paired and conductor spans would generally be matched. As shown in the simulation, the new structures and conductors would be visible, though not prominent at this viewing distance. The new structures would be the same design and height as the existing structures. The resulting visual contrast would be weak and the overall level of change would be low. The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. The new line would not repeat the basic elements of the existing natural features in the landscape though it would repeat the characteristics of the existing line and would not dominate the view of the casual observer. Therefore, the low level of change that would be caused by this portion of the Proposed Project would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). The following APMs commit SCE to several tower design and placement measures to minimize visual impacts: APM V-1 through APM V-3, APM V-5 through APM V-10, APM L-4, and APM L-5. These measures are assumed to be implemented for all structures and route segments. In addition, visual resources Mitigation Measure V-3a is recommended to provide additional detail pertaining to structure design and

placement and is recommended for all structures and route segments including the route segment south of the Big Horn Mountains. While Impact V-3 is less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of views toward the Big Horn Mountains from BLM lands north of I-10.

Mitigation Measure for Impact V-3: Increased structure contrast when viewed from Key Viewpoint 1, south of the Big Horn Mountains

V-3a **Reduce visual contrast of towers and conductors.** The following design measures shall be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities:

- All new and replacement structures are to as closely as possible match the design of the existing structures with which they will be seen.
- All new and replacement structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements.
- All new and replacement structures are to match the heights of the existing DPV1 structures to the extent possible as dictated by variation in terrain.
- All new and reconductored spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as Salome Highway, I-10, U.S. 95, Colorado River, SR 78, Dillon Road, SR 62, Whitewater Canyon Road, and San Timoteo Canyon Road.
- All new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast.
- To the extent feasible, no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for structure skylining.

Impact V-4: Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 2 on Interstate 10, Crossing the Harquahala Plain (VS-VC) (Class III)

Figure D.3-3A (see enclosed CD) presents the existing view to the west from Key Viewpoint 2 on westbound I-10, approximately 1.5 miles west of Avenue 75E. Figure D.3-3B (see enclosed CD) presents a visual simulation that depicts the crossing of I-10. As shown in the simulation, the DPV2 transmission line towers (D-33 through D-37) would be located adjacent and slightly to the southeast of the existing DPV1 towers. Because of the angle of the crossing, the more gradual convergence on and then divergence from the highway allows for more structures to be visible within the primary cone of vision of travelers on I-10. The Proposed Project would be similar in scale and design to the DPV1 line and conductor spans would generally be matched. The new structures and conductors would cause a noticeable increase in structure prominence and industrial character within the corridor. Additional skylining (extending above the horizon line) and view blockage of background sky and distant mountains would also occur. As a result, visual contrast would be moderate and the Proposed Project would appear codominant with the existing landscape features. View blockage of background sky and mountains would be low-to-moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). However, Mitigation Measure V-3a is recommended to further reduce the visual impact along this portion of the project. While Impact V-4 is less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from I-10 on the Harquahala Plain in general and specifically at the two freeway crossings.

Mitigation Measure for Impact V-4

V-3a Reduce visual contrast of towers and conductors.

Impact V-48: Inconsistency of the Harquahala Mountain Telecommunication Facility with BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from Harquahala Mountains Wilderness (VRM Class I) and surrounding area (VRM Class II)

The proposed Harquahala Mountain telecommunication facility would be constructed adjacent to an existing facility of similar design and character on BLM lands that are designated VRM Class II. The site location is in close proximity to the Harquahala Mountains Wilderness Area, which is designated VRM Class I. Although the new structures would be similar to the existing facilities, the new facility would cause an increase in industrial character, structure skylining, and view blockage. These visual effects would become more pronounced the closer the viewer is to the facility. Of particular concern are views from the adjacent Harquahala Mountains Wilderness, the Smithsonian Observatory, and the Harquahala Pack Trail. The resulting visual contrast for structural form and line would be moderate as would the overall level of change.

The BLM's Visual Resource Management (VRM) Class II objective requires that the existing character of the landscape be retained and that the level of change to the characteristic landscape be low and not attract the attention of the casual observer. Also, any changes to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the landscape. The new facility may not substantially alter the existing character of the telecommunication site, nor cause an incremental increase in facility noticeability. However, the new facility would not repeat the basic elements found in the natural features of the landscape. Therefore, the new facility would not achieve full consistency with the Class II objectives and the moderate level of visual change that would be caused by this portion of the Proposed Project would be inconsistent with the applicable VRM Class II management objectives. The resulting visual impact would be significant (Class I).

While it is not expected that that the Harquahala Mountain visual impact can be mitigated to a level that would be less than significant as presently proposed, Mitigation Measure C-1g (see Section D.7.6.1, Cultural Resources) is proposed to provide an opportunity to revise the project design to reduce the level of impact. However, at this point, even with mitigation, the impact would still be significant (Class I).

Mitigation Measure for Impact V-48

C-1g Minimize impacts at Harquahala Peak.

Impact V-5: Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 3 at the north end of the Eagletail Mountains (VRM) (Class III)

Figure D.3-4A (see enclosed CD) presents the existing view to the northwest from Key Viewpoint 3 on Eagletail Mountains access road YE047 at the north end of the Eagletail Mountains. This viewpoint analysis is considered representative of views from the north access roads into the Eagletail Mountains. This viewpoint is located approximately 0.1 miles south of Pipeline Road. Figure D.3-4B (see enclosed CD) presents a visual simulation that depicts the addition of the DPV2 transmission line adjacent and slightly to the south of the existing DPV1 transmission line. The proposed structures would be similar in scale and design to the DPV1 line. The proposed towers would appear as complex, geometric forms with vertical to diagonal lines. The conductors would appear as simple curvilinear forms. Although the number of visible structures would be effectively doubled, existing and new structures would be paired and conductor spans would generally be matched. The resulting visual contrast would be weak-to-moderate, and the overall level of change would be low-to-moderate. The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line and it would not dominate the view of the casual observer. Therefore, this portion of the Proposed Project would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). While Impact V-5 is less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measure for Impact V-5

V-3a Reduce visual contrast of towers and conductors.

Impact V-6: Increased structure contrast, industrial character, and skylining when viewing the Arizona Series Capacitor Bank from Pipeline Road (VRM) (Class III)

The proposed Arizona series capacitor bank would be located approximately 55 miles west of the Harquahala Switchyard on the Ranegras Plain on BLM land. The new site would be adjacent to the south side of the existing DPV1 series capacitor bank, between Towers M61-T3 and M61-T4. The site is approximately seven miles south of I-10 and is accessed from the nearby El Paso Natural Gas Pipeline road. The facility would occupy approximately two acres inside a fenced site and would temporarily use a one-acre fenced area for material laydown, storage, and staging. The facility would appear visually complex and industrial in character. Equipment would include series capacitors, dead-end structures, telecommunications equipment, night lighting fixtures and a mechanical-electrical equipment room. The new series capacitor bank would appear similar to the existing DPV1 series capacitor bank. In the context of the existing DPV1 facilities, the resulting visual contrast would be moderate. The overall level of change would be moderate. The BLM's Visual Resource Management (VRM) Class III objective would allow for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new capacitor bank would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing capacitor bank and it would not dominate the view of the casual observer. Therefore, the capacitor bank would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). However, Mitigation Measures V-6a ~~through~~ and V-6c are recommended to reduce the visual impact of the series capacitor bank and to ensure that visual impacts do not become significant. While Impact V-6 is less than significant, mit-

igation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). **Mitigation Measures V-6a ~~through~~ and V-6c would also apply to all permanent ancillary facilities including substations/switchyards, 500 kV shunt reactor, series capacitor banks, and optical repeater stations.**

Mitigation Measures for Impact V-6: Increased structure contrast, industrial character, and skylining when viewing the Arizona Series Capacitor Bank from Pipeline Road

V-6a **Reduce visual contrast associated with ancillary facilities.** SCE shall submit to BLM and CPUC a Surface Treatment Plan describing the application of colors and textures to all facility structures, buildings, walls, fences, and components comprising all ancillary facilities including substations/switchyards, series capacitor banks, and optical repeater stations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to BLM and CPUC for approval at least 90 days prior to (a) ordering the first structures that are to be color treated during manufacture, or (b) construction of any of the ancillary facility component, whichever comes first. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include:

- Specification, and 11"x17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture
- A list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation)
- Two sets of brochures and/or color chips for each proposed color
- A detailed schedule for completion of the treatment
- A procedure to ensure proper treatment maintenance for the life of the project.

SCE shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated onsite, until SCE receives notification of approval of the Treatment Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SCE shall notify the BLM and CPUC that all buildings and structures are ready for inspection.

~~V-6b~~ ~~**Screen ancillary facilities.** SCE shall provide a Screening Plan for screening vegetation, walls, and fences that reduces visibility of ancillary facilities (except Devers Substation) and helps the facility blend in with the landscape. The use of berms to facilitate project screening may also be incorporated into the Plan. SCE shall submit the Plan to the BLM and CPUC for review and approval at least 90 days prior to installing the landscape screening. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to:~~

- ~~An 11"x17" color simulation of the proposed landscaping at 5 years~~
- ~~A plan view to scale depicting the project and the location of screening elements~~
- ~~A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity.~~

~~SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the BLM and CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection.~~

V-6c **Reduce night lighting impacts.** SCE shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to ordering any permanent exterior lighting fixtures or components. SCE shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following:

- Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary
- All lighting shall be of minimum necessary brightness consistent with worker safety
- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.

D.3.6.2 Kofa National Wildlife Refuge

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Construction impacts within Kofa National Wildlife Refuge (NWR) would be as described above for the Harquahala to Kofa segment in Section D.3.6.1. Although there are no ancillary facilities (e.g., substations, switchyards, series capacitor sites, and construction yards) proposed along this route segment, specific viewing opportunities of concern would include Crystal Hill Road and Pipeline Road.

Due to the relatively short duration of project construction (approximately 24 months), project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. In addition to the APMs identified under Impact V-1 in Section D.3.6.1 (B-5, B-14, and L-9), APM L-1 would also apply in this segment. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Kofa NWR segment. The following APMs must be implemented in this segment: B-14, B-23-25, B-30, W-9, W-17, G-10, G-11, V-4, L-1, and L-3. Because the APMs alone do not eliminate the significant impacts, Mitigation Measures V-2a,

V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Within Kofa National Wildlife Refuge, the Proposed Project would result in significant and unmitigable (Class I) visual impacts as the project parallels the existing DPV1 transmission line. Long-term, operational visual impacts would be experienced by travelers and recreationists accessing the refuge on Pipeline Road and Crystal Hill Road. One representative Key Viewpoint (KVP 4) was selected to characterize the visual impacts that would occur along this route segment.

Impact V-7: Increased visual contrast, view blockage, and skylining when viewed from Key Viewpoint 4 on Crystal Hill Road in Kofa NWR (VS-VC) (Class I)

Figure D.3-5A (see enclosed CD) presents the existing view to the southeast from Key Viewpoint 4 on Crystal Hill Road in Kofa NWR, approximately 4.8 miles east of U.S. 95. Figure D.3-5B (see enclosed CD) presents a visual simulation that depicts the addition of the DPV2 transmission line adjacent and slightly to the south of the existing DPV1 line. As shown in the simulation, the DPV2 transmission line towers (F-50 through F-53 in the image) would be similar in scale and design to the DPV1 line and conductor spans would generally be matched. The new structures and conductors would cause a noticeable increase in structure prominence and industrial character along the corridor. Additional skylining (extending above the horizon line) and view blockage of background sky and the Livingston Hills and Kofa Mountains would also occur. As a result, visual contrast would be moderate and the Proposed Project would appear co-dominant with the existing landscape features. View blockage of background sky and mountains would be moderate-to-high and is a key consideration in the conclusion of overall visual change. In this narrow valley landscape with somewhat confined sightlines, the most notable features are the rugged mountains with jagged ridgelines that form the southern backdrop to the existing corridor. Any additional blockage of these scenic features would substantially compromise overall visual quality within this portion of Kofa.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). Although Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project, the visual impact would not be reduced to less than significant levels. This viewpoint analysis is considered representative of project views within Kofa from Crystal Hill Road, Pipeline Road, and other branch roads.

Mitigation Measure for Impact V-7

V-3a **Reduce visual contrast of towers and conductors.**

D.3.6.3 Kofa National Wildlife Refuge to Colorado River

Construction Impacts

Construction impacts from Kofa NWR to the Colorado River would be as described above for the Harquahala to Kofa segment in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

The only ancillary facility associated with this route segment would be the Quartzsite Construction Yard, located approximately 1,000 feet north of the intersection of Quartzsite Road and Main Street in Quartzsite. Specific viewing opportunities of concern along this portion of the transmission line route would include U.S. 95, the access road to Copper Bottom Pass, access roads into the Dome Rock Mountains from Ehrenberg and the Ehrenberg Sandbowl OHV Area, the east levee road along the east side of the Colorado River, and the Colorado River.

Due to the relatively short duration of project construction (approximately 24 months), project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. The APMs must be implemented in this segment: B-5, B-14, and L-9, and L-1. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Kofa NWR to the Colorado River segment. The following APMs must be implemented in this segment: B-14, B-23-25, B-30, W-9, W-17, G-10, G-11, V-4, L-1, and L-3. However, in addition to the APMs, Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

From Kofa NWR to the Colorado River, the Proposed Project would result in adverse but less than significant (Class III) visual impacts as the project parallels the existing DPV1 transmission line. Long-term, operational visual impacts would be experienced by travelers on U.S. 95 and recreationists accessing

the Copper Bottom Pass area and the Colorado River corridor. Three representative Key Viewpoints (KVPs 5 through 7) were selected to characterize the visual impacts that would occur along this route segment. Photos of these KVPs and simulations at each location are presented after the discussion of Impact V-10.

Impact V-8: Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 5 on U.S. 95 near the Crystal Hill Road Entrance to Kofa NWR (VRM) (Class III)

Figure D.3-6A (see enclosed CD) presents the existing view to the north from Key Viewpoint 5 on northbound U.S. 95, just south of the Crystal Hill Road entrance to Kofa NWR. Figure D.3-6B (see enclosed CD) presents a visual simulation of the span of U.S. 95 with the addition of the DPV2 transmission line adjacent and slightly to the south of the existing DPV1 transmission line. The angle at which the corridor crosses U.S. 95 is closer to 95 degrees and thus, fewer towers are visible within the primary cone of vision of motorists on U.S. 95. The proposed structures would be similar in scale and design to the DPV1 line. The proposed towers would appear as complex, geometric forms with vertical to diagonal lines. The conductors would appear as simple curvilinear forms. Although the number of visible structures would be effectively doubled, existing and new structures would be paired and conductor spans would generally be matched. The existing landscape character would not substantially change with addition of the Proposed Project. The resulting visual contrast would be weak and the overall level of change would be low. The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line and it would not dominate the view of the casual observer. Therefore, the low level of visual change that would be caused by this portion of the Proposed Project would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to further reduce the visual impact along this portion of the project. While Impact V-8 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from U.S. 95 on the La Posa Plain in general and specifically at the highway crossing.

Mitigation Measure for Impact V-8

V-3a Reduce visual contrast of towers and conductors.

Impact V-9: Increased structure contrast, industrial character, and view blockage when viewed from Key Viewpoint 6 on Pipeline Road near Copper Bottom Pass (VRM) (Class III)

Figure D.3-7A (see enclosed CD) presents the existing view to the east-southeast from Key Viewpoint 6 on Pipeline Road, just south of Copper Bottom Pass in the Dome Rock Mountains. Figure D.3-7B (see enclosed CD) presents a visual simulation with the addition of the DPV2 transmission line adjacent and slightly to the south of the existing DPV1 transmission line. Because of the close parallel of the corridor with Pipeline Road and the resulting "in-line" view of the corridor, a number of towers are visible within the primary cone of vision of travelers on Pipeline Road. The proposed structures would be similar in scale and design to the DPV1 line and would appear as complex, geometric forms with vertical to diagonal lines. The conductors would appear as simple curvilinear forms. Although the number of visible structures would be effectively doubled, existing and new structures would be paired and conductor spans would generally be matched though variations in terrain may result in varying tower elevations and the appearance of asynchronous spans in some cases. The new line would also cause some

additional view blockage of the adjacent ridges and slopes when viewed from Pipeline Road and increase the structural complexity and industrial character in the narrow valley landscape. The resulting visual contrast would be moderate as would be the overall level of change. The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line and would not dominate the view of the casual observer. Therefore, the moderate level of visual change that would be caused by this portion of the Proposed Project would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to further reduce the visual impact along this portion of the project. While Impact V-9 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from the west side of the Dome Rock Mountains.

Mitigation Measure for Impact V-9

V-3a Reduce visual contrast of towers and conductors.

Impact V-10: Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 7 on the Colorado River (VRM) (Class III)

Figure D.3-8A (see enclosed CD) presents the existing view to the southwest from Key Viewpoint 7 on the Colorado River, north of the crossing. Figure D.3-8B (see enclosed CD) presents a visual simulation of the span of the river with the addition of the DPV2 transmission line adjacent and slightly to the north of the existing DPV1 transmission line. The proposed towers would appear as complex, geometric forms with vertical to diagonal lines. The existing and new structures would be paired and conductor spans, which would appear as simple curvilinear forms, would generally be matched. Although the new structures would be the same design and height as the existing structures, the new structures would "skyline" (extend above the horizon line) as they approach the span of the river. As a result, some additional view blockage of sky would occur when viewed from the river.

The Proposed Project would also increase the overall structural complexity and industrial character visible from the river and would contrast with the relatively horizontal, natural characteristics of the river environment composed of the watercourse, parallel banks, and riparian vegetation. The level of change attributable to the conductors, which span a VRM Class II area (riparian border to riparian border) would be low with only marginally more prominent curvilinear lines over the river. The low level of change would be consistent with the VRM Class II management objective.

The transmission towers would be located outside of the riparian boundary in areas designated VRM Class III. The resulting visual contrast for form and line associated with the structures would be moderate as would be the overall level of change. The BLM's Visual Resource Management (VRM) Class III objective (for areas outside of the riparian corridor) allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the structures would not repeat the basic elements of the existing natural features in the landscape, they would repeat the characteristics of the existing towers and would not dominate the view of the casual observer. Therefore, the moderate level of visual change that would be caused by the structures would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to further reduce the visual impact along this portion of the project. While Impact V-10 would be less than

significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).This viewpoint analysis is considered representative of project views from the Colorado River, both north and south of the crossing.

Mitigation Measure for Impact V-10

V-3a Reduce visual contrast of towers and conductors.

D.3.6.4 Palo Verde Valley (Colorado River to Midpoint Substation)

Construction Impacts

Construction impacts within the Palo Verde Valley from the Colorado River to Midpoint Substation would be as described above for the Harquahala to Kofa segment in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term Visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Blythe Construction Yard, located on the north side of Hobson Way, one mile west of Neighbors Blvd, on the west side of Blythe Substation, and the Blythe Optical Repeater Station located approximately six miles southwest of Blythe (and just west of Lovekin Road) adjacent to the proposed ROW. Specific viewing opportunities of concern along this portion of the transmission line route would include SR 78, several local roads and a few rural residences. Viewing opportunities of concern for the Blythe Construction Yard include Hobson Way and I-10.

Due to the relatively short duration of project construction (approximately 24 months), project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a Reduce visibility of construction activities and equipment.

V-1b Reduce construction night lighting impacts.

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Palo Verde Valley from the Colorado River to Midpoint Substation segment. The following APMs must be implemented in this segment: B-14, B-23-25, B-30, W-9, W-17, G-10, G-11, V-4, L-1, and L-3. However, Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Within the Palo Verde Valley, the Proposed Project would result in adverse but less than significant (Class III) visual impacts as the project parallels the existing DPV1 transmission line through agricultural fields on the valley floor. Long-term, operational visual impacts would be experienced by travelers on local roads in the vicinity of the route and the Blythe Repeater Station, and from a very few residences. One representative Key Viewpoint (KVP 8) was selected to characterize the visual impacts that would occur along this segment of the transmission line.

Impact V-11: Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 8 on SR 78 Near Ripley (VS-VC) (Class III)

Figure D.3-9A (see enclosed CD) presents the existing view to the north from Key Viewpoint 8 on northbound SR-78, just north of the community of Ripley. Figure D.3-9B (see enclosed CD) presents a visual simulation that depicts the crossing of SR-78. As shown in the simulation, the DPV2 transmission line towers (2735 and 2736) would be located adjacent and to the north of the existing DPV1 towers. The 90 degree angle crossing reduces the number of structures visible within the primary cone of vision of travelers on SR-78. The Proposed Project would be similar in scale and design to the DPV1 line and conductor spans would generally be matched. In the context of the forms, lines, and landscape character attributable to agrarian management in the valley, the new structures and conductors would cause a noticeable increase in structure prominence and industrial character when viewed from SR-78. Additional skylining (extending above the horizon line) and view blockage of background sky and distant mountains would also occur. However, in the context of the existing structures, visual contrast would be low-to-moderate and the Proposed Project would appear co-dominant with the existing landscape features. View blockage of background sky and mountains would be moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-11 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views in the Palo Verde Valley.

Mitigation Measure for Impact V-11

V-3a **Reduce visual contrast of towers and conductors.**

Impact V-12: Introduction of new structure contrast and industrial character when viewing the Blythe Optical Repeater Station site from nearby local roads (VS-VC) (Class III)

The Blythe Optical Repeater Station would consist of a 12' x 36' prefabricated building, an emergency generator, and a 500-gallon fuel tank along with two air condition systems and other minor equipment.

The Repeater Station would be located adjacent to the ROW, just west of Lovekin Road and approximately six miles southwest of the City of Blythe in an area characterized by flat agricultural fields and ancillary agricultural structures and facilities.

The resulting visual contrast and view blockage would be low-to-moderate. The facility would appear subordinate to other landscape features including the existing and proposed transmission line structures. The overall level of change would be low-to-moderate and in the context of the existing landscape's moderate visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). In order to minimize the visual impacts of this relatively small facility, Mitigation Measures V-6a ~~through~~ and V-6c are recommended. While Impact V-12 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-12: Introduction of new structure contrast and industrial character when viewing the Blythe Optical Repeater Station site from nearby local roads

V-6a **Reduce visual contrast associated with ancillary facilities.**

~~**V-6b** **Screen ancillary facilities.**~~

V-6c **Reduce night lighting impacts.**

D.3.6.5 Midpoint Substation

Construction Impacts

Construction impacts associated with Midpoint Substation would be as described above for the Harquahala to Kofa segment in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term Visibility of construction activities, equipment and night lighting (Class III)

Although there are a very few rural residences in the general region (to the north and east) of the Midpoint Substation site, the primary viewing opportunity of concern along this portion of the transmission line route would be from the 4WD access road to the Mule Mountains ACEC. This 4WD road heads south from the Mesa Verde residential community (Nicholls Warm Springs) and passes just west of the substation site.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the area of the Midpoint Substation. The following APMs must be implemented in this segment: B-14, B-23-25, B-30, W-9, W-17, G-10, G-11, V-4, L-1, and L-3. In addition, Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

On Palo Verde Mesa, Midpoint Substation would be located adjacent to the existing DPV1 transmission line to the south and two 161 kV transmission lines to the east in a flat, open landscape sparsely vegetated with short grass and low-growing shrubs of muted colors. Given the limited public access in this area, viewer exposure to the substation site would be minimal.

Impact V-13: Increased structure contrast, industrial character, view blockage, and skylining when viewing the Midpoint Substation site from the nearby BLM access road (VRM) (Class III)

The proposed substation would appear as an assemblage of complex, geometric forms with vertical to diagonal lines. Although the substation structures would exhibit an industrial character similar to the existing DPV1 transmission line, the substation structures would be more numerous and would increase the overall structural complexity at this location. The resulting visual contrast for form and line would be moderate in the context of the existing infrastructure. The overall level of change would also be moderate. The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the substation would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing transmission lines and it would not dominate the view of the casual observer. Therefore, the moderate level of visual change that would be caused by Midpoint Substation would be consistent with the Interim VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). Additionally, the substation would have the potential to cause light and glare impacts if night lighting is not properly controlled. While the visual impacts at the substation are less than significant, Mitigation Measures V-6a ~~through~~ and V-6c are recommended to further reduce the visual impact of Midpoint Substation. While Impact V-13 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-13

V-6a **Reduce visual contrast associated with ancillary facilities.**

~~**V-6b** **Screen ancillary facilities.**~~

V-6c **Reduce night lighting impacts.**

D.3.6.6 Midpoint Substation to Cactus City Rest Area

Construction Impacts

Construction impacts associated with the Midpoint Substation to Cactus City Rest Area segment would be as described above for the Harquahala to Kofa segment in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term Visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Desert Center Construction Yard, approximately 1,000 feet northwest of the intersection of Rice Road (SR 177) and Ragsdale Road. The other ancillary facility along this route segment would be the California Series Capacitor in the Chuckwalla Valley, adjacent to the south side of the existing DPV1 series capacitor, approximately 0.4 miles south of I-10 and just west of Red Cloud Road. There are numerous viewing opportunities of concern along this route segment including from paved roads (I-10, Wiley Well Road, Chuckwalla Valley Road, Box Canyon Road, and Cottonwood Springs Road); unpaved 4WD access roads (Graham Pass Road, Dupont Road, Corn Springs Road, Red Cloud Road, Summit Road, and Red Canyon Trail); commercial and tourist service stops including Desert Center, Chiriaco Summit, and Cactus City Rest Area; and Alligator Rock ACEC.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the area of the Midpoint Substation to Cactus City Rest Area segment. The following APMs must be implemented in this segment: B-14, B-23-25, B-30, W-9, W-17, G-10, G-11, V-4, L-1, and L-3. In addition, Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

From Midpoint Substation to the Cactus City Rest Area, the Proposed Project would parallel the existing DPV1 transmission line across the expansive Chuckwalla Valley and smaller Shavers Valley. This portion of the project would result in significant (Class I) visual impacts and adverse but less than significant (Class III) visual impacts. Long-term, operational visual impacts would be experienced from numerous locations along this route segment as noted above. Four representative Key Viewpoints (KVPs 9 through 12) were selected to characterize the visual impacts that would occur along this segment of the transmission line.

Impact V-14: Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 9 on Interstate 10 in the eastern Chuckwalla Valley (VRM) (Class III)

Figure D.3-10A (see enclosed CD) presents the existing view to the east-southeast from Key Viewpoint 9 on eastbound I-10, at the end of the on-ramp from Corn Springs Road in Chuckwalla Valley. Figure D.3-10B (see enclosed CD) presents a visual simulation of the DPV2 transmission line adjacent and slightly to the north of the existing DPV1 transmission line. The relatively close parallel of the Proposed Project to I-10 and the resulting in-line view causes more structures to fall within the primary cone of vision of motorists on I-10. Compared to the existing DPV1 structures, the new structures would be of similar design (complex, geometric forms with vertical to diagonal lines) and height and the conductors would appear as simple curvilinear lines. Although the number of visible structures would be effectively doubled, existing and new structures would be paired and conductor spans would generally be matched. The new structures would also cause additional skylining as they cross the flat expanse of Chuckwalla Valley, resulting in some additional view blockage of sky and mountains (though slight) when viewed from I-10. Visual contrast would be weak for structural form and weak-to-moderate for line and the existing landscape character would not substantially change. The overall level of change would be low.

The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line and it would not dominate the view of the casual observer. Therefore, the low level of visual change that would be caused by this portion of the Proposed Project would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-14 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views within the central and eastern Chuckwalla Valley.

Mitigation Measure for Impact V-14

V-3a Reduce visual contrast of towers and conductors.

Impact V-15: Inconsistency with Interim BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 10 in the Alligator Rock ACEC (VRM) (Class I)

Figure D.3-11A (see enclosed CD) presents the existing view to the east-southeast from Key Viewpoint 10 on an access road within the Alligator Rock ACEC, south of I-10 and Desert Center. Figure D.3-11B (see enclosed CD) presents a visual simulation of the DPV2 transmission line adjacent and

slightly to the north of the existing DPV1 transmission line. Although the new structures would be of similar design and height as the existing DPV1 structures, the new structures would cause additional skylining and view blockage of the Chuckwalla Mountains in the background. The new line would also increase the structural complexity and industrial character visible from the several access roads within the Alligator Rock ACEC. These visual effects would become more pronounced the closer the viewer is to the transmission line. The resulting visual contrast for structural form and line would be moderate because of the close proximity of viewers to the line. The overall level of change would also be moderate.

The BLM's Visual Resource Management (VRM) Class II objective requires that the existing character of the landscape be retained and that the level of change to the characteristic landscape be low and not attract the attention of the casual observer. Also, any changes to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the landscape. The new line would not achieve any of the Class II objectives. Therefore, the moderate level of visual change that would be caused by this portion of the Proposed Project would be inconsistent with the applicable VRM Class II management objectives and the resulting visual impact would be significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. It would be possible to relocate the DPV2 line out of the ACEC into VRM Class III areas, but the resulting visual impact would be even greater given the absence of similar facilities (i.e., transmission lines) in the VRM Class III areas. VRM Class III areas require that the level of change to the characteristic landscape be "moderate or less" and that the project should not dominate the view of the casual observer. A new 500 kV transmission line would create change exceeding "moderate" and it would dominate the view. Therefore, significant visual impacts would still occur with a realignment of the Proposed Project, which is therefore not recommended. However, Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. This viewpoint analysis is considered representative of project views within the Alligator Rock ACEC.

Mitigation Measure for Impact V-15

V-3a Reduce visual contrast of towers and conductors.

Impact V-16: Increased structure contrast, view blockage, and skylining when viewing the Orocopia Mountains from Key Viewpoint 11 on Interstate 10 (VRM) (Class III)

Figure D.3-12A (see enclosed CD) presents the existing view to the southeast from Key Viewpoint 11 on eastbound I-10, approximately 0.9 miles west of Hayfield Road. Figure D.3-12B (see enclosed CD) presents a visual simulation of the DPV2 transmission line adjacent and slightly to the north of the existing DPV1 transmission line. Although the new structures would be of similar design and height as the existing DPV1 structures, the new structures would cause additional skylining as the line crosses the lower ridges of the Orocopia Mountains. As a result, some additional view blockage of sky and mountains (though slight) would occur when viewed from I-10. The new line would also increase the structural complexity and industrial character visible from I-10 though when backdropped by the rugged slopes, the structures would blend relatively well. The resulting visual contrast would be moderate for structural form and weak for line, color, and texture. The overall level of change would be low-to-moderate.

The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line and it would not dominate the view

of the casual observer. Therefore, the low level of visual change that would be caused by this portion of the Proposed Project would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-16 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from I-10 toward the Orocopia Mountains.

Mitigation Measure for Impact V-16

V-3a Reduce visual contrast of towers and conductors.

Impact V-17: Increased structure contrast, industrial character, and skylining when viewing the proposed California Series Capacitor Bank from Interstate 10 or Red Cloud Road (VRM) (Class III)

The proposed California series capacitor bank would be located approximately 64 miles east of the Devers Substation, on BLM land in the Chuckwalla Valley. The new site would be adjacent to the south side of the existing DPV1 series capacitor bank, between Towers M173-T2 and M173-T3. The site is approximately 0.4 miles south of I-10 and is accessed from the nearby Red Cloud Road. The facility would occupy approximately two acres inside a fenced site and would temporarily use a one-acre fenced area for material laydown, storage, and staging. The tallest structure at the site would be the dead-end, which would be 110 feet in height. The facility would appear visually complex and industrial in character. Equipment would include series capacitors, dead-end structures, telecommunications equipment, night lighting fixtures and a mechanical-electrical equipment room. The new series capacitor bank would appear similar to the existing DPV1 series capacitor bank. In the context of the existing DPV1 facilities, the resulting visual contrast would be moderate as would be the overall level of change. The BLM's Visual Resource Management (VRM) Class III objective would allow for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new capacitor bank would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing capacitor bank and it would not dominate the view of the casual observer. Therefore, the capacitor bank would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). However, Mitigation Measures V-6a ~~through~~ and V-6c are recommended to further reduce the visual impact of the series capacitor bank. While Impact V-17 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-17

V-6a Reduce visual contrast associated with ancillary facilities.

~~**V-6b Screen ancillary facilities.**~~

V-6c Reduce night lighting impacts.

Impact V-18: Increased structure contrast and view blockage when viewing the Orocopia Mountains from Key Viewpoint 12 on Cottonwood Springs Road when exiting Joshua Tree National Park (VRM) (Class III)

Figure D.3-13A (see enclosed CD) presents the existing view to the south-southeast from Key Viewpoint 12 on southbound Cottonwood Springs Road, just south of the entrance to Joshua Tree National Park. Figure D.3-13B (see enclosed CD) presents a visual simulation of the DPV2 transmission line

adjacent and slightly to the north of the existing DPV1 transmission line. From this viewpoint, the closest pair of structures would be approximately two miles distant. At this viewing distance, the structures would be barely discernible and would not attract the attention of viewers leaving Joshua Tree National Park. The new structures would be of similar design and height as the existing DPV1 structures and although some new skylining and view blockage would be caused by the new structures, they would, for the most part, blend effectively with the background landforms. The resulting visual contrast would be weak and the overall level of change would be very low.

The BLM's Visual Resource Management (VRM) Class III objective allows for a moderate or lower degree of visual change that, while it may attract attention, should not dominate the view of the casual observer. Although the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the existing line and it would not dominate the view of the casual observer. Therefore, the very low level of visual change that would be caused by this portion of the Proposed Project would be consistent with the applicable VRM Class III management objective and the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-18 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from southbound Cottonwood Springs Road in general and as visitors to Joshua Tree National Park exit the park to the south.

Mitigation Measure for Impact V-18

V-3a Reduce visual contrast of towers and conductors.

D.3.6.7 Cactus City Rest Area to Devers Substation

Construction impacts associated with the Cactus City Rest Area to Devers Substation segment would be as described above for the Harquahala to Kofa segment in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Indio Construction Yard located on the east side of Dillon Road, approximately 300 feet north of Fargo Canyon Road and approximately 1,500 feet north of the existing DPV1 line. Other ancillary facilities include the Palm Springs Construction Yard at Devers Substation and modifications within Devers Substation. Viewing opportunities of concern along this route segment include I-10, Dillon Road, Thousand Palms Canyon Road, Varner Road, and other local roads as well as the Coachella Valley Preserve and numerous residential developments north of I-10.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the area of the Cactus City Rest Area to Devers Substation segment. The following APMs must be implemented in this segment: B-14, B-23-25, B-30, W-9, W-17, G-10, G-11, V-4, L-1, and L-3. In addition, Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

From the Cactus City Rest Area to Devers Substation, the Proposed Project would parallel the existing DPV1 transmission line across the rapidly developing Coachella Valley. Long-term, adverse but less than significant (Class III) visual impacts along this route segment would occur at Devers Substation and along the transmission line route. At Devers Substation, the visual impacts associated with modifications to the substation would not be substantially noticeable in the context of the substantive existing structural complexity and industrial character and surrounding wind turbines. To the extent any modifications to the substation are perceived, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measures V-6a ~~through~~ and V-6c are recommended to reduce the visual and night lighting impacts of Devers Substation modifications, to the extent that those modifications require additional lighting.

Long-term, operational visual impacts would also be experienced from numerous locations along the transmission line route as it passes in close proximity to urban populations. Two representative Key Viewpoints (KVPs 13 and 14) were selected to characterize the visual impacts that would occur along this segment of the transmission line.

Impact V-19: Increased structure contrast, industrial character, and view blockage when viewed from Key Viewpoint 13 in the Terra Lago golf and residential development in Indio (VS-VC) (Class III)

Figure D.3-14A (see enclosed CD) presents the existing view to the north from Key Viewpoint 13 from the Terra Lago golf and residential development in the City of Indio. Figure D.3-14B (see enclosed CD) presents a visual simulation that depicts the transmission line passing north of the development at the base of the Indio Hills. As shown in the simulation, the DPV2 transmission line towers (2236XX through 2238X) would be located adjacent and to the north of the existing DPV1 towers and two other transmission lines. The Proposed Project would be similar in scale and design to the DPV1 line and conductor spans would generally be matched. However, tower locations would be somewhat offset which would cause a noticeable increase in structure prominence and industrial character. Additional blockage of the background hills would also occur. Visual contrast would be moderate and the Proposed Project would appear co-dominant with the existing landscape features. View blockage of background sky and mountains would be also be moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III).

Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. ~~One additional measure (V-19a) is also recommended to reduce the visual contrast and industrial character of this route segment from proposed tower location 2209 to 2239 in the vicinity of the Indio Hills.~~ While Impact V-19 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from other residential and golf developments in close proximity to the corridor in the vicinity of the Indio Hills.

Mitigation Measures for Impact V-19: Increased structure contrast, industrial character, and view blockage when viewed from Key Viewpoint 13 in the Terra Lago golf and residential development in Indio (and other golf and residential developments south of the Proposed Project in the vicinity of the Indio Hills)

V-3a **Reduce visual contrast of towers and conductors.**

~~**V-19a** **Reduce visual contrast by painting towers with appropriate colors.** Existing and proposed transmission towers within the DPV1/DPV2 corridor from proposed tower location 2209 to 2239 in the vicinity of the Indio Hills shall be painted an appropriate color to more effectively blend the structures with the light tan color of the background vegetation and soils of the Indio Hills. This measure is limited to only the 31 tower locations (2209 to 2239) because the Indio Hills provide an immediate light tan backdrop to sensitive views from residences and recreational facilities to the immediate south of the corridor. It is recommended that a light tan color be used to match the background soils. SCE shall submit a Tower Painting Plan demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to (a) the start of construction or (b) ordering the first structures that are to be color treated during manufacture, whichever comes first. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Tower Painting Plan shall include:~~

- ~~Specification, and 11"x17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture~~
- ~~A map showing the towers to be painted~~
- ~~Two sets of brochures and/or color chips for each alternative color~~
- ~~A detailed schedule for completion of the treatment~~
- ~~A procedure to ensure proper treatment maintenance for the life of the project.~~

~~SCE shall not specify to the vendors the treatment of towers or tower components treated during manufacture, or perform the final treatment on any towers until SCE receives notification of approval of the Tower Painting Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SCE shall notify the BLM and CPUC that the towers are ready for inspection.~~

Impact V-20: Increased structure contrast, industrial character, and view blockage when viewing the Santa Rosa Mountains to the south from Key Viewpoint 14 in the Coachella Valley Preserve, just west of Thousand Palms Canyon Road (VRM) (Class III)

Figure D.3-15A (see enclosed CD) presents the existing view to the south from Key Viewpoint 14 on a hiking/access trail in the Coachella Valley Preserve, just west of Thousand Palms Canyon Road. Figure D.3-15B (see enclosed CD) presents a visual simulation of the DPV2 transmission line adjacent and slightly to the north of the existing DPV1 transmission line, approximately 0.39 miles south of the viewpoint. Although the new structures would be of similar design and height as the existing DPV1 structures, the new structures would cause additional view blockage of the background Santa Rosa Mountains. The new line would also slightly increase the structural complexity and industrial character visible from the Coachella Valley Preserve and would not repeat the basic elements of the existing natural features in the landscape. However, the new line would repeat the characteristics of the existing three lattice tower transmission lines. Also, in the context of the existing facilities, the additional structures would not dominate the view, or attract the attention of the casual observer. The resulting visual contrast from the Proposed Project would be weak and the overall level of change would be low, which would meet the VRM Class II objective of a low degree of visual change. The resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-20 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from various locations in the southern portion of the Coachella Valley Preserve.

Mitigation Measure for Impact V-20

V-3a Reduce visual contrast of towers and conductors.

D.3.7 Environmental Impacts and Mitigation Measures for the Proposed Project – West of Devers

Construction of the Proposed Project west of Devers Substation would involve replacement of an existing transmission line with a new line, removal of an existing transmission line (up to San Bernardino Junction), and reconductoring a third existing line. Although the facilities being constructed and changed west of Devers are different than the facilities being built east of Devers, construction activities would be similar though the number of spur roads west of Devers would be substantially fewer and tower demolition/removal would be required west of Devers. As a result, the impacts and mitigation measures identified for the Proposed Project east of Devers would also be applicable to construction west of Devers Substation.

D.3.7.1 Devers Substation to East Border of Banning

Construction Impacts

Construction impacts from Devers Substation to the east border of the City of Banning would be similar to that described above in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Construction yards associated with the West of Devers portion of the project are proposed to be located at existing facilities such as substations. However, if space at existing facilities is either unavailable or insufficient, up to two additional construction yards (three to 10 acres in size) could be established west of Devers though their location has not been specified.

Viewing opportunities of concern along this route segment include roads (I-10, SR 62, Dillon Road, Painted Hills Road, Whitewater Canyon Road, and other local roads), several residential developments north of I-10 (Painted Hills and West Palm Springs Village), and the Morongo Community Center and Outlet Mall at Cabazon.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the area of the Devers Substation to the east border of the City of Banning segment. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-21: Increased structure contrast and skylining when viewing the San Jacinto Mountains from Key Viewpoint 15 on southbound State Route 62 (VS-VC) (Class III)

Figure D.3-16A (see enclosed CD) presents the existing view to the south-southeast from Key Viewpoint 15 from southbound SR 62 (a State-designated Scenic Highway), just north of the crossing of SR 62. Figure D.3-16B (see enclosed CD) presents a visual simulation that depicts the reconductoring of Tower M1-T1, removal of Tower M61-T2, and replacement of Tower T266 with new (and taller) Tower 207. Although the replacement tower would appear similar in design and height to that of Tower M1-T1, the increased height over the existing tower would cause additional skylining (extending above the horizon), view blockage (of sky), and increased structural prominence, resulting in a moderate degree

of visual contrast. However, it is the profusion of wind generation facilities covering the foreground landscape that tends to draw the viewer's attention. Also, the conductor spans of the replacement towers would generally be matched with the existing Devers–San Bernardino 1 and 2 line (DSB1/2). The Proposed Project would appear co-dominant with the existing transmission lines and wind generation facilities and subordinate to the dominant landform of Mt. San Jacinto. View blockage of background sky and mountains would be low-to-moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). This conclusion is substantially influenced by the existing prominence of energy infrastructure and the reduction in transmission line complexity that would be achieved by eliminating one line (structures) and matching the tower design of the third with the DSB1/2 structures. Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-21 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from SR 62 in the vicinity of the highway crossing.

Mitigation Measure for Impact V-21

V-3a Reduce visual contrast of towers and conductors.

Impact V-22: Increased structure contrast and skylining when viewed from Key Viewpoint 16 on Painted Hills Road in the Painted Hills rural residential community (VS-VC) (Class III)

Figure D.3-17A (see enclosed CD) presents the existing view to the south-southeast from Key Viewpoint 16 from Painted Hills Road, just east of Country View Road. Figure D.3-17B (see enclosed CD) presents a visual simulation that depicts the reconductoring of Tower M1-T3, removal of Tower M61-T4, and replacement of Tower T262 with new (and taller) Tower 209. Although the replacement tower would appear similar in design and height to that of Tower M1-T3, the increased height over the existing tower would cause additional skylining, view blockage (of sky), and increased structural prominence, resulting in a moderate degree of visual contrast. However, it is the prominence of wind generation facilities covering the foreground landscape that tends to draw the viewer's attention. Also, the conductor spans of the replacement towers would generally be matched with the existing DSB1/2 line. The Proposed Project would appear co-dominant with the existing transmission lines and wind generation facilities and subordinate to the regionally dominant landform of Mt. San Jacinto. View blockage of background sky and mountains would be low-to-moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). This conclusion is substantially influenced by the existing profusion of energy infrastructure and the reduction in transmission line complexity that would be achieved by eliminating one line (structures) and matching the tower design of the DSB1/2 structures. Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project route. While Impact V-22 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from the Painted Hills residential area.

Mitigation Measure for Impact V-22

V-3a Reduce visual contrast of towers and conductors.

Impact V-23: Increased structure contrast when viewing the east rim of Whitewater Canyon and Mount San Jacinto from Key Viewpoint 17 on southbound Whitewater Canyon Road (VS-VC) (Class III)

Figure D.3-18A (see enclosed CD) presents the existing view to the southeast from Key Viewpoint 17 on Whitewater Canyon Road, south of the community of Bonnie Bell. Figure D.3-18B (see enclosed CD) presents a visual simulation that depicts the reconductoring of Tower M3-T1, removal of Tower M63-T2, and replacement of Tower T251 with new (and taller) Tower 215. The replacement tower would appear similar in design and height to that of Tower M3-T1. Although the increased height over the existing tower would cause additional skylining, structural prominence and view blockage (of sky), the removal of Tower M63-T2, which also skylines, would somewhat offsets the new skylining, and it should be noted that it is the wind generation facilities along the canyon rim and Mt. San Jacinto that tends to draw the viewer's attention. Also, the conductor spans of the replacement towers would generally be matched with the existing DSB1/2 line. The resulting visual contrast would be low-to-moderate and the Proposed Project would appear subordinate to co-dominant with the existing landscape features. View blockage would be low.

The overall visual change would be low-to-moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). This conclusion is influenced by the reduction in transmission line complexity that would be achieved by eliminating one line (structures) and matching the tower design (of the new structures) with the DSB1/2 structures. Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project route. While Impact V-23 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from within Whitewater Canyon.

Mitigation Measure for Impact V-23

V-3a Reduce visual contrast of towers and conductors.

Impact V-24: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 18 on Haugen-Lehman Way in the West Palm Springs Village residential community (VS-VC) (Class III)

Figure D.3-19A (see enclosed CD) presents the existing view to the west from Key Viewpoint 18 on Haugen-Lehman Way, just south of the intersection with Amethyst Drive, in West Palm Springs Village. Figure D.3-19B (see enclosed CD) presents a visual simulation that depicts the replacement of the existing wood-pole H-frame structure (T231) with a new (and taller) lattice tower (226), reconductoring of Tower M6-T3, and the removal of Tower M66-T4. The replacement tower would appear substantially more complex and industrial compared to the wood-pole structure it would replace but similar in design and height to that of Tower M6-T3. Although the increased height over the existing tower would cause additional skylining, structural prominence and view blockage (of sky), the removal of Tower M66-T34 which also skylines and exhibits darker color contrast, would somewhat offset the new skylining. Also, the conductor spans of the replacement tower would generally be matched with the existing DSB1/2 line. The resulting visual contrast would be moderate and the Proposed Project would appear co-dominant with the existing landscape features. View blockage would be low-to-moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project route. While Impact V-24 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views within West Palm Springs Village.

Mitigation Measure for Impact V-24

V-3a Reduce visual contrast of towers and conductors.

Impact V-25: Increased structure contrast, structure prominence, and skylining when viewed from Key Viewpoint 19 at the Morongo Community Center (VS-VC) (Class III)

Figure D.3-20A (see enclosed CD) presents the existing view to the southwest from Key Viewpoint 19 at the Morongo Community Center at 13000 Fields Road, just north of I-10. Figure D.3-20B (see enclosed CD) presents a visual simulation that depicts the reconductoring of Tower M14-T1, removal of the shorter lattice Tower M74-T2, and replacement of the existing wood-pole H-frame structures (Towers T173 and T174) with new (and taller) lattice towers (256 and 257). The replacement towers would appear substantially more complex and industrial compared to the wood-pole structures they would replace but similar in design and height to that of Tower M14-T1. The increased height over the existing H-frame towers would cause additional skylining, structural prominence and view blockage (of sky), which would be partially offset by the removal of one of the existing lattice structure transmission lines and consolidation of structure locations. Also, the conductor spans of the replacement towers would generally be matched with the existing DSB1/2 line. The resulting visual contrast would be moderate and the Proposed Project would appear co-dominant with the existing landscape features. View blockage would be low-to-moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-25 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from both the Community Center and southbound on Fields Road as people exit the Reservation.

Mitigation Measure for Impact V-25

V-3a Reduce visual contrast of towers and conductors.

D.3.7.2 Banning and Beaumont

Construction Impacts

Construction impacts within the Cities of Banning and Beaumont would be similar to that described above in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Construction yards associated with the West of Devers portion of the project are proposed to be located at existing facilities such as substations. However, if space at existing facilities is either unavailable or insufficient, up to two additional construction yards (3 to 10 acres in size) could be established west of Devers though their location has not been specified.

Viewing opportunities of concern along this route segment include local roads paralleling and crossing under the corridor, residential areas adjacent to the corridor, and park facilities either crossed by or adjacent to the existing transmission lines.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Cities of Banning and Beaumont segment. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-26: Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 20 on Murray Street in Banning (VS-VC) (Class III)

Figure D.3-21A (see enclosed CD) presents the existing view to the northeast from Key Viewpoint 20 on Murray Street in the City of Banning. Figure D.3-21B (see enclosed CD) presents a visual simulation that depicts the reconductoring of Tower M17-T1, removal of the shorter lattice Tower M77-T1, and replacement of H-frame structures T152 and T153 with new (and taller) lattice towers (102 and 103). The replacement towers would appear substantially more complex and industrial compared to the H-frame structures they would replace but similar in design and height to that of Tower M17-T1. The increased height over the existing H-frame towers would cause additional skylining, structural prominence and view blockage (of sky and hills), which would be partially offset by the removal of one of the existing lattice structure transmission lines and consolidation of structure locations. Also, the conductor spans of the

replacement tower would generally be matched with the existing DSB1/2 line and the lattice design of the new structures would enable the structures to better blend with the background hills. The resulting visual contrast would be low-to-moderate and the Proposed Project would appear co-dominant with the existing landscape features. View blockage would be low-to-moderate.

The overall visual change would be low-to-moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-26 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from residential areas bordering the corridor in Banning.

Mitigation Measure for Impact V-26

V-3a Reduce visual contrast of towers and conductors.

Impact V-27: Reduced structure prominence and view blockage when viewed from Key Viewpoint 21 on Cedar Hollow Road in Beaumont (VS-VC) (Class IV)

Figure D.3-22A (see enclosed CD) presents the existing view to the west-southwest from Key Viewpoint 21 on Cedar Hollow Road, immediately south of Beaumont High School in the City of Beaumont. Figure D.3-22B (see enclosed CD) presents a visual simulation that illustrates the reconductoring of Towers M22-T4 and M23-T1, removal of the shorter lattice Towers M82-T4 through M83-T2, and replacement of the H-frame transmission line with a new (and taller) lattice tower transmission line. The replacement towers (Nos. 127 and 128) would appear substantially more complex and industrial compared to the H-frame structures they would replace but similar in design and height to that of Tower M22-T4. With removal of one lattice structure transmission line and replacement of the visually prominent H-frame structures with their asynchronous conductor spans (relative to the reconductored lattice towers to be retained), tower locations would be consolidated and conductor spans would be synchronized (with the DSB1/2 line). As a result, overall visual contrast within the corridor would be low while visual complexity, structural dominance, and view blockage would actually be reduced (fewer new lattice structures would be required to replace the shorter-span H-frame structures).

The overall visual change would be improved and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be beneficial (Class IV). This viewpoint analysis is considered representative of unobstructed project views from residential areas bordering the corridor in Beaumont.

Impact V-28: Reduced structure prominence and view blockage when viewed from Key Viewpoint 22 at the intersection of Stargazer Street and Rose Avenue in Beaumont (VS-VC) (Class IV)

Figure D.3-23A (see enclosed CD) presents the existing view to the east-southeast from Key Viewpoint 22 at the intersection of Stargazer Street and Rose Avenue in The Estates residential subdivision in the City of Beaumont. Figure D.3-23B (see enclosed CD) presents a visual simulation that illustrates the reconductoring of Towers M23-T3 and M24-T1, removal of the shorter lattice Towers M83-T3 and M84-T1, and replacement of the H-frame transmission line (Towers T105 through T107) with a new (and taller) lattice tower transmission line. The replacement towers (Nos. 129 and 130) would appear more complex and industrial compared to the H-frame structures they would replace but similar in design and height to that of Towers M23-T3 and M24-T1. With removal of one lattice structure transmission line and replacement of the visually prominent H-frame structures with their asynchronous con-

ductor spans (relative to the reconductored lattice towers to be retained), tower locations would be consolidated and conductor spans would be synchronized (with the DSB1/2 line). As a result, visual contrast would be low while structural dominance and view blockage would actually be reduced (fewer new lattice structures would be required to replace the shorter-span H-frame structures).

The overall visual change would be improved and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be beneficial (Class IV). This viewpoint analysis is considered representative of partially obstructed project views from residential areas bordering the corridor in Beaumont.

Impact V-29: Reduced structure prominence and view blockage when viewed from Key Viewpoint 23 on the Oak Valley Golf Course in Beaumont (VS-VC) (Class IV)

Figure D.3-24A (see enclosed CD) presents the existing view to the east from Key Viewpoint 23 on the Oak Valley Golf Course. Figure D.3-24B (see enclosed CD) presents a visual simulation that illustrates the reconductoring of Towers M24-T1 and M24-T2, removal of the shorter lattice Towers M84-T1 and M84-T2, and replacement of the H-frame transmission line (Towers T104 through T106) with a new (and taller) lattice tower transmission line. The replacement towers (Nos. 130 and 131) would appear more complex and industrial compared to the H-frame structures they would replace but similar in design and height to that of Towers M24-T1 and M24-T2. With removal of one lattice structure transmission line and replacement of the visually prominent H-frame structures with their asynchronous conductor spans (relative to the reconductored lattice towers to be retained), tower locations would be consolidated and conductor spans would be synchronized (with the DSB1/2 line). As a result, visual contrast would be low while structural dominance and view blockage would actually be reduced (fewer new lattice structures would be required to replace the shorter-span H-frame structures).

The overall visual change would be improved and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be beneficial (Class IV). This viewpoint analysis is considered representative of project views from recreation and park areas bordering the corridor in Beaumont.

D.3.7.3 Calimesa and San Timoteo Canyon

Construction Impacts

Construction impacts within Calimesa and San Timoteo Canyon would be similar to that described above in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Construction yards associated with the West of Devers portion of the project are proposed to be located at existing facilities such as substations. However, if space at existing facilities is either unavailable or insufficient, up to two additional construction yards (three to 10 acres in size) could be established west of Devers though their location has not been specified.

Viewing opportunities of concern along this route segment would be available from I-10 at the freeway span, San Timoteo Canyon Road, local roads paralleling and crossing the corridor, and rural residences.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Calimesa and San Timoteo Canyon segment. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-30: Increased view blockage when viewed from Key Viewpoint 24 on Pilgrim Road in San Timoteo Canyon (VS-VC) (Class III)

Figure D.3-25A (see enclosed CD) presents the existing view to the west-southwest from Key Viewpoint 24 on Pilgrim Road, off of San Timoteo Canyon Road in San Timoteo Canyon. Figure D.3-25B (see enclosed CD) presents a visual simulation that depicts the reconductoring of Tower M38-T2, removal of the shorter lattice Tower M98-T2, and replacement of H-frame lattice structures T28 and T29 with new (and taller) lattice towers (183 and 184). The replacement towers would appear similar in design and height to Tower M38-T2. The increased height over the existing H-frame towers would cause additional skylining, though overall structural prominence would be somewhat reduced with the elimination of structures, consolidation of structure locations, and synchronization of conductor spans (with the existing DSB1/2 line). However, the conductors would appear slightly more prominent and would cause additional view blockage (of sky and hills). The resulting visual contrast would be low and the Proposed Project would appear co-dominant with the existing landscape features. View blockage would be low.

The overall visual change would be low-to-moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project. While Impact V-30 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from rural residential areas and San Timoteo Canyon Road in San Timoteo Canyon.

Mitigation Measure for Impact V-30

V-3a Reduce visual contrast of towers and conductors.

D.3.7.4 San Bernardino Junction to Vista Substation

Construction Impacts

Construction impacts within San Bernardino Junction to Vista Substation segment would be similar to that described above in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Construction yards associated with the West of Devers portion of the project are proposed to be located at existing facilities such as substations. However, if space at existing facilities is either unavailable or insufficient, up to two additional construction yards (three to 10 acres in size) could be established west of Devers. Although the possible yard locations have not been specified, it is not anticipated that a construction yard would be located along this route segment.

Viewing opportunities of concern would be available from local roads paralleling and crossing the corridor and residential neighborhoods adjacent to the transmission line.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a Reduce visibility of construction activities and equipment.

V-1b Reduce construction night lighting impacts.

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the San Bernardino Junction to Vista Substation segment. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a Reduce in-line views of land scars.

V-2b Reduce visual contrast from unnatural vegetation lines.

V-2c Reduce color contrast of land scars.

Operational Impacts

Visual impacts during project operation would occur at Vista Substation and along the route segments. At Vista Substation, the visual impacts associated with modifications to the substation would not be noticeable (from nearby residences and roads) in the context of the substation's existing substantial structural

complexity and industrial character. To the extent that any change is perceived, the resulting visual impact would be adverse but less than significant (Class III) and no mitigation measures are proposed. Visual impacts along the route are addressed in the following discussion of representative Key Viewpoint 25.

Impact V-31: Increased view blockage when viewed from Key Viewpoint 25 at the intersection of Canyon Vista Drive and Chase Canyon Lane (VS-VC) (Class III)

Figure D.3-26A (see enclosed CD) presents the existing view to the west from Key Viewpoint 25 at the intersection of Canyon Vista Drive and Chase Canyon Lane in the City of Colton. Figure D.3-26B (see enclosed CD) presents a visual simulation that illustrates the reconductoring of the Devers-Vista No. 1 and No. 2 (DV1/2) lines (Towers M42-T2 and M42-T3 respectively). The reconductoring would result in slightly more prominent DV1/2 conductors with slightly increased visual contrast and view blockage. The resulting visual contrast would be low and the Proposed Project would appear co-dominant with the existing landscape features. View blockage would also be low.

The overall visual change would be low-to-moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this portion of the project route. While Impact V-31 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from residential areas bordering the corridor in Colton.

Mitigation Measure for Impact V-31

V-3a Reduce visual contrast of towers and conductors.

D.3.7.5 San Bernardino Junction to San Bernardino Substation

Construction Impacts

Construction impacts within San Bernardino Junction to San Bernardino Substation segment would be similar to that described above in Section D.3.6.1 and would include visibility of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Construction yards associated with the West of Devers portion of the project are proposed to be located at existing facilities such as substations. However, if space at existing facilities is either unavailable or insufficient, up to two additional construction yards (three to 10 acres in size) could be established west of Devers though the possible yard locations have not been specified.

Viewing opportunities of concern along this route segment would be available from local roads paralleling and crossing the corridor, residential neighborhoods adjacent to the transmission line corridor, parks within the corridor right-of-way, and I-10 where the transmission lines span the freeway.

Due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but less than significant (Class III) visual impacts. Mitigation Measures V-1a and V-1b (full text presented above) are recommended to further reduce construction impacts. While Impact V-1 in this segment would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the San Bernardino Junction to San Bernardino Substation segment. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels:

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Long-term visual impacts along this route segment would occur at San Bernardino Substation and along the transmission line route. At San Bernardino Substation, the visual impacts associated with modifications to the substation would not be noticeable (from nearby residences and roads) in the context of the substation's existing substantial structural complexity and industrial character. To the extent that any change is perceived, the resulting visual impact would be adverse but less than significant (Class III) and no mitigation measures are proposed. Visual impacts along the route are addressed in the following discussion of representative Key Viewpoint 26.

Impact V-32: Increased view blockage when viewed from Key Viewpoint 26 in the Right-of-Way Park just off Beaumont Avenue (VS-VC) (Class III)

Figure D.3-27A (see enclosed CD) presents the existing view to the north from Key Viewpoint 26 at the top of the Right-of-Way Park, adjacent to Beaumont Avenue in the City of Loma Linda. Figure D.3-27B (see enclosed CD) presents a visual simulation that illustrates the reconductoring of the Devers–San Bernardino No. 1 and No. 2 (DSB1/2) lines (Towers M2-T4). The existing lattice structures would have the outside circuits reconductored, which would then match the bundled inside circuits along the center-line of the right-of-way. The result would be slightly more prominent conductors and slightly increased view blockage. The resulting visual contrast would be low and the Proposed Project would appear subordinate to the existing landscape features. View blockage would also be low.

The overall visual change would be low and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along the portion of the project. While Impact V-32 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of project views from the park that is located within the ROW, residences located adjacent to the corridor, and roads crossing the corridor in Loma Linda.

Mitigation Measure for Impact V-32

V-3a **Reduce visual contrast of towers and conductors.**

D.3.8 Alternatives for Devers-Harquahala

D.3.8.1 SCE Harquahala-West Alternative

Environmental Setting

The SCE Harquahala-West Alternative extends west from Harquahala Switchyard across primarily State and private lands on the flat, expansive, relatively undeveloped southern end of the Harquahala Plain before turning to the northwest, crossing BLM lands at the base of the Eagletail Mountains. Continuing to the northwest, this alternative route connects with the Proposed Project route at the north end of the Eagletail Mountains at Alternative Milepost 21 and Proposed Project Milepost 35. This relatively flat, desert landscape supports a low diversity of vegetation, composed primarily of short grass and shrubs.

Views of the Harquahala-West Alternative would be available from several rural residences along West Courthouse Road as well as several roads including Interstate 10, Salome Highway, West Courthouse Road, Centennial Road, North Harquahala Valley Road, Pipeline Road, BLM Access Road YE013 to Courthouse Rock, and other BLM access roads into the Eagletail Mountains.

Points of access into the Eagletail Mountains and Wilderness and Courthouse Rock in particular were selected for detailed analysis along this alternative route (KVP 27). The location of KVP 27 is shown on Figure D.3-1A (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 27 is presented in the following paragraph.

Key Viewpoint 27 – Eagletail Mountains Courthouse Rock (VRM)

Key Viewpoint 27 was established on BLM Access Road YE013 to Courthouse Rock, just east of the Eagletail Mountains and approximately 0.9 miles from the intersection with Pipeline Road (see Figure D.3-28A on enclosed CD). Viewing to the east-northeast across the Harquahala Plains toward Big Horn Mountain, this location was selected to generally characterize the existing landscape visible to backcountry and off-road recreationists accessing the Eagletail Mountains and Courthouse Rock. Views in all directions encompass a predominantly natural setting. The foreground landform of the Harquahala Plain appears flat and horizontal. The rugged, angular form of the distant Big Horn Mountains provides a dramatic contrast to the level plains they backdrop though the mountains do appear relatively low on the horizon. Landform colors are predominantly tan with lavender and bluish hues for the distant mountains. Landform textures appear smooth to granular. Vegetation is patchy with clumps, transitioning to continuous blocks at greater distance and punctuated by the prominent vertical forms of Saguaro. Vegetation colors include tans to pale yellow for grasses with muted to light and dark greens for the shrubs. Vegetation exhibits a matte texture. The view from KVP 27 encompasses the alternative route in the vicinity of Mileposts 13 and 14. There are no visible built structural landscape features (although large trucks on I-10 are barely discernible at a distance of approximately 7.5 miles). The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is III as identified in the existing Resource Management Plan.

Construction Impacts

Construction impacts from the SCE Harquahala-West Alternative would occur from the Harquahala Switchyard to the intersection with the DPV1 transmission line, immediately north of the El Paso Wendon Pump Station would be as described above for the Harquahala to Kofa segment in Section D.3.6.1 and

would include the visual intrusion of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Construction yards associated with the SCE Harquahala-West Alternative are proposed to be located at existing facilities such as substations. However, if space at existing facilities is either unavailable or insufficient, up to two additional construction yards (three to 10 acres in size) could be established west of Devers though the possible yard locations have not been specified.

Ancillary facilities associated with this route segment would include the Tonopah Construction Yard located northwest of the intersection of West Indian School Road and North 411th Avenue and the Vicksburg Construction Yard (potentially) located south of a fuel station on the south side of I-10 on Vicksburg Road.

Viewing opportunities of concern along this route segment would be available from rural residences along West Courthouse Road, nearby highways (I-10 and Salome Highway), and local roads including West Courthouse Road, Centennial Road, and North Harquahala Valley Road). Also of concern would be views from 4WD access roads into the Eagletail Mountains including Pipeline Road and several BLM access roads. While Impact V-1 in this segment would be less than significant (Class III), mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the SCE Harquahala-West Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-33: Inconsistency with BLM VRM Class III Management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewed from Key Viewpoint 27 on a BLM access road to Courthouse Rock and the Eagletail Mountains (VRM) (Class I)

Figure D.3-28A (see enclosed CD) presents the existing view to the east-northeast across Harquahala Plain toward Big Horn Mountain, from Key Viewpoint 27 on BLM access road YE013 to Courthouse Rock, east of the Eagletail Mountains. Figure D.3-28B (see enclosed CD) presents a visual simulation

of the Harquahala-West Alternative as it passes along the east side of the Eagletail Mountains. The Harquahala-West Alternative would result in the introduction of a new transmission line into a natural appearing landscape lacking similar built structures and industrial character. The resulting vertical structural form and line contrast would be strong (compared to the predominantly horizontal form and line of Harquahala Plain) and the color contrast would be weak-to-moderate. The new line would not repeat the basic elements of the existing natural features in the landscape and would cause view blockage of background sky, Harquahala Plain and distant mountain ranges. The new line would also dominate the views of the casual observer, particularly along Pipeline Road, the main access road running along the east side of the Eagletail Mountains. The overall level of change would be moderate-to-high, which would not meet the VRM Class III objective of a moderate degree of visual change. The resulting visual impact would be adverse and significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. However, Mitigation Measure V-3a is recommended to reduce the visual impact along this alternative. This viewpoint analysis is considered representative of views of this alternative from BLM access roads to the Eagletail Mountains. Also, a similar level of visual impact would be experienced by rural residences along West Courthouse Road with views of the route.

Mitigation Measure for Impact V-33

V-3a Reduce visual contrast of towers and conductors.

D.3.8.2 SCE Palo Verde Alternative

Environmental Setting

The SCE Palo Verde Alternative parallels existing transmission lines, diverging to the southeast from the Proposed Project route at Milepost 5, crossing Salome Highway and passing between Saddle Mountain and the Palo Verde Hills on public lands administered by the BLM. South of the Palo Verde Hills, this alternative route turns east passing briefly through private lands before crossing South Wintersburg Road and turning to the northeast to the Palo Verde Nuclear Generating Station. The landscape along this alternative is for the most part undeveloped and natural appearing though there are several rural residences west of South Wintersburg Road. The regional landscape is dominated by scale and unique formation of Saddle Mountain. The arid desert landscape supports a low diversity of vegetation, composed primarily of short grass and shrubs.

Views of the Palo Verde Alternative would be available from several rural residences to the west of South Wintersburg Road (both north and south of the corridor). Views would also be available to travelers on West Elliot Road, Salome Highway, and West Courthouse Road.

Views from Salome Highway toward Saddle Mountain were selected for detailed analysis along this alternative route (KVP 28). The location of KVP 28 is shown on Figure D.3-1A (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 28 is presented in the following paragraph.

Key Viewpoint 28 – Salome Highway–Saddle Mountain (VRM)

Key Viewpoint 28 was established on Salome Highway at the highway mile marker 42, approximately 1.2 miles east of the highway crossing (see Figure D.3-29A on enclosed CD). Viewing to the south-southwest toward Palo Verde Alternative tower locations D-123 through D-125 and Saddle Mountain

beyond, this location was selected to characterize the existing views of Saddle Mountain visible to travelers on Salome Highway. The rugged, angular form of Saddle Mountain stands in dramatic visual contrast to the surrounding flat desert plain with its horizontal form. Landform colors are predominantly tan with additional lavender and bluish hues for the mountain. Landform textures appear smooth to granular. Vegetation is patchy with clumps, transitioning to a more continuous distribution punctuated by the prominent vertical forms of Saguaro. Vegetation colors include tans to pale yellow for grasses with light and dark greens for the shrubs. Vegetation exhibits a matte texture. The view from KVP 28 encompasses the alternative tower locations D-123 through D-125 in the vicinity of Mileposts 2 and 3. The two existing lattice structure transmission lines with their vertical linear forms and industrial character are prominent structural features in the foreground of Saddle Mountain though they are dominated by the scale of the mountain. Structure colors are light to dark gray and textures are smooth. The existing BLM scenic quality classification or viewer sensitivity are not available but the VRM Class Rating is III as identified in the existing Resource Management Plan.

Construction Impacts

Construction impacts along the SCE Palo Verde Alternative would be as described above for the Harquahala to Kofa segment in Section D.3.6.1 and would include the visual intrusion of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Tonopah Construction Yard located northwest of the intersection of West Indian School Road and North 411th Avenue. Viewing opportunities of concern along this route segment would include several rural residences to the west of South Wintersburg Road (both north and south of the corridor), West Elliot Road, Salome Highway, and West Courthouse Road. While Impact V-1 in this alternative would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the SCE Palo Verde Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-34: Increased structure contrast and view blockage when viewing Saddle Mountain from Key Viewpoint 28 on Salome Highway (VRM) (Class III)

Figure D.3-29A (see enclosed CD) presents the existing view to the south-southwest toward Saddle Mountain from Salome Highway, approximately 1.2 miles east of the highway crossing. Figure D.3-29B (see enclosed CD) presents a visual simulation of the Palo Verde Alternative as it passes east of Saddle Mountain in a corridor with two other lattice structure transmission lines. The Palo Verde Alternative would parallel the existing DPV1 line to the west. Although the new structures would be the same design and height as the existing DPV1 structures, the new structures would cause some additional view blockage of Saddle Mountain in the background. While the new line would slightly increase the structural complexity and industrial character visible from Salome Highway, it would also blend substantially with the background landform. In the context of the two existing lattice structure transmission lines, the resulting visual contrast would be weak. Although the new line would not repeat the basic elements of the existing natural features in the landscape, it would repeat the characteristics of the two existing transmission lines it would parallel. The new line would not dominate the views of the casual observer from any of the nearby roads including Salome Highway. The overall level of change would be low, which would meet the VRM Class III objective of a moderate degree of visual change. The resulting visual impact would be adverse but less than significant (Class III). Mitigation Measure V-3a is recommended to reduce the visual impact along this alternative. While Impact V-34 would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2). This viewpoint analysis is considered representative of views of this alternative from Salome Highway toward Saddle Mountain.

Mitigation Measure for Impact V-34

V-3a Reduce visual contrast of towers and conductors.

D.3.8.3 Harquahala Junction Switchyard Alternative

Environmental Setting

This switchyard alternative would be located on State lands adjacent to the east side of Salome Highway, just north of West Courthouse Road. Although the existing flat landform and vegetation (consisting of a low diversity of short grasses and low-growing shrubs) of this desert landscape are natural appearing, there is substantial built energy infrastructure present, including the complex industrial forms of Harquahala power plant and switchyard to the west and several transmission lines including those adjacent to the alternative switchyard site. However, the regional landscape is dominated by the scale and unique formation of Saddle Mountain. Views of the substation alternative would be available from Salome Highway and West Courthouse Road. Northbound views on Salome Highway in the vicinity of the substation site tend to be drawn toward the northwest and north toward the open Harquahala Plain, Courthouse Rock, and the Big Horn Mountains. Southbound views on Salome Highway are drawn to the unique form of Saddle Mountain. Views from eastbound West Courthouse Road are drawn away from the substation site toward Saddle Mountain.

Key Viewpoint 29 – Salome Highway (VS-VC)

Key Viewpoint 29 was established on southbound Salome Highway, at mile marker 39 (see Figure D.3-30a on enclosed CD). Viewing to the southeast, this viewpoint was selected to characterize the existing visual setting for the alternative substation site and its visibility from Salome Highway.

Visual Quality. Low-to-moderate. The foreground flat, desert landscape is sparsely vegetated by short grasses and low-growing shrubs of subdued yellow and green colors. The rounded to angular forms and jagged ridgelines of the Palo Verde Hills and Saddle Mountain (just out of view of the photograph) provide visual interest and contrast with the horizontal form of the foreground plain they backdrop. Prominent, skylined transmission line structures of tubular and lattice design, exhibit industrial character and, with the nearby Harquahala power plant and substation (out of view to the west), compromise landscape coherence and overall visual quality.

Viewer Concern. High. Although energy infrastructure (transmission lines, power plant, and substation) in the vicinity of the alternative substation site features prominently in the foreground views from Salome Highway, travelers would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (background sky or mountains) and adverse visual change.

Viewer Exposure. Moderate-to-high. The alternative substation site would be highly visible in the foreground of views from Salome Highway in general and KVP 29 specifically as the substation site would be located immediately adjacent and to the east of Salome Highway. The number of viewers would be low-to-moderate though the duration of view would be extended given the close proximity of the project to the road and the site's location within the primary cone of vision (45° either side of the primary direction of travel) of travelers on Salome Highway for considerable distances (particularly for southbound viewers).

Overall Visual Sensitivity. Moderate-to-high. For travelers on Salome Highway, the low-to-moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Construction Impacts

Construction impacts from the Harquahala Junction Switchyard Alternative would be similar to those described above for the Harquahala to Kofa segment in Section D.3.6.1 and would include the visual intrusion of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Tonopah Construction Yard located northwest of the intersection of West Indian School Road and North 411th Avenue. Viewing opportunities of concern would include rural residences along West Courthouse Road and nearby roads including Salome Highway and West Courthouse Road. While Impact V-1 in this alternative would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Harquahala Junction Switchyard Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-35: Increased structure contrast, industrial character, view blockage, and skylining when viewing the Harquahala Junction Switchyard Alternative site from Key Viewpoint 29 on Salome Highway (VS-VC) (Class II)

Figure D.3-30A (see enclosed CD) presents the existing view to the north toward the Harquahala Junction Switchyard alternative site from Key Viewpoint 29 on Salome Highway at the mile 39 marker. The placement of a 500 kV switchyard immediately adjacent to Salome Highway would introduce substantial industrial character, visual contrast and view blockage into views from Salome Highway. The resulting visual contrast would be moderate-to-high and the switchyard would appear co-dominant with the existing landscape features. View blockage would be moderate. The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse and potentially significant (Class II). The switchyard would also have the potential to cause light and glare impacts if night lighting is not properly controlled.

Successful implementation of Mitigation Measures V-6a through V-6c ~~are~~ is required to reduce the visual impacts of the Harquahala Junction Switchyard Alternative to levels that would not be significant. Mitigation Measure V-35a is further required to augment Mitigation Measure V-6b (Screen ancillary facilities) in order to achieve adequate screening of the switchyard from Salome Highway views. This viewpoint analysis is considered representative of views of this alternative from Salome Highway in the vicinity of the alternative switchyard site.

Mitigation Measures for Impact V-35: Increased structure contrast, industrial character, view blockage, and skylining when viewing the Harquahala Junction Switchyard Alternative site from Key Viewpoint 29 on Salome Highway

V-6a **Reduce Visual Contrast Associated with Ancillary Facilities.**

V-6b **Screen ancillary facilities.** For the Harquahala Junction Switchyard Alternative, SCE shall provide a Screening Plan for screening vegetation, walls, and fences that reduces visibility and helps the facility blend in with the landscape. The use of berms to facilitate project

screening may also be incorporated into the Plan. SCE shall submit the Plan to the BLM for review and approval at least 90 days prior to installing the landscape screening. If the BLM notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to:

- An 11"x17" color simulation of the proposed landscaping at 5 years
- A plan view to scale depicting the project and the location of screening elements
- A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity.

SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the BLM within seven days after completing installation of the screening, that the screening components are ready for inspection.

V-6c **Reduce night lighting impacts.**

V-35a **Screen alternative switchyard site from Salome Highway views.** This measure is required to augment and not replace Mitigation Measure V-6b in order to provide more detailed direction pertaining to the planting of roadside screening vegetation along Salome Highway. Screening vegetation shall be planted along the east side of Salome Highway between mile markers 39 and 40. Vegetation shall be comprised of native species and shall be selected to achieve heights and screen effectiveness comparable to that shown in Figure D.3-30B (see enclosed CD). SCE shall submit a Screening Plan demonstrating compliance with this measure to the ~~CPUC~~ BLM for review and approval at least 90 days prior to installing the landscape screening. If the ~~CPUC~~ BLM notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Screening Plan shall include but not necessarily be limited to:

- An 11"x17" color simulation of the proposed landscaping at 5 years
- A plan view to scale depicting the project and the location of screening elements
- A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity

SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection.

D.3.8.4 Desert Southwest Transmission Project Alternative

Environmental Setting

A majority of the Desert Southwest Transmission Project (DSWTP) Alternative would follow a route similar to the Proposed Project from the vicinity of Midpoint Substation to Devers Substation. Therefore, the reader is referred to the visual setting discussions of this desert basin and range landscape provided in Sections D.3.2.5 and D.3.2.6. However, the DSWTP Alternative would vary from the Proposed Project in three respects:

- DSWTP would originate at the new Keim Substation/Switching Station on the south side of Hobsonway, adjacent to Interstate 10 and just southeast of the existing Blythe Energy Project power plant. From Keim, the transmission line would traverse southwest along existing transmission line rights-of-way for approximately 1.8 miles before turning west for approximately 7 miles to the intersection point with the existing DPV1 corridor where a new 25- to 50-acre Midpoint Substation/Switching station would be built (also an option under the Proposed Project but in a different location). The line from Keim to Midpoint would be either a double-circuit facility or two parallel 500 kV lines.
- DSWTP would diverge from the DPV1 corridor to the north (closer to I-10) in the vicinity of Alligator Rock for approximately 9.5 miles.
- DSWTP would require the construction of a third substation/switching station adjacent to the existing DPV1 line west of Dillon Road near Indio.

From Keim to Midpoint, the route would traverse the Palo Verde Mesa, passing adjacent or through private agricultural fields and open, undeveloped and sparsely vegetated public lands administered by the BLM. Views across the mesa are panoramic in scope with little topographic variation. Colors are subdued tans and yellows for grasses and greens for shrubs. At greater distances, mountain ranges of lavender and bluish hues appear low on the horizon. The existing transmission lines with their linear forms and vertical to horizontal lines and industrial character contrast with the otherwise natural appearing or agricultural landscape.

Views of the Keim to Midpoint segment would be available from Hobsonway and I-10. Views would also be available to residents of the Mesa Verde (Nicholls Warm Springs) residential community. However, views to the east would be limited because the 1.8-mile segment would be located on a lower terrace of the mesa. Views to the south toward the seven-mile segment would be open but at a greater distance. Views would also be available to a few local access roads south of Mesa Verde, and a very few rural residences. The deviation around Alligator Rock would be visible from I-10. Views of the Dillon Road Substation would be available from Dillon Road.

The route deviation around Alligator Rock was selected for detailed analysis along this route segment. The location of KVP 30 is shown on Figure D.3-1C (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 30 is presented in the following paragraph.

Key Viewpoint 30 – Eastbound Interstate 10 at Alligator Rock (VRM)

Key Viewpoint 30 was established on eastbound I-10, approximately one mile west of the Desert Center overpass (see Figure D.3-31A on enclosed CD). Viewing to the east toward the route location for both the Desert Southwest Transmission Project Alternative and the Alligator Rock South of I-10 Frontage Alternative, and Alligator Rock beyond, this location was selected to characterize the existing views of Alligator Rock available to travelers on Interstate 10. The rugged, angular form of Alligator Rock rises from the flat valley floor characterized by desert scrub vegetation. Landform colors are predominantly tan and brown. Further to the south (out of the frame of the image presented in Figure D.3-31A on enclosed CD) are the steeply rising Chuckwalla Mountains. Although the Chuckwallas are not part of this scenic quality rating unit, they do provide a backdrop of visual interest. Landform textures appear smooth to granular. Vegetation is patchy with clumps, transitioning to a more continuous distribution. Vegetation colors include tans to pale yellow for grasses with light and dark greens for the shrubs. Vegetation exhibits a matte texture. Existing built structures (aside from the linear form of I-10) are

limited to a simple wood-pole utility line and a roadside fence though these are not prominent features in comparison to Alligator Rock. The existing DPV1 line is of limited visibility and is located to the south (out of the view of Figure D.3-31A on enclosed CD) of Alligator Rock and does not impair views of the unusual ridge formation. Structures appear gray to dark brown in color and smooth in texture. Overall, the landscape consists of an interesting combination of flat valley floor with desert scrub vegetation, punctuated by unusual rock formations and the alligator-shaped ridge that gives rise to the area's name. The resulting Interim Scenic Quality classification is Class B and Viewer Sensitivity is high because of its status within the Desert Conservation Area and the Alligator Rock Area of Critical Environmental Concern. Combined with the foreground to middleground viewing opportunities, the resulting VRM Class Rating is II (see Appendix VR-3 on enclosed CD).

Construction Impacts

Construction impacts from the Desert Southwest Transmission Project Alternative would be as described above in Section D.3.6.1 and would include the visual intrusion of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this alternative would include those described above for the Proposed Project between Midpoint Substation and Devers substation as well as the following additional substations/switching stations: Keim, Midpoint (different location), and Dillon Road.

In addition to the viewing opportunities described above for the Proposed Project between Midpoint Substation and Devers Substation, views of the Keim to Midpoint segment would be available from Hobsonway, I-10, residences along the east and south sides of the Mesa Verde (Nicholls Warm Springs) residential community, a few local access roads south of Mesa Verde, and a very few rural residences. Views of the deviation around Alligator Rock would be visible from I-10 and access roads into the Alligator Rock ACEC. Views of the Dillon Road Substation would be available from Dillon Road. While Impact V-1 in this alternative would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Desert Southwest Transmission Project Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-36: Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on Eastbound I-10 (VRM) (Class I)

Figure D.3-31A (see enclosed CD) presents the existing view to the east toward Alligator Rock from eastbound I-10, approximately one mile west of the Desert Center off-ramp. Figure D.3-31B (see enclosed CD) presents a visual simulation of the Desert Southwest Transmission Project Alternative and the Alligator Rock South of I-10 Frontage Alternative, which are identical routes in this location. This alternative route would result in the introduction of a new 500 kV transmission line into a predominantly natural appearing landscape south of I-10. Although the landscape does include a simple wood pole utility line, the existing landscape is lacking the large scale, complex, and industrial structures characteristic of a high-voltage transmission line. The resulting structural form and line contrast would be strong and the color contrast would be moderate. The new line would not repeat the basic elements of the existing natural features in the landscape and would cause view blockage of sky and Alligator Rock. The new line would also appear co-dominant to the casual observer on I-10 as they approach Alligator Rock. The overall level of change would be moderate-to-high, which would not meet the VRM Class II objective of a low degree of visual change. The resulting visual impact would be adverse and significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. However, Mitigation Measure V-3a is recommended to reduce the visual impact along this alternative route. This viewpoint analysis is considered representative of views of this alternative from eastbound I-10 toward Alligator Rock.

Mitigation Measure for Impact V-36

V-3a Reduce visual contrast of towers and conductors.

D.3.8.5 Alligator Rock–North of Desert Center Alternative

Environmental Setting

The Alligator Rock–North of Desert Center Alternative diverges from the proposed route approximately 5 miles east of Desert Center, crosses to the north of I-10 and then passes immediately north of Desert Center. The route then converges on I-10 and crosses to the south side of the freeway approximately 4 miles west of Desert Center, reconnecting to the proposed route approximately 1.5 miles further west.

This alternative route primarily crosses public lands administered by the BLM and a few private land holdings near the western crossing of I-10. The landscape consists primarily of the broad, open floor of Chuckwalla Valley, a desert basin characterized by low-growing grasses and shrubs and surrounded by rugged, angular mountains including the Chuckwalla Mountains immediately to the south of I-10. The most notable built structures include I-10 and the somewhat dilapidated collection of buildings housing limited commercial and traveler services at Desert Center.

Views of this alternative would be available to travelers on Kaiser Road, SR 177 (Rice Road), I-10, as well as visitors to Desert Center and the Alligator Rock ACEC. More distant views of the project would be available to residents and visitors at Lake Tamarisk to the north.

Several areas of potential visual sensitivity were identified including views from I-10, SR 177, Kaiser Road, Desert Center, and Lake Tamarisk. The view from southbound Kaiser Road was selected for detailed

analysis. The location of KVP 31 is shown on Figure D.3-1C (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 31 is presented in the following paragraphs.

Key Viewpoint 31 – Kaiser Road at Desert Center (VRM)

Key Viewpoint 31 was established on southbound Kaiser Road, approximately one mile north of I-10 and Desert Center and approximately 0.3 miles north of the route crossing of Kaiser Road (see Figure D.3-32A on enclosed CD). Viewing to the south toward Desert Center and the alternative route, this location was selected to characterize the existing landscape in the vicinity of Desert Center as viewed from the north (Kaiser Road and SR 177). The landscape north of I-10 and Desert Center is within the central portion of Chuckwalla Valley and is flat, exhibits a prominent horizontal line, and is relatively non descript. The more distant, angular Chuckwalla Mountains and Alligator Rock provide a backdrop of visual interest. Landform colors are tan to lavender and bluish hues for the more distant mountains. Vegetation is characterized by grass and low-growing shrubs with patchy to continuous distributions. Vegetative lines are irregular to distinct where defined by the line of the valley floor and roads. Vegetation colors range from tan to pale yellow for grasses and muted to dark greens for shrubs. The overall landscape character and visual quality is predominantly natural in appearance with a few structures at Desert Center slightly visible above the vegetative line. The Interim Scenic Quality classification is Class C and Viewer Sensitivity is high because of its status within the Desert Conservation Area. Combined with the foreground to middleground viewing opportunities, the resulting VRM Class Rating is III (see Appendix VR-3 on enclosed CD).

Construction Impacts

Construction impacts from the Alligator Rock–North of Desert Center Alternative would be similar to those described above in Section D.3.6.1 and would include the visual intrusion of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Desert Center Construction Yard located approximately 1,000 feet northwest of the intersection of SR 177 and Ragsdale Road.

Viewing opportunities of concern along this alternative would include Kaiser Road, SR 177, I-10, Desert Center, and Alligator Rock ACEC. More distant views of the project would be available to residents and visitors at Lake Tamarisk. While Impact V-1 in this alternative would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Alligator Rock–North of Desert Center Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-37: Inconsistency with Interim BLM VRM Class III management objectives due to the introduction of structure contrast, industrial character, view blockage, and skylining when viewing the Chuckwalla Mountains from Key Viewpoint 31 on southbound Kaiser Road, north of Desert Center (VRM) (Class I)

Figure D.3-32A (see enclosed CD) presents the existing view to the south toward Desert Center and the Chuckwalla Mountains from southbound Kaiser Road, approximately one mile north of I-10 and Desert Center. Figure D.3-32B (see enclosed CD) presents a visual simulation of the Alligator Rock North Alternative. This alternative route would result in the introduction of a new 500 kV transmission line into a rural landscape lacking similar built structures of industrial character. Although other built structures are visible in the Desert Center landscape, only a single telecommunications tower shares the structural complexity or vertical extent of the lattice transmission towers. The resulting structural form and line contrast would be moderate to strong, color contrast would be weak-to-moderate, and texture contrast would be weak. The new line would not repeat the basic elements of the existing natural features in the landscape and would cause view blockage of sky and portions of the Chuckwalla Mountains and Alligator Rock depending on viewpoint location. The new line would also appear co-dominant to the casual observer. The overall level of change would be moderate-to-high, which would not meet the VRM Class III objective of a moderate degree of visual change. The resulting visual impact would be adverse and significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. However, Mitigation Measure V-3a is recommended to reduce the visual impact along this alternative route. This viewpoint analysis is considered representative of views of this alternative from north of the alternative and Desert Center.

Mitigation Measure for Impact V-37

V-3a **Reduce visual contrast of towers and conductors.**

D.3.8.6 Alligator Rock–Blythe Energy Transmission Alternative

Environmental Setting

The Alligator Rock–Blythe Energy Transmission Alternative diverges from the proposed route approximately 3.5 miles east of Desert Center, where it begins to converge on and then parallel I-10 on the south side of the freeway until just before the Desert Center Overpass. At that point the route would

turn to the southwest to parallel an existing access road along the east side of Alligator Rock, eventually rejoining the proposed route south of Alligator Rock at approximately Proposed Project Milepost 155.

Views of this alternative would be available to travelers on I-10, visitors to Desert Center, and recreationists accessing the Alligator Rock ACEC south of I-10.

The primary area of potential visual sensitivity identified was the view from westbound I-10 on approach to Desert Center and Alligator Rock from the east. The location of KVP 32 is shown on Figure D.3-1C (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for KVP 32 is presented in the following paragraphs.

Key Viewpoint 32 – Westbound Interstate 10 at Alligator Rock (VRM)

Key Viewpoint 32 was established on westbound I-10, approximately 0.72 miles east of the Desert Center overpass (see Figure D.3-33A on enclosed CD). Viewing to the southwest toward Alligator Rock south of I-10, this location was selected to characterize the existing views of Alligator Rock available to westbound travelers on Interstate 10. The rugged, angular form of Alligator Rock rises from the flat valley floor characterized by desert scrub vegetation. Landform colors are predominantly tan and brown. Further to the south (left side of the image presented in Figure D.3-33A on enclosed CD) are the steeply rising Chuckwalla Mountains. Although the Chuckwallas are not part of this scenic quality rating unit, they do provide a backdrop of visual interest. Landform textures appear smooth to granular. Vegetation is patchy with clumps, transitioning to a more continuous distribution. Vegetation colors include tans to pale yellow for grasses with light and dark greens for the shrubs. Vegetation exhibits a matte texture. Existing built structures (aside from the linear form of I-10) are limited to a simple wood-pole utility line and a roadside fence though these are not prominent features in comparison to Alligator Rock. The existing DPV1 line is of limited visibility and is located to the south (out of the view of Figure D.3-33A) of Alligator Rock and does not impair views of the unusual ridge formation. Structures appear gray to dark brown in color and smooth in texture. Overall, the landscape consists of an interesting combination of flat valley floor with desert scrub vegetation, punctuated by unusual rock formations and the alligator-shaped ridge that gives rise to the area's name. The resulting Interim Scenic Quality classification is Class B and Viewer Sensitivity is high because of its status within the Desert Conservation Area and the Alligator Rock Area of Critical Environmental Concern. Combined with the foreground to middleground viewing opportunities, the resulting VRM Class Rating is II (see Appendix VR-3 on enclosed CD).

Construction Impacts

Construction impacts from the Alligator Rock–Blythe Energy Transmission Alternative would be as described above in Section D.3.6.1 and would include the visual intrusion of construction activities, vehicles and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Desert Center Construction Yard located approximately 1,000 feet northwest of the intersection of SR 177 and Ragsdale Road. Viewing opportunities of concern for this alternative would include I-10, Desert Center, and Alligator Rock ACEC south of I-10. While Impact V-1 in this alternative would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Alligator Rock–Blythe Energy Transmission Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-38: Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewing Alligator Rock from Key Viewpoint 32 on westbound Interstate 10 east of Desert Center (VRM) (Class I)

Figure D.3-33A (see enclosed CD) presents the existing view to the southwest toward Alligator Rock from westbound I-10, approximately 0.72 miles east of the Desert Center overpass. Figure D.3-33B (see enclosed CD) presents a visual simulation of the Alligator Rock Blythe Energy Transmission Alternative as it passes adjacent to I-10 and then immediately east of Alligator Rock. This alternative route would result in the introduction of a new 500 kV transmission line into a landscape generally lacking similar built structures of industrial character. Although the DPV1 line passes through the Alligator Rock ACEC, it is sufficiently to the south that it does not appear noticeable in views from Interstate 10. The resulting structural form and line contrast would be strong, while color and texture contrast would be weak. The new line would not repeat the basic elements of the existing natural features in the landscape and would cause view blockage of sky, Alligator Rock, and the Chuckwalla Mountains when viewed by westbound travelers on Interstate 10. The new line would also appear co-dominant to the casual observer. The overall level of change would be moderate-to-high, which would not meet the VRM Class II objective of a low degree of visual change. The resulting visual impact would be adverse and significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. However, Mitigation Measure V-3a is recommended to reduce the visual impact along this alternative route. This viewpoint analysis is considered representative of views of this alternative from westbound I-10 toward Alligator Rock.

Mitigation Measure for Impact V-38

V-3a **Reduce visual contrast of towers and conductors.**

D.3.8.7 Alligator Rock–South of I-10 Frontage Alternative

Environmental Setting

The Alligator Rock–South of I-10 Frontage Alternative follows the same route as the Desert Southwest Transmission Line Project around Alligator Rock. The reader is therefore referred to Section D.3.8.4 and specifically to the discussion about Key Viewpoint 30 on eastbound I-10. The reader is also referred to the summary of the KVP 30 analysis presented in Appendix VR-1 (see enclosed CD) and the existing view photograph and visual simulation presented in Figures D.3-31A and D.3-31B (see enclosed CD) respectively.

Construction Impacts

Construction impacts from the Alligator Rock–South of I-10 Frontage Alternative would be as described above in Section D.3.6.1 and would include the visual intrusion of construction activities, vehicles and equipment (Impact V-1) and visibility of land scarring (Impact V-2).

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

Ancillary facilities associated with this route segment would include the Desert Center Construction Yard located approximately 1,000 feet northwest of the intersection of SR 177 and Ragsdale Road. Viewing opportunities of concern for this alternative would include I-10, Desert Center, and e Alligator Rock ACEC south of I-10. While Impact V-1 in this alternative would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Alligator Rock–South of I-10 Frontage Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-39: Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on eastbound Interstate 10 (VRM) (Class I)

The Alligator Rock–South of I-10 Frontage Alternative follows the same route as the Desert Southwest Transmission Line Project around Alligator Rock. The reader is therefore referred to Section D.3.8.4 and specifically to the discussion about Key Viewpoint 30 on eastbound I-10. The reader is also referred to the summary of the KVP 30 analysis presented in Appendix VR-1 (see enclosed CD) and the existing view photograph and visual simulation presented in Figures D.3-31A and D.3-31B (see enclosed CD) respectively. The resulting visual impact would be adverse and significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. However, Mitigation Measure V-3a is recommended to reduce the visual impact along this alternative route. This viewpoint analysis is considered representative of views of this alternative from eastbound I-10 toward Alligator Rock.

Mitigation Measure for Impact V-39

V-3a Reduce visual contrast of towers and conductors.

D.3.9 Alternatives for West of Devers

D.3.9.1 Devers-Valley No. 2 Alternative

Environmental Setting

The eastern portion of the Devers-Valley Alternative transitions from a desert basin environment that is host to a profusion of wind turbines and energy transmission infrastructure and ringed by rugged mountain ranges, to the steeply rising northern ridges of the San Jacinto Mountains south of Interstate 10 (I-10). South of I-10, the route passes through private lands and public lands administered by the Bureau of Land Management (on the desert floor) and the U.S. Forest Service (on the upper ridges). The existing Devers-Valley No. 1 (D-V1) transmission line, with its large 500 kV structures, is a prominent built feature in the landscape along with the other energy infrastructure. This portion of the route is visible to travelers on I-10, SR 62 (a State-designated scenic highway), SR-111 (a State-eligible scenic highway), and Snow Creek Road; hikers on the Pacific Crest Trail; and residents in the Painted Hills residential area north of I-10 and the Snow Creek Village residential community south of I-10. After traversing a portion of the northern ridges of the San Jacinto Mountains, the route descends rocky slopes and passes through the residential community of Cabazon in San Gorgonio Pass, an arid desert pass characterized by desert scrub vegetation and bordered by the rugged San Bernardino Mountains on the north and the San Jacinto Mountains on the south. Extending west from Cabazon, the route crosses SR 243 (a State designated scenic highway) and passes through the cities of Banning and Beaumont. This portion of the route is visible at the base of the San Jacinto Mountains from I-10, numerous local roads, SR 243, scattered rural residences in Banning, and new residential subdivisions in Beaumont. The existing D-V1 line continues to be a prominent built feature in the landscape.

Heading southwest from Beaumont, the route passes through the rocky western portion of the San Jacinto Mountains, crossing SR 74 before descending into the San Jacinto Valley, which is characterized by open agricultural fields and rural residences. Panoramic vista views encompassing this alternative route

are available from SR 74, Gilman Springs Road, and Ramona Expressway, all three of which are County-eligible scenic highways. Continuing to the southwest, the route enters the rugged Lakeview Mountains, exiting north of Romoland and passing through a landscape characterized by open grassy fields that are bordered by low, rolling, rocky hills, and punctuated by numerous, scattered rural residences. The D-V1 transmission line with its distinctive "Tetra" tower design is a prominent, built landscape feature. Views of this portion of the route are available to the numerous local roads and rural residences surrounding the route.

Four key viewpoints (KVPs) were selected for detailed analysis along this Alternative and are considered representative of the various viewing opportunities that are available along the route. From north to south, the viewpoints include: (1) KVP 33 on the Pacific Crest Trail near the Snow Creek Village residential community; (2) KVP 34 on Riza Avenue in a residential community in Cabazon; (3) KVP 35 on southbound SR 243, which is a State-designated scenic highway; and KVP 36 on Mapes Road, just west of Menifee Road and north of Romoland. The locations of these four KVPs are shown on Figure D.3-1G (see enclosed CD). The results of the visual analysis are summarized in Appendix VR-1 (see enclosed CD). A discussion of the existing visual setting for each KVP is presented in the following paragraphs.

Key Viewpoint 33 – Pacific Crest Trail near Snow Creek Village (VS-VC)

Key Viewpoint 33 was established on the Pacific Crest Trail, just west of Snow Creek Road and just north of the Snow Creek Village Residential community (see Figure D.3-34A on enclosed CD). Viewing to the west toward the existing D-V1 line and the northern ridges of the San Jacinto Mountains, this location was selected to represent the existing views from the Pacific Crest Trail, Snow Creek Road, and the Snow Creek Village rural residential area.

Visual Quality: moderate. The foreground, flat desert floor is characterized by desert scrub vegetation and is backdropped by the dominant, rugged and steeply rising northern ridges of the San Jacinto Mountains. The existing D-V1 transmission line is a prominent feature made more noticeable by the visible skylining (extending above the horizon line) that occurs as the transmission line ascends the ridges and is viewed from lower elevation vantagepoints. In addition to the transmission line structures, the existing D-V1 conductors also appear as discordant built features in the predominantly natural landscape when highlighted by the afternoon sun (see Figure D.3-35 on enclosed CD).

Viewer Concern: high. Residents of the Snow Creek Village residential community and hikers on the Pacific Crest Trail would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (background sky and mountain ridges) an adverse visual change. Also, portions of the route in this area are located within the Santa Rosa and San Jacinto Mountains National Monument. The special status of these lands also imparts a high degree of public concern.

Viewer Exposure: moderate-to-high. The proposed route would be highly visible in the foreground, of views from the Pacific Crest Trail, the Snow Creek Village residential community, and Snow Creek Road. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity: moderate-to-high. For Snow Creek Village residents and travelers on the Pacific Crest Trail and Snow Creek Road, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 34 – Riza Avenue in Cabazon (VS-VC)

Key Viewpoint 34 was established on Riza Avenue, approximately 0.2 miles west of Elm Street in Cabazon (see Figure D.3-36A on enclosed CD). Viewing to the northeast toward existing D-V1 structures DV 49 through DV 51, this location was selected to represent the existing views from the surrounding rural residences in Cabazon.

Visual Quality: low-to-moderate. The foreground relatively non-descript, grass- and shrub-covered desert landscape is punctuated by rural residences and prominent utility towers that are structurally complex and exhibit a pronounced industrial character. The foreground, landscape is backdropped by the undulating northern ridges of the San Jacinto Mountains and a wind farm development to the east. The existing D-V1 transmission line is a prominent built feature made more noticeable by the visible skylining that occurs when viewed from south of the line.

Viewer Concern: high. Although the existing energy generation and transmission infrastructure feature prominently in the landscape visible from within this community, residential viewers would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (background sky and mountain ridges) an adverse visual change.

Viewer Exposure: moderate-to-high. The proposed route would be highly visible in the foreground, of residential views in Cabazon. Although the number of viewers would be low, the duration of view would be extended.

Overall Visual Sensitivity: moderate-to-high. For Cabazon residents and travelers on local roads, the low-to-moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Key Viewpoint 35 – State Route 243 Scenic Highway (VS-VC)

Key Viewpoint 35 was established on southbound SR 243, just north of the crossing of SR 243 (see Figure D.3-37A on enclosed CD). Viewing to the east toward existing D-V1 towers DV 73 through DV 75, this location was selected to represent the existing view from the State scenic highway.

Visual Quality: moderate. SR 243 affords a panoramic view of the San Gorgonio Pass area and the northern ridges of the San Jacinto Mountains. Foreground, views are dominated by rugged, rocky ridgelines, punctuated by prominent utility towers with industrial character, made more prominent where structure skylining occurs. These landscape features are backdropped by distant mountains and the urban development within the Pass area.

Viewer Concern: high. Travelers on a State Scenic Highway typically have expectations for views of notable scenic quality. Although some local travelers on SR 243 may anticipate the presence of the existing transmission infrastructure, any addition of industrial character or prominence or blockage of higher quality landscape features (sky, mountain ridges, or panoramic views of the Pass) would be seen as an adverse visual change.

Viewer Exposure: moderate to high. The proposed route would be highly visible in the foreground, of views from SR 243 in general and KVP 35 specifically as the route approaches and then spans the highway. The number of viewers would be moderate and the duration of view would be moderate-to-extended.

Overall Visual Sensitivity: moderate-to-high. For travelers on SR 243, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Residential Views in Banning and Beaumont

Figure D.3-38 (see enclosed CD) presents the existing view to the northeast from Del Rita Road in Banning. This view is representative the rural residential views of the existing D-V1 line and D-V2 Alternative route in Banning. Visual quality is moderate with views of open fields and the San Bernardino Mountains (or San Jacinto Mountains if viewing to the south) in the background. Viewer concern would be high with any increase in industrial character or view blockage perceived as an adverse visual change. Viewer exposure would be moderate-to-high due to highly visible foreground, views available to a relatively low number of viewers but with extended view duration. The overall visual sensitivity of the existing visual setting and viewing characteristics would be moderate-to-high based on the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure.

Figure D.3-39 (see enclosed CD) presents the existing view to the southwest from the Four Seasons residential development, just west of Highland Springs Avenue in Beaumont. The existing D-V1 transmission line is a prominent feature crossing the hilltops to the south of the residential development. This view is considered representative of residential views in the southern portion of Beaumont though there are other residential developments east of Highland Springs Avenue that are located in closer proximity to the transmission line. Visual quality is moderate with foreground, views of developed landscaping backdropped by natural appearing grass-covered rolling hills. Viewer concern would be high with any increase in industrial character or view blockage perceived as an adverse visual change. Viewer exposure would be moderate-to-high due to highly visible foreground, views (made more pronounced by structure skylining) available to a relatively low number of viewers but with extended view duration. The overall visual sensitivity of the existing visual setting and viewing characteristics would be moderate-to-high based on the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure.

Key Viewpoint 36 – Mapes Road West of Menifee Road (VS-VC)

Key Viewpoint 36 was established on Mapes Road, just west of Menifee Road and north of Romoland (see Figure D.3-40A on enclosed CD). Viewing to the south toward existing D-V1 structures DV 146 through DV 151, this location was selected to represent the existing views from the surrounding rural residences along the southern portion of this alternative.

Visual Quality: moderate. Foreground open panoramic views encompass a flat, rural residential landscape consisting of grass-covered fields ringed by rolling to angular hills and rocky ridges. Numerous rural residences dot the landscape and the existing D-V1 transmission line is the prominent built feature with its distinctive "Tetra" tower design that exhibit substantial skylining due to the low horizon line and availability of close proximity viewpoints.

Viewer Concern: high. Although the existing transmission infrastructure features prominently in the landscape visible from surrounding residences and local roads, residential viewers would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (background sky and mountain ridges) an adverse visual change.

Viewer Exposure: high. The proposed route would be highly visible in the foreground, of residential views. While the number of viewers would be moderate, the duration of views would be extended.

Overall Visual Sensitivity: moderate-to-high. For rural residents and travelers on local roads, the moderate visual quality, high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Policy Consistency Analysis

Table D.3-10 identifies the various plans and policies that pertain to Visual Resources. For each relevant policy or directive identified in the table, the Devers-Valley Alternative's consistency is identified and discussed.

Table D.3-10. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Alternative Consistent?	Method of Consistency
U.S. Bureau of Land Management California Desert District	**California Desert Conservation Area (CDCA) Plan-1980 as amended. Record of Decision for California Desert Conservation Area Plan Amendment for the Coachella Valley, Page 1, Plan Amendment Decision 2: Designate Visual Resource Management Classes on public lands.**		
	VRM Classifications in the Plan Amendment (Table 2-2 on Page 2-4) are specified Class II for BLM-managed lands within the Santa Rosa and San Jacinto Mountains National Monument (except for designated wilderness which is Class I). The **VRM Class II Management Objective** requires that a project or action retain the existing character of the landscape. The level of change to the landscape should be low. Activities may be seen but should not attract attention of the casual observer. Changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.	No	Just west of Snow Creek Road, the D-V2 Alternative would pass through portions of the Santa Rosa and San Jacinto Mountains National Monument subject to VRM Class II management objectives. The moderate level of visual change that would be caused by the Alternative in this area would not meet the VRM Class II objective of a low degree of visual change. While the new line would repeat the characteristics of the existing lattice tower transmission line, it would not repeat the basic elements of the existing natural features in the landscape. Also, the additional skylining industrial character that would result would attract attention of the casual observer on the Pacific Crest Trail and Snow Creek Road, and within Snow Creek Village.
	California Desert District South Coast Resource Management Plan and Record of Decision. June 1994. Land Use Allocations, No. 21, Page 30.		
	The South Coast Resource Management Plan specifies that management actions (projects) on BLM-administered lands within the Potrero ACEC are to conform to VRM Class II management objectives (see above for VRM Class II management requirements).	No	The D-V2 Alternative would introduce additional energy infrastructure into the Potrero ACEC landscape. Project structures would exhibit substantial structural complexity, industrial character, and increased structure prominence. View blockage of higher value landscape features would also occur. The resulting visual contrast for structural form and line would be moderate to moderate-to-high because of the close proximity of viewers (within the ACEC) to the line. The overall level of change would also be moderate to moderate-to-high. The new line would not achieve any of the VRM Class II objectives. Therefore, the moderate to moderate-to-high level of visual change that would be caused by this portion of the D-V2 Alternative would be inconsistent with the applicable VRM Class II management objectives

Table D.3-10. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Alternative Consistent?	Method of Consistency
U.S. Forest Service San Bernardino National Forest	**San Bernardino National Forest South Final Land Management Plan Scenic Integrity Objectives Map and Design Criteria for Southern California National Forests, Page 6**		
	The D-V2 Alternative would cross lands administered by San Bernardino National Forest that are subject to the *VERY HIGH* Scenic Integrity Objective. *VERY HIGH scenic integrity refers to landscapes where the valued landscape character "is" intact with only minute if any deviations. The existing landscape character and sense of place is expressed at the highest possible level.* *NOTE: The San Bernardino National Forest's comment letter on the Draft EIR/EIS (see Volume 3, Comment Set A15) states that the SIO will be modified from VERY HIGH to HIGH. If this is done and SCE meets Forest criteria for visibility of the new transmission line, the alternative could be found to be consistent with the Forest Plan.*	No	Aesthetic Management Standard S9 of the Design Criteria for Southern California National Forests stipulates that management activities (or projects) are to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map, which in this case is *VERY HIGH*. The D-V2 Alternative would result in the introduction of additional energy infrastructure, which would exhibit substantial industrial character and structural complexity and prominence imparted by the towers and conductors. These characteristics would result in levels of visual contrast that would be inconsistent with the *VERY HIGH* Scenic Integrity Objective assigned to the lands through which the Alternative would pass. Aesthetic Management Standard S10 does allow the following exceptions to the SIO requirement: • Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor's approval. • Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration. However, in this case, it appears that the drop in scenic integrity would be at least two levels to MODERATE or possibly three levels to LOW. The increased visual contrast associated with the additional transmission line would cause the landscape character to appear at least slightly altered which is a characteristic of MODERATE scenic integrity. Since the project-induced changes would be essentially permanent or at least long-term (greater than three years), the impact would exceed the exception allowed under Aesthetic Management Standard S10.
Riverside County	**Riverside County Comprehensive General Plan. Land Use Element: Project Design, Pages LU-22 and LU-23.**		
	Policy LU 4.1 – Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts: a. Compliance with the design standards of the appropriate area plan land use category. l. Mitigate noise, odor, lighting, and other impacts on surrounding properties.	No (for Item a.) Yes (with mitigation for Item l)	There are no aesthetic design standards pertaining to high-voltage transmission lines in the Land Use Element. However, it has been determined that the D-V2 Alternative would result in Significant (Class I) visual impacts, which is considered a degradation of the character of the surrounding area. Also, the D-V2 Alternative would include facilities that would require night lighting with the potential to impact surrounding areas. However, with implementation of Mitigation Measure V-6c, night lighting impacts would be mitigated to a level that would be less than significant (Class III).

Table D.3-10. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Alternative Consistent?	Method of Consistency
	Riverside County Comprehensive General Plan. Land Use Element: Land Use Compatibility, Page LU-25.		
	Policy LU 6.1 – Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts.	Yes	The D-V2 Alternative would be located within an established utility corridor, which would avoid the proliferation of additional utility facilities across the landscape with the potential for land use compatibility impacts. Furthermore, implementation of the APMs identified in this document and the Mitigation Measures presented in following sections would help to lessen the visual impacts of this alternative. However, even though the visual impacts of the D-V2 Alternative would likely be less than a different route located outside of an existing transmission line corridor, implementation of this alternative would still result in significant Class I visual Impacts.
	Policy LU 6.4 – Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.	Yes	The D-V2 Alternative would include facilities that might cause daytime glare and night lighting impacts on surrounding areas. However, with implementation of Mitigation Measures V-40a, V-6a and V-6c, glare and night lighting impacts would be kept to levels that would be less than significant (Class III).
	Riverside County Comprehensive General Plan. Land Use Element: Hillside Development & Slope, Page LU-30.		
	Policy LU 11.1 – Apply the following policies to areas where development is allowed and that contain natural slopes, canyons, or other significant elevation changes, regardless of land use designation: a. Restrict development on visually significant ridgelines, canyon edges and hilltops through sensitive siting and appropriate landscaping to ensure development is visually unobtrusive.	No	The D-V2 Alternative would cross several hilltops and ridgelines in Riverside County. As a result, the transmission structures would cause additional skylining (extending above the horizon line) and appear more prominent and obtrusive. There is no mitigation available that would bring the project into consistency with this policy following the D-V2 alignment.
	Riverside County Comprehensive General Plan. Land Use Element: Scenic Corridors, Page LU-31.		
	Policy LU 13.1 – Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.	No	Although the D-V2 Alternative would be located within an existing utility corridor, several views from roads within Riverside County would be adversely affected, including views from SR 62 and SR 243 (State-designated scenic highways), I-10, SR 111, SR 74, and SR 79 (State-eligible scenic highways) and Gilman Springs Road, Ramona Expressway, and Menifee Road (County-eligible scenic highways). A number of these visual impacts would be significant (Class I). Although Mitigation Measure V-40a is proposed to lessen the visual impacts of the D-V2 Alternative, the impacts would not be reduced to levels that would not be significant.

Table D.3-10. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Alternative Consistent?	Method of Consistency
	Policy LU 13.3 – Ensure that the design and appearance of new landscaping, structures, equipment, signs, or grading within Designated and Eligible State and County scenic highway corridors are compatible with the surrounding scenic setting or environment.	Yes	Portions of the D-V2 Alternative would cross designated and eligible scenic roads within Riverside County. However, the project would be located within an existing utility corridor and the proposed structures would match the design of existing structures within the corridor.
	Policy LU 13.4 – Maintain at least a 50-foot setback from the edge of the right-of-way for new development adjacent to Designated and Eligible State and County Scenic Highways.	Yes	Although the D-V2 Alternative would affect views from designated and eligible scenic highways in Riverside County, structures would be located within an existing utility corridor and it is expected that structures would be situated more than 50 feet from the edge of the scenic highway right-of-way (though precise tower placements have not been identified).
	Riverside County Comprehensive General Plan. Land Use Element: Open Space Area Plan Land Use Designations: Recreation Page LU-52.		
	Policy LU 20.1 – Require that structures be designed to maintain the environmental character in which they are located.	No	The D-V2 Alternative would be located within an established utility corridor, which would avoid the proliferation of additional utility corridors. The proposed transmission line structures would also match the same design as existing structures within the corridor. However, as a result of the scale of the structures, the extent of visual change that would occur (increased visual contrast, structural prominence, and view blockage), and the close proximity of sensitive viewers, this Alternative would still result in significant (Class I) visual impacts.
	Policy LU 20.2 – Require that development be designed to blend with undeveloped natural contours of the site and avoid an unvaried, unnatural, or manufactured appearance.	No	Although the D-V2 Alternative would **(a)** be located within an established utility corridor, **(b)** have the same design as existing transmission line structures, and **(c)** have a lattice design that would help the structures blend with a background where one exists, the project would still exhibit an industrial, manufactured appearance. There is no mitigation available that would bring the project into consistency with this policy following the Alternative alignment.
	Policy LU 20.4 – Ensure that development does not adversely impact the open space and rural character of the surrounding area.	No	Although the D-V2 Alternative would **(a)** be located within an established utility corridor, **(b)** have the same design as existing transmission line structures, and **(c)** have a lattice design that would help the structures blend with a background where one exists, the project would still exhibit an industrial, manufactured appearance and cause adverse visual impacts. There is no mitigation available that would bring the project into consistency with this policy following the Alternative alignment.
	Riverside County Comprehensive General Plan. Circulation Element: Scenic Corridors, Page C-46.		
	Policy C 19.1 – Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan.	No	Although the D-V2 Alternative would: **(a)** be located within an established utility corridor and **(b)** have the same design as existing transmission line structures, this alternative would still adversely affect views from designated (SR 62 and SR 243) and eligible (I-10, SR 111, SR 74, SR 79, Gilman Springs Road, Ramona Expressway, and Menifee Road) scenic highways.

Table D.3-10. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Alternative Consistent?	Method of Consistency
	Riverside County Comprehensive General Plan. Circulation Element: Major Utility Corridors, Page C-55.		
	Policy C 25.2 – Locate new and relocated utilities underground when possible. All remaining utilities shall be located or screened in a manner that minimizes their visibility by the public.	No	The D-V2 Alternative would be an aboveground facility. Although the project would be located within an existing corridor and have the same design as other facilities within the corridor, its location within an existing corridor would not minimize the project's visibility given the relatively close proximity of the utility corridor to major travel corridors, local roads, and residential development. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
	Riverside County Comprehensive General Plan. Open Space Element: Scenic Resources, Page OS-45.		
	Policy OS 21.1 – Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.	No	The D-V2 Alternative would be located along a number of ridgelines and slopes that would result in additional skylining. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
	Policy OS 22.1 – Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses.	No	Although the D-V2 Alternative would: **(a)** be located within an established utility corridor and **(b)** have the same design as existing transmission line structures, this alternative would still adversely affect views from designated (SR 62 and SR 243) and eligible (I-10, SR 111, SR 74, SR 79, Gilman Springs Road, and Ramona Expressway) scenic highways.
	Riverside County The Pass Area Plan. Circulation: Scenic Highways, Page 41.		
	Policy PAP 12.1 – Protect the scenic highways in the Pass from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	The D-V2 Alternative would cause significant (Class I) visual impacts on views from SR 243, a State-designated scenic highway within The Pass Planning Area. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
	Riverside County Western Coachella Valley Area Plan. Land Use: Industrial Uses, Page 38.		
	Policy WCVAP 12.4 – Require the screening and/or landscaping of outdoor storage areas, such as contractor storage yards and similar uses.	Yes (with mitigation)	The D-V2 Alternative would require the establishment of the Palm Springs Construction yard within the Western Coachella Valley Plan Area. However, implementation of Mitigation Measure V-1a would help to minimize the temporary visual impacts from construction and storage yards.
	Riverside County Western Coachella Valley Area Plan. Land Use: Light Pollution, Page 43.		
	Policy WCVAP 15.1 – Where outdoor lighting is proposed, require the inclusion of outdoor lighting features that would minimize the effects on the nighttime sky and wildlife habitat areas.	Yes (with mitigation)	Some project facilities (substations and construction yards) would include night lighting with the potential to impact the nighttime sky and adjacent wildlife habitat areas. However, implementation of Mitigation Measures V-1b and V-6c would ensure that night lighting impacts do not occur.

Table D.3-10. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Alternative Consistent?	Method of Consistency
	Policy WCVAP 15.2 – Adhere to the lighting requirements of the County Ordinance Regulating Light Pollution for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.	Yes (with mitigation)	Some project facilities (substations and construction yards) would include night lighting with the potential to impact the nighttime sky. However, implementation of Mitigation Measures V-1b and V-6c would ensure that night lighting impacts do not occur.
	Riverside County Western Coachella Valley Area Plan. Land Use: Scenic Highways, Page 48.		
	Policy WCVAP 18.1 – Protect the scenic highways in the Western Coachella Valley from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	The D-V2 Alternative would result in an adverse visual impact on views from State-designated scenic highway SR 62 and State-eligible scenic highways I-10 and SR 111). There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
	Riverside County Western Coachella Valley Area Plan. Land Use: Multipurpose Open Space, Page 55.		
	Policy WCVAP 19.1 – Protect visual and biological resources in the Western Coachella Valley through adherence to General Plan policies found in the Fish and Wildlife Habitat section of the Multipurpose Open Space Element.	No	The D-V2 Alternative would adversely affect visual resources within the Western Coachella Valley Planning Area. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
	Riverside County Lakeview/Nuevo Area Plan. Circulation: Scenic Highways, Page 41.		
	Policy LNAP 10.1 – Protect the scenic highways in the Lakeview/ Nuevo planning area from change that would diminish the aesthetic value of views of the Bernasconi Hills, the San Jacinto River, the Mystic Lake Corridor, and the San Jacinto Wildlife Area in accordance with the Scenic Highways section of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	Although the D-V2 Alternative would: **(a)** be located within an established utility corridor and **(b)** have the same design as existing transmission line structures, this alternative would still adversely affect views from Ramona Expressway, a county-eligible scenic highway within the Lakeview/ Nuevo Planning Area. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
	Riverside County San Jacinto Valley Area Plan. San Jacinto River, Page 23.		
	Policy SJVAPP 3.8 – Discourage utility lines within the River corridor. If approved, lines shall be placed underground where feasible and shall be located in a manner to harmonize with the natural environment and amenity of the River.	No	Although the D-V2 Alternative would: **(a)** be located within an established utility corridor and **(b)** have the same design as existing transmission line structures, this alternative would still adversely affect within the San Jacinto River corridor. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.

Table D.3-10. Consistency with Applicable Land Use Plans and Policies

Agency Regulating Visual Resources	Regulation or Policy	Alternative Consistent?	Method of Consistency
	Riverside County San Jacinto Valley Area Plan. Circulation: Scenic Highways, Page 37.		
	Policy SJVAP 12.1 – Protect the scenic highways in the San Jacinto Valley Area Plan from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	Although the D-V2 Alternative would: **(a)** be located within an established utility corridor and **(b)** have the same design as existing transmission line structures, this alternative would still adversely affect views from Ramona Expressway, Gilman Springs Road, and SR 79, all county-eligible scenic highways within the San Jacinto Valley Planning Area. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
	Riverside County Harvest Valley/Winchester Area Plan. Land Use: Mount Palomar Nighttime Lighting, Page 42.		
	Policy HVWAP 9.1 – Adhere to the lighting requirements specified in County Ordinance No. 655 that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.	Yes (with mitigation)	Some project facilities (substations and construction yards) would include night lighting with the potential to impact the nighttime sky. However, implementation of Mitigation Measures V-1b and V-6c would ensure that night lighting impacts do not occur.
	Riverside County Harvest Valley/Winchester Area Plan. Circulation: Scenic Highways, Page 49.		
	Policy HVWAP 14.1 – Protect the scenic highways in the Harvest Valley/Winchester planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	No	Although the D-V2 Alternative would: **(a)** be located within an established utility corridor and **(b)** have the same design as existing transmission line structures, this alternative would still adversely affect views from SR 74, a State-eligible scenic highway and Menifee Road, a county-eligible scenic highway within the Harvest Valley/Winchester Planning Area. There is no mitigation available that would bring the project into consistency with this policy following the alternative alignment.
City of Palm Springs	**City of Palm Springs General Plan. Land Use, Page I-19.**		
	3.1.7 Ensure that development does not overwhelm natural features, especially the washes and the views of mountains.	No	Although the D-V2 Alternative would: **(a)** be located within an established utility corridor and **(b)** have the same design as existing transmission line structures, this alternative would still cause significant (Class I) visual impacts on views of mountain ridgelines.

Impacts and Mitigation Measures

Construction Impacts

Construction impacts along the D-V2 Alternative would be as described above for the Proposed Project in Section D.3.6.1 and would include the visual intrusion of construction activities and equipment (Impact V-1) and visibility of land scarring (Impact V-2). Construction yards associated with the D-V2 Alternative would likely be located at existing facilities such as Devers Substation and Valley Substation. However, if space at existing facilities is either unavailable or insufficient, up to two additional construction yards may be necessary for this alternative though their location has not been specified.

Viewing opportunities of concern along this alternative would include residential subdivisions, rural residential communities, designated scenic highways (SR 62 and SR 243), eligible scenic highways (I-10, SR 111, SR 79, Gilman Springs Road, Ramona Expressway, Menifee Road, and SR 74) local roads, and the Pacific Crest Trail.

In addition to the APMs identified under Impact V-1 (B-5, B-14, and L-9) and Impact V-2 (B-14, B-23-25, B-30, W-9, W-17, G-10, G-11, V-4, and L-3) above, Mitigation Measures V-1 through V-2c shall be implemented for construction Impact V-1 and Impact V-2 along this alternative between Devers Substation and Valley Substation.

Impact V-1: Short-term visibility of construction activities, equipment and night lighting (Class III)

While Impact V-1 in this alternative would be less than significant, mitigation is recommended in compliance with NEPA requirements (please see the explanation of mitigation for less than significant impacts in Section D.1.2).

Mitigation Measures for Impact V-1: Visibility of Construction Activities and Equipment

V-1a **Reduce visibility of construction activities and equipment.**

V-1b **Reduce construction night lighting impacts.**

Impact V-2: Long-term visibility of land scars in arid and semi-arid landscapes (Class II)

This impact, described in Section D.3.6.1 above, would also occur in the Devers-Valley Alternative. Mitigation Measures V-2a, V-2b, and V-2c are required in order to reduce the potentially significant impact (Class II) to less than significant levels.

Mitigation Measures for Impact V-2: Visibility of land scarring in arid and semi-arid landscapes (Class II)

V-2a **Reduce in-line views of land scars.**

V-2b **Reduce visual contrast from unnatural vegetation lines.**

V-2c **Reduce color contrast of land scars.**

Operational Impacts

Impact V-40: Increased structure contrast and skylining when viewing the San Jacinto Mountains from Key Viewpoint 33 on the Pacific Crest Trail in the vicinity of the Snow Creek Village residential community (VS-VC) (Class I)

Figure D.3-34A (see enclosed CD) presents the existing view to the west from Key Viewpoint 33 on the Pacific Crest Trail, just west of Snow Creek Road and just north of the Snow Creek Village residential community. Figure D.3-34B (see enclosed CD) presents a visual simulation that depicts the addition of the D-V2 transmission line adjacent and to the east of the existing D-V1 transmission line. The new and existing towers would appear similar in design and height and would be paired up. The new structures would cause a noticeable increase in structure prominence and industrial character within the corridor. Additional skylining and view blockage of background sky and mountain ridges would also occur. Additional visual contrast would be caused by the highlighting of the conductors by the afternoon sun as illustrated in the existing view presented in Figure D.3-35 (see enclosed CD).

Although the additional towers would appear similar in design and height to that of the existing towers, the additional skylining, view blockage, and increased structural prominence would result in a moderate degree of visual contrast. The D-V2 Alternative would appear co-dominant with the existing transmission lines and subordinate to the northern ridges of the San Jacinto Mountains. View blockage of background sky and mountains would be moderate.

The overall visual change would be moderate and in the context of the existing landscape's overall moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). This conclusion is substantially influenced by the high sensitivity of the Pacific Crest Trail (that is in close proximity to both the lower and upper elevations of route) and the adjacent residential community. Mitigation Measure V-40a is recommended to lessen the visual impact along this portion of the alternative though the impact would not be reduced to a level that would be less than significant. This viewpoint analysis is considered representative of project views from Snow Creek Village, the Pacific Crest Trail, and Snow Creek Road in the vicinity of alternative route.

In addition, Mitigation Measure V-40b is added in compliance with requirements of the San Bernardino National Forest (SBNF). This measure applies to towers on SBNF land.

The Devers-Valley No. 2 Alternative would cross the Pacific Crest National Scenic Trail south of the I-10 in the Desert Flats zone. Views and sounds of I-10 are part of the setting in this area. The SBNF Land Management Plan (Part II, page 100) reads:

> *SBNFFS7 - Pacific Crest National Scenic Trail - Protect scenic value in accordance with adopted scenic integrity values. Protect foreground view from the footpath, as well as the designated viewpoints. Where practicable, avoid establishing unconforming land uses with the viewshed of the trail.*

The SBNF states that direction is to manage the trail as a Sensitivity Level 1 and with the Visual Quality Objective of Retention (comparable to the SIO of High). As a result, Mitigation Measure V-40c is also added in compliance with SBNF requirements; it applies to the area near the Pacific Crest National Scenic Trail south of the I-10 (Towers numbered DV-38 to DV-46 on Figure Ap.1-8b, provided in the Draft EIR/EIS only and not included on the CD due to SCE security reasons. Paper copies are available upon request).

Mitigation Measures for Impact V-40

V-40a **Reduce visual contrast of towers and conductors.** The following design measures are to be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities: **(a)** all new structures are to as closely as possible match the design of the existing structures with which they will be seen; **(b)** all new structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements; **(c)** all new structures are to match the heights of the existing D-V1 structures to the extent possible as dictated by variation in terrain; **(d)** all new spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as SR 62, I-10, SR 111, SR 243, SR 79, Gilman Springs Road, Ramona Expressway, Menifee Road, and SR 74; **(e)** all new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast, and **(f)** no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for skylining. SCE

shall provide to the CPUC, BLM, and Forest Service a Project Design Plan demonstrating implementation of this measure at least 90 days prior to the start of construction, and shall not commence construction until the Project Design Plan has been approved by the CPUC, BLM, and Forest Service.

V-40b **Reduce visual contrast of towers and conductors on San Bernardino National Forest land**. The following design measures are to be applied to all new structures and conductors on SBNF land based on SCE's consultation with SBNF staff prior to completion of final design. The details of these measures shall be developed:

In all areas:

- Transmission lines should have a permanent coloring of dark gray.
- All towers not back-dropped on mid-slope should have permanent coloring of cool mid-gray (battleship gray).

In mid-slope areas (as defined by SBNF):

- All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab.
- Tower pads should be left uneven without leveling.
- No construction roads shall be built.
- Towers shall be constructed by air support.

At ridge crossing and mid-slope (as defined by SBNF):

- Towers should be constructed of lower profile to closer "hug" the top of the ridge to avoid tower silhouetting.
- Graphic studies from dominant view sites should be used to best place towers where they would be best back-dropped from expected viewing points.
- All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab.
- Tower pads should be left uneven without leveling.
- No construction roads shall be built.
- Towers should be constructed by air support.

V-40c **Reduce visual contrast of towers and conductors near the Pacific Crest Trail**. For towers located south of I-10 and outside of the SBNF, the following provisions apply:

- Where towers could be practicably back-dropped, utilize mitigation suggested for mid-slope and Ridge Crossing on SBNF lands (as defined in Mitigation Measure V-40b).
- The PCT shall not be crossed with construction roads.
- Locate towers so that the PCT is in the middle of the span (if this does not involve placement of extra or taller span towers to accomplish such action).

Impact V-41: Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing the San Jacinto Mountains from BLM-managed lands within the Santa Rosa and San Jacinto Mountains National Monument (in the vicinity of KVP 33) (VRM) (Class I)

Just west of Snow Creek Road, the Devers-Valley 2 Alternative would cross BLM-administered lands within the Santa Rosa and San Jacinto Mountains National Monument. These lands are subject to the Class II Visual Resource Management (VRM) objective as specified in Table 2-2 on page 2-4 of the California Desert Conservation Area Plan Amendment for the Coachella Valley and Final Environmental Impact Statement. The VRM Class II management objective requires that a project or action retain the existing character of the landscape. The level of change to the landscape should be low. Activities may be seen but should not attract attention of the casual observer. Changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The D-V2 Alternative would introduce a new 500 kV transmission line adjacent to the existing D-V1 transmission line. The visual change associated with this route segment would be similar to that described in the previous section though the visual impacts would be somewhat more pronounced because of the closer proximity of the route to the BLM-managed lands. Although the new structures would be of similar design and height as the existing D-V1 structures, the new structures would cause additional skylining and view blockage of the San Jacinto Mountains. The new line would also increase the structural complexity and industrial character visible from Monument lands. These visual effects would become more pronounced the closer the viewer is to the transmission line. The resulting visual contrast for structural form and line would be moderate, while color and texture contrast would be weak. The new line would not repeat the basic elements of the existing natural features in the landscape and would cause view blockage of sky and the San Jacinto Mountains. The new line would also appear co-dominant to the casual observer on the Monument lands.

The overall level of visual change would be moderate, which would not meet the VRM Class II objective of a low degree of visual change. The resulting visual impact would be adverse and significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. However, Mitigation Measure V-40a is recommended to lessen the visual impact along this portion of the alternative. This viewpoint analysis is considered representative of views of this Alternative from the low-elevation Monument lands in the vicinity of KVP 33.

Impact V-42: Inconsistency with U.S. Forest Service Scenic Integrity Objective (SIO) due to introduction of structure contrast and industrial character (Class I)

The D-V2 Alternative would result in the introduction of additional energy infrastructure onto public lands administered by the U.S. Forest Service. Specifically, this alternative would enter San Bernardino National Forest at Tower DV 32 and exit the National Forest approximately 1.4 miles further west at Tower DV 49. The increased industrial character and structural complexity and prominence imparted by the towers and conductors would result in levels of visual contrast that would be inconsistent with the *VERY HIGH* Scenic Integrity Objective assigned to the lands through which the alternative would pass. Aesthetic Management Standard S9 of the Design Criteria for Southern California National Forests stipulates that management activities (or projects) are to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map, which in this case is *VERY HIGH*. Below is a list of the four highest Scenic Integrity Objectives:

VERY HIGH scenic integrity refers to landscapes where the valued landscape character "is" intact with only minute if any deviations. The existing landscape character and sense of place is expressed at the highest possible level.

HIGH scenic integrity refers to landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

MODERATE scenic integrity refers to landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.

LOW scenic integrity refers to landscapes where the valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed but compatible or complimentary to the character within.

Aesthetic Management Standard S10 does allow the following exceptions to the SIO requirement:

- Minor adjustments not to exceed a drop of one SIO level are allowable with the Forest Supervisor's approval.
- Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.

However, in this case, it appears that the drop in scenic integrity would be at least two levels to *MODERATE* or possibly three levels to *LOW*. The increased visual contrast associated with the additional transmission line would cause the landscape character to appear at least slightly altered which is a characteristic of *MODERATE* scenic integrity. Since the project-induced changes would be essentially permanent or at least long-term (greater than three years), the impact would exceed the exception allowed under Aesthetic Management Standard S10. As a result, this inconsistency with the established Scenic Integrity Objective is considered a significant (Class I) visual impact. Mitigation Measure V-40a is recommended to reduce the visual impact along this portion of the alternative though the impact would not be reduced to a level that would be less than significant.

Impact V-43: Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 34 in the residential community in Cabazon (VS-VC) (Class I)

Figure D.3-36A (see enclosed CD) presents the existing view to the northeast from Key Viewpoint 34 on Riza Avenue, approximately 0.2 miles west of Elm Street in Cabazon. Figure D.3-36B (see enclosed CD) presents a visual simulation that depicts the addition of the D-V2 transmission line adjacent and to the south (to the right in the simulation) of the existing D-V1 transmission line. The new and existing towers would appear similar in design and height and would be paired up. The new structures would cause a substantial increase in structure prominence and industrial character within the corridor, which is located within the immediate foreground, of views from nearby residences. Additional skylining and view blockage of background sky and mountain ridges would also occur.

Although the additional towers would appear similar in design and height to that of the existing towers, the additional skylining, view blockage, and increased structural prominence would result in a moderate-

to-high degree of visual contrast due to their close proximity to residential views. The D-V2 alternative would appear co-dominant with the existing transmission line and landforms of the San Jacinto Mountains. View blockage of background sky and mountains would be moderate-to-high.

The overall visual change would be moderate-to-high and in the context of the existing landscape's overall moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). This conclusion is substantially influenced by the high sensitivity of the adjacent residential community and the close proximity of the structures to those residences. Mitigation Measure V-40a is recommended to lessen the visual impact along this portion of the alternative though the impact would not be reduced to a level that would be less than significant. This viewpoint analysis is considered representative of project views from rural residential communities along the north side of the San Jacinto Mountains.

Impact V-44: Increased structure contrast and skylining when viewing the San Jacinto Mountains and San Gorgonio Pass from Key Viewpoint 35 on southbound State Route 243 (VS-VC) (Class I)

Figure D.3-37A (see enclosed CD) presents the existing view to the east from Key Viewpoint 35 from southbound SR 243 (a State-designated scenic highway), just north of the crossing of SR 243. Figure D.3-37B (see enclosed CD) presents a visual simulation that depicts the addition of the D-V2 transmission line adjacent and to the south of the existing D-V1 line. The new and existing structures would be paired and would appear similar in design and height but would be offset in elevation due to the slope and variation in terrain. The new structures would cause a substantial increase in structure prominence and industrial character within the corridor as viewed from SR 243. Additional skylining and view blockage of background sky, mountain ridges, and San Gorgonio Pass would also occur. The resulting visual contrast would be moderate-to-high. The new transmission line would appear co-dominant compared to the existing line and the northern ridges of the San Jacinto Mountains and view blockage of higher value landscape features (sky, ridges, and the Pass) would be moderate.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). This conclusion is substantially influenced by the high sensitivity imparted to a State-designated scenic highway. Mitigation Measure V-40a is recommended to lessen the visual impact along this portion of the route although the impact would not be reduced to a level that would be less than significant.

Impact V-45: Increased structure contrast, skylining, and view blockage when viewed from residential areas in southern Banning and Beaumont (VS-VC) (Class I)

Figures D.3-38 and D.3-39 (see enclosed CD) present the existing views from residential areas adjacent to the D-V2 Alternative in the Cities of Banning and Beaumont (respectively). The new and existing towers would appear similar in design and height and would be paired up. The new structures would cause a substantial increase in structure prominence and industrial character within the corridor, which is located within the foreground, of views from nearby residences. Additional skylining and view blockage of background sky and mountain ridges would also occur.

Although the additional towers would appear similar in design and height to that of the existing towers, the additional skylining, view blockage, and increased structural prominence would result in a moderate-to-high degree of visual contrast due to their close proximity to residential views. The D-V2 Alternative would appear co-dominant with the existing transmission line and background landforms. View blockage of background sky and mountains would range from moderate to moderate-to-high depending on the viewpoint.

The overall visual change would be moderate-to-high and in the context of the existing landscape's overall moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). This conclusion is substantially influenced by the high sensitivity of the adjacent residences and the relatively close proximity of the structures to those residences. Mitigation Measure V-40 is recommended to lessen the visual impact along this portion of the route though the impact would not be reduced to a level that would be less than significant. This viewpoint analysis is considered representative of project views from residential areas along the north side of the San Jacinto Mountains.

Impact V-46: Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing from BLM-managed lands within the Potrero ACEC (VRM) (Class I)

Although the new structures would be of similar design and height as the existing D-V1 structures, the new structures would cause additional skylining and view blockage of sky and mountains. The new line would also increase the structural complexity and industrial character visible from within the ACEC. These visual effects would become more pronounced the closer the viewer is to the transmission line. The resulting visual contrast for structural form and line would be moderate to moderate-to-high because of the close proximity of viewers to the line. The overall level of change would also be moderate to moderate-to-high.

Lands administered by the BLM within the Potrero ACEC would be subject to Visual Resource Management (VRM) Class II management objective. The VRM Class II objective requires that the existing character of the landscape be retained and that the level of change to the characteristic landscape be low and not attract the attention of the casual observer. Also, any changes to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the landscape. The new line would not achieve any of the Class II objectives. Therefore, the moderate to moderate-to-high level of visual change that would be caused by this portion of the D-V2 Alternative would be inconsistent with the applicable VRM Class II management objective and the resulting visual impact would be significant (Class I). There is no mitigation available to reduce the significant visual impact to a level that would be less than significant. However, Mitigation Measure V-40a is recommended to lessen the visual impact along this portion of the route. This viewpoint analysis is considered representative of project views within the Potrero ACEC.

Impact V-47: Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 36 on Mapes Road (VS-VC) (Class I)

Figure D.3-40A (see enclosed CD) presents the existing view to the south from Key Viewpoint 36 on Mapes Road, just west of Menifee Road north of Romoland. Figure D.3-40B (see enclosed CD) presents a visual simulation that depicts the addition of the D-V2 transmission line adjacent and to the east (to the left in the simulation) of the existing D-V1 transmission line. The new and existing towers would appear similar in design and height and would be paired up. The new structures would cause a substantial increase in structure prominence and industrial character within the corridor, which is located within the immediate foreground, of views from numerous nearby residences. Additional skylining and view blockage of background sky, hills, and mountain ridges would also occur.

Although the additional towers would appear similar in design and height to that of the existing towers, the additional skylining, view blockage, and increased structural prominence would result in a moderate-to-high degree of visual contrast due to their close proximity to residential views and views from local roads. The D-V2 Alternative would appear co-dominant with the existing transmission line. View blockage of background sky and mountains would be moderate-to-high.

The overall visual change would be moderate-to-high and in the context of the existing landscape's overall moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). This conclusion is substantially influenced by the high sensitivity of the adjacent residences and the close proximity of the structures to those residences. Mitigation Measure V-40a is recommended to lessen the visual impact along this portion of the route though the impact would not be reduced to a level that would be less than significant. This viewpoint analysis is considered representative of project views from rural residential communities and local roads along that portion of the route south of the Lakeview Mountains.

D.3.10 Environmental Impacts of the No Project Alternative

The No Project Alternative is defined in Section C.6. The No Project Alternative includes the assumption that existing transmission lines and power plants would continue to operate. The effects that these facilities cause on the existing environment would not change, so no new impacts would occur from continuing operation of the existing transmission lines and power plants. Also, under the No Project Alternative, the proposed DPV2 project would not be constructed and the visual impacts (increased industrial character; increased structure contrast, skylining, and prominence; and increased view blockage) associated with construction and operation of the project would not occur. Between Harquahala Switchyard and Devers Substation the significant, Class I visual impacts within Kofa National Wildlife Refuge and Alligator Rock ACEC would not occur if the Proposed Project is not constructed and the numerous adverse but less than significant (Class III) visual impacts that would occur along most of the remaining route segment would also not occur. West of Devers, the numerous Class III visual impacts would be avoided if the Proposed Project is not constructed, but the beneficial (Class IV) visual impacts (resulting from reduced structural complexity, industrial character, and view blockage) in Beaumont and San Timoteo Canyon would not be achieved.

The first component of the No Project Alternative is the continuation of ongoing demand-side actions, including energy conservation and distributed generation (DG). These actions would be under the jurisdiction of local jurisdictions, such as cities and counties, to conduct environmental reviews. DG units would have their own attendant visual impacts, which could include increased or new visual contrast and view blockage associated with the height, structural complexity, structural prominence, and industrial character of DG facilities. Increased conservation would not cause any visual resources impacts.

The second component of the No Project Alternative is the continuation of supply-side actions, resulting in potentially increased generation within California or increased transmission into California to serve anticipated growth in electricity consumption. Therefore, the No Project Alternative may also result in the construction of other transmission lines and/or generation facilities that would have their own attendant visual impacts. Visual impacts could include: (1) increased or new visual contrast and view blockage associated with the height, structural complexity, structural prominence, and industrial character of lattice or tubular steel tower transmission lines; (2) increased cumulative visual impacts associated with the proliferation of transmission facilities across the landscape if different transmission routes or corridors are utilized; and (3) increased or new visual contrast and view blockage associated with the height, structural complexity, structural prominence, and industrial character of power generation facilities. The visual impacts of any of these potential outcomes may be less severe or more severe than those of the Proposed Project.

D.3.11 Mitigation Monitoring, Compliance, and Reporting Table

Table D.3-11 presents the mitigation monitoring table for Visual Resources.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-1	**Short-term visibility of construction activities, equipment, and night lighting. (Class III)**
MITIGATION MEASURE	**V-1a: Reduce visibility of construction activities and equipment.** Substation construction sites and all staging and material and equipment storage areas, including storage sites for excavated materials shall be appropriately located away from areas of high public visibility. If visible from nearby roads, residences, public gathering areas, or recreational areas, facilities, or trails, construction sites and staging and storage areas shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Additionally, avoid construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use. This measure encompasses BLM permit requirements BLM B-7.1 and B-7.2. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.
Location	Mitigation Measure V-1a applies to all sites and all routes.
Monitoring / Reporting Action	CPUC and BLM to verify in the field during construction and following construction
Effectiveness Criteria	Project construction sites (static), construction yards, and staging areas will be screened during construction and all construction areas will appear in their original or improved condition following construction.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Confirm implementation during and following construction.
MITIGATION MEASURE	**V-1b: Reduce construction night lighting impacts.** SCE shall design and install all lighting at construction and storage yards and staging areas such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Construction Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following: • Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary • All lighting shall be of minimum necessary brightness consistent with worker safety • High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied
Location	Mitigation Measure V-1b applies to all static sites.
Monitoring / Reporting Action	CPUC and BLM to review and approve the Construction Lighting Mitigation Plan prior to construction and to monitor implementation in the field during construction.
Effectiveness Criteria	Light bulbs and reflectors at Construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Review and approve plan prior to start of construction and confirm implementation of plan during construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-2	Long-term visibility of land scars in arid and semi-arid landscapes. (Class II)
MITIGATION MEASURE	**V-2a: Reduce in-line views of land scars.** Construct access or spur roads at appropriate angles from the originating, primary travel facilities to minimize extended, in-line views of newly graded terrain. Contour grading should be used where possible to better blend graded surfaces with existing terrain. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.
Location	All grading sites for access roads, spur roads, and ancillary faculties.
Monitoring / Reporting Action	CPUC and BLM to review construction plans prior to start of construction and verify compliance during construction.
Effectiveness Criteria	In-line views of land scars from grading will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review construction plans prior to start of construction and verify compliance during construction.
MITIGATION MEASURE	**V-2b: Reduce visual contrast from unnatural vegetation lines.** In those areas where views of land scars are unavoidable, the boundaries of disturbed areas should be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for on-going operation, maintenance, or access shall be returned to pre-construction conditions. This measure partially encompasses BLM permit requirement BLM B-7.9. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.
Location	All grading sites for access roads, spur roads, and ancillary faculties.
Monitoring / Reporting Action	CPUC and BLM to review construction and restoration plans prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of unnatural vegetation lines will be minimized and the resulting visual contrast will be minimal.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review construction and restoration plans prior to start of construction and verify implementation following construction.
MITIGATION MEASURE	**V-2c: Reduce color contrast of land scars.** In those areas where views of land scars from sensitive public viewing locations are unavoidable, disturbed soils shall be treated with Eonite or similar treatments to reduce the visual contrast created by the lighter-colored disturbed soils with the darker vegetated surroundings. SCE will consult with the Authorized Officer on a site-by-site basis for the use of Eonite. This measure partially encompasses BLM permit requirement BLM B-6.4. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.
Location	Locations of all land scars that would be visible to the public.
Monitoring / Reporting Action	CPUC and BLM to review construction and restoration plans prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of high-contras colors from exposed soils will be minimized and the resulting visual contrast will be minimal.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review construction and restoration plans prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-3	**Increased structure contrast when viewed from Key Viewpoint 1 south of the Big Horn Mountains. (Class III)**
MITIGATION MEASURE	**V-3a: Reduce visual contrast of towers and conductors.** The following design measures are to be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities: • all new and replacement structures are to as closely as possible match the design of the existing structures with which they will be seen • all new and replacement structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements • all new and replacement structures are to match the heights of the existing DPV1 structures to the extent possible as dictated by variation in terrain • all new and reconductored spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as Salome Highway, I-10, U.S. 95, Colorado River, SR 78, Dillon Road, SR 62, Whitewater Canyon Road, and San Timoteo Canyon Road • all new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast • no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for skylining. SCE shall provide to the CPUC and BLM a Project Design Plan demonstrating implementation of this measure at least 90 days prior to the start of construction, and shall not commence construction until the Project Design Plan has been approved CPUC and BLM.
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-4	**Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 2 on Interstate 10 crossing the Harquahala Plain. (Class III)**
MITIGATION MEASURE	**V-3a:** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-5	**Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 3 at the north end of the Eagletail Mountains. (Class III)**
MITIGATION MEASURE	**V-3a:** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-6	**Increased structure contrast, industrial character, and skylining when viewing the Arizona Series Capacitor Bank from Pipeline Road. (Class III)**
MITIGATION MEASURE	**V-6a: Reduce Visual Contrast Associated with Ancillary Facilities.** SCE shall submit to BLM and CPUC a Surface Treatment Plan describing the application of colors and textures to all facility structures, buildings, walls, fences, and components comprising all ancillary facilities including substations/switchyards, series capacitor banks, and optical repeater stations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to BLM and CPUC for approval at least 90 days prior to (a) ordering the first structures that are to be color treated during manufacture, or (b) construction of any of the ancillary facility component, whichever comes first. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include: • specification, and 11"x17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture • a list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation) • two sets of brochures and/or color chips for each proposed color • a detailed schedule for completion of the treatment • a procedure to ensure proper treatment maintenance for the life of the project. • SCE shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated on site, until SCE receives notification of approval of the Treatment Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SCE shall notify the BLM and CPUC that all buildings and structures are ready for inspection.
Location	Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.
Monitoring / Reporting Action	CPUC and BLM to review Surface Treatment Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Surface Treatment Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

~~MITIGATION MEASURE~~	~~**V-6b: Screen ancillary facilities.** SCE shall provide a Screening Plan for screening vegetation, walls, and fences that reduces visibility of ancillary facilities (except Devers Substation) and helps the facility blend in with the landscape. The use of berms to facilitate project screening may also be incorporated into the Plan. SCE shall submit the Plan to the BLM and CPUC for review and approval at least 90 days prior to installing the landscape screening. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to:~~ ~~• an 11"x17" color simulation of the proposed landscaping at 5 years~~ ~~• a plan view to scale depicting the project and the location of screening elements~~ ~~• a detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity.~~ ~~SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the BLM and CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection~~
~~Location~~	~~Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.~~
~~Monitoring / Reporting Action~~	~~CPUC and BLM to review Screening Plan prior to start of construction and verify implementation following construction.~~
~~Effectiveness Criteria~~	~~Visibility of ancillary facilities will be reduced such that unnecessary visual contrast and industrial character will not occur.~~
~~Responsible Agency~~	~~CPUC, BLM on BLM-administered lands~~
~~Timing~~	~~CPUC and BLM to review Screening Plan prior to start of construction and verify implementation following construction.~~
MITIGATION MEASURE	**V-6c: Reduce night lighting impacts.** SCE shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to ordering any permanent exterior lighting fixtures or components. SCE shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following: • lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary • all lighting shall be of minimum necessary brightness consistent with worker safety • high illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.
Location	Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.
Monitoring / Reporting Action	CPUC and BLM to review Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	Light bulbs and reflectors at Construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Lighting Mitigation Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-7	**Increased visual contrast, view blockage, and skylining when viewed from Key Viewpoint 4 on Crystal Hill Road in Kofa National Wildlife Refuge (NWR). (Class I)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-8	**Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 5 on U.S. 95 near the Crystal Hill Road entrance to Kofa NWR. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-9	**Increased structure contrast, industrial character, and view blockage when viewed from Key Viewpoint 6 on Pipeline Road near Copper Bottom Pass. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-10	**Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 7 on the Colorado River. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-11	**Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 8 on SR 78 near Ripley. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-12	**Introduction of new structure contrast and industrial character when viewing the proposed Blythe Optical Repeater Station from nearby local roads. (Class III)**
MITIGATION MEASURE	**V-6a through V-6c** (see above)
Location	Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.
Monitoring / Reporting Action	CPUC and BLM to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	For the **Surface Treatment Plan**, the occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible. For the **Screening Plan**, visibility of ancillary facilities will be reduced such that unnecessary visual contrast and industrial character will not occur. For the **Lighting Mitigation Plan**, light bulbs and reflectors at Construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
IMPACT V-13	**Increased structure contrast, industrial character, view blockage, and skylining when viewing the proposed Midpoint Substation site from the nearby BLM access road. (Class III)**
MITIGATION MEASURE	**V-6a through V-6c** (see above)
Location	Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.
Monitoring / Reporting Action	CPUC and BLM to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

Effectiveness Criteria	For the **Surface Treatment Plan**, the occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible. For the **Screening Plan**, visibility of ancillary facilities will be reduced such that unnecessary visual contrast and industrial character will not occur. For the **Lighting Mitigation Plan**, light bulbs and reflectors at Construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
IMPACT V-14	**Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 9 on Interstate 10 in the eastern Chuckwalla Valley. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-15	**Inconsistency with Interim BLM VRM Class II management objective due to increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 10 in the Alligator Rock ACEC. (Class I)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-16	**Increased structure contrast, view blockage, and skylining when viewing the Orocopia Mountains from Key Viewpoint 11 on Interstate 10. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-17	**Increased structure contrast, industrial character, and skylining when viewing the proposed California Series Capacitor Bank from Interstate 10 or Red Cloud Road. (Class III)**
MITIGATION MEASURE	**V-6a ~~through~~ and V-6c** (see above)
Location	Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.
Monitoring / Reporting Action	CPUC and BLM to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	For the **Surface Treatment Plan**, the occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible. For the **Screening Plan**, visibility of ancillary facilities will be reduced such that unnecessary visual contrast and industrial character will not occur. For the **Lighting Mitigation Plan**, light bulbs and reflectors at Construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
IMPACT V-18	**Increased structure contrast and view blockage when viewing the Orocopia Mountains from Key Viewpoint 12 on Cottonwood Springs Road, when exiting Joshua Tree National Park. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-19	**Increased structure contrast, industrial character, and view blockage when viewed from Key Viewpoint 13 in the Terra Lago golf and residential development in Indio. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

~~MITIGATION MEASURE~~	~~**V-19a: Reduce Visual Contrast by Painting Towers with Appropriate Colors.** Existing and proposed transmission towers within the DPV1/DPV2 corridor from proposed tower location 2209 to 2239 in the vicinity of the Indio Hills shall be painted an appropriate color to more effectively blend the structures with the light tan color of the background vegetation and soils of the Indio Hills. This measure is limited to only the above 31 referenced towers because the Indio Hills provide an immediate light-tan backdrop to sensitive views from residences and recreational facilities to the immediate south of the corridor. It is recommended that a light-tan color be used to match the background soils. SCE shall submit a Tower Painting Plan demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to: (a) the start of construction or (b) ordering the first structures that are to be color treated during manufacture, whichever comes first. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Tower Painting Plan shall include: • specification, and 11"x17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture • a map showing the towers to be painted • two sets of brochures and/or color chips for each alternative color • a detailed schedule for completion of the treatment • a procedure to ensure proper treatment maintenance for the life of the project. SCE shall not specify to the vendors the treatment of towers or tower components treated during manufacture, or perform the final treatment on any towers until SCE receives notification of approval of the Tower Painting Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SCE shall notify the BLM and CPUC that the towers are ready for inspection.~~
~~Location~~	~~Applies to new permanent Towers 2209 to 2239 in the vicinity of the Indio Hills.~~
~~Monitoring / Reporting Action~~	~~CPUC and BLM to review Tower Painting Plan, Screening Plan prior to start of construction and verify implementation following construction.~~
~~Effectiveness Criteria~~	~~Visual contrast from new towers will be minimized and structures will blend effectively with the tan background of the Indio Hills.~~
~~Responsible Agency~~	~~CPUC, BLM on BLM-administered lands~~
~~Timing~~	~~CPUC and BLM to review Tower Painting Plan prior to start of construction and verify implementation following construction.~~
IMPACT V-20	**Increased structure contrast, industrial character, and view blockage when viewing toward the Santa Rosa Mountains from Key Viewpoint 14 in the Coachella Valley Preserve, just west of Thousand Palms Canyon Road. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-21	**Increased structure contrast and skylining when viewing the San Jacinto Mountains from Key Viewpoint 15 on southbound SR 62. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-22	**Increased structure contrast and skylining when viewed from Key Viewpoint 16 on Painted Hills Road in the Painted Hills rural residential community. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-23	**Increased structure contrast when viewing the east rim of Whitewater Canyon and Mount San Jacinto from Key Viewpoint 17 on southbound Whitewater Canyon Road. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-24	**Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 18 on Haugen-Lehmann Way in the West Palm Springs Village residential community. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-25	**Increased structure contrast, structure prominence, and skylining when viewed from Key Viewpoint 19 at the Morongo Community Center. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-26	**Increased structure contrast, view blockage, and skylining when viewed from Key Viewpoint 20 on Murray Street in the City of Banning. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-30	**Increased view blockage when viewed from Key Viewpoint 24 on Pilgrim Road in San Timoteo Canyon. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-31	**Increased view blockage when viewed from Key Viewpoint 25 at the intersection of Canyon Vista Drive and Chase Canyon Lane in the City of Colton. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-32	**Increased view blockage when viewed from Key Viewpoint 26 in the right-of-way park, just off Beaumont Avenue. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-33	**Inconsistency with BLM VRM Class III management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 27 on a BLM access road to Courthouse Rock and the Eagletail Mountains. (Class I)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-34	**Increased structure contrast and view blockage when viewing Saddle Mountain from Key Viewpoint 28 on Salome Highway. (Class III)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	CPUC and BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-35	**Increased structure contrast, industrial character, view blockage, and skylining when viewing the alternative Harquahala Junction Switchyard site from Viewpoint 29 on Salome Highway. (Class II)**
MITIGATION MEASURE	**V-6a ~~through~~ and V-6c** (see above)
Location	Applies to all permanent ancillary facilities including substations, switchyards, series capacitor banks, and optical repeater stations.
Monitoring / Reporting Action	CPUC to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

Effectiveness Criteria	For the **Surface Treatment Plan**, the occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible. For the **Screening Plan**, visibility of ancillary facilities will be reduced such that unnecessary visual contrast and industrial character will not occur. For the **Lighting Mitigation Plan**, light bulbs and reflectors at Construction yards and staging areas would not be visible from public viewing areas and night lighting would not cause reflected glare and illumination beyond the construction site and into the nighttime sky.
Responsible Agency	CPUC
Timing	CPUC to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
MITIGATION MEASURE	**V-6b: Screen ancillary facilities.** For the Harquahala Junction Switchyard Alternative, SCE shall provide a Screening Plan for screening vegetation, walls, and fences that reduces visibility of ancillary facilities and helps the facility blend in with the landscape. The use of berms to facilitate project screening may also be incorporated into the Plan. SCE shall submit the Plan to the BLM for review and approval at least 90 days prior to installing the landscape screening. If the BLM notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to: • an 11"x17" color simulation of the proposed landscaping at 5 years • a plan view to scale depicting the project and the location of screening elements • a detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity. SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the BLM within seven days after completing installation of the screening, that the screening components are ready for inspection
Location	Applies to the Harquahala Junction Switchyard Alternative.
Monitoring / Reporting Action	BLM to review Screening Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	Visibility of ancillary facilities will be reduced such that unnecessary visual contrast and industrial character will not occur.
Responsible Agency	BLM
Timing	BLM to review Screening Plan prior to start of construction and verify implementation following construction.
MITIGATION MEASURE	**V-35a Screen Alternative Switchyard Site from Salome Highway Views.** This measure is required to augment and not replace Mitigation Measure V-6b in order to provide more detailed direction pertaining to the planting of roadside screening vegetation along Salome Highway. Screening vegetation shall be planted along the east side of Salome Highway between mile markers 39 and 40. Vegetation shall be comprised of native species and shall be selected to achieve heights and screen effectiveness comparable to that shown in Figure D.3-30B (see enclosed CD). SCE shall submit a Screening Plan demonstrating compliance with this measure to the CPUC for review and approval at least 90 days prior to installing the landscape screening. If the CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Screening Plan shall include but not necessarily be limited to: • An 11"x17" color simulation of the proposed landscaping at 5 years • A plan view to scale depicting the project and the location of screening elements • A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity. SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

Location	Applies to east side of Salome Highway between mile markers 39 and 40.
Monitoring / Reporting Action	CPUC to review Screening Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	Visibility of the switchyard site will be reduced in a manner that is comparable to the screening illustrated in Figure D.3-30B (see enclosed CD).
Responsible Agency	CPUC
Timing	CPUC and BLM to review Surface Treatment Plan, Screening Plan and Lighting Mitigation Plan prior to start of construction and verify implementation following construction.
IMPACT V-36	**Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on eastbound Interstate 10. (Class I)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-37	**Inconsistency with Interim BLM VRM Class III management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing the Chuckwalla Mountains from Key Viewpoint 31 on southbound Kaiser Road, north of Desert Center. (Class I)**
MITIGATION MEASURE	**V-3** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-38	**Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 32 on westbound Interstate 10 east of Desert Center. (Class I)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-39	**Inconsistency with Interim BLM VRM Class II management objective due to introduction of structure contrast, industrial character, view blockage, and skylining when viewing Alligator Rock from Key Viewpoint 30 on eastbound Interstate 10. (Class I)**
MITIGATION MEASURE	**V-3a** (see above)
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-40	**Increased structure contrast and skylining when viewing the San Jacinto Mountains from Key Viewpoint 33 on the Pacific Crest Trail in the vicinity of the Snow Creek Village residential community (Class I)**
MITIGATION MEASURE	**V-40a: Reduce visual contrast of towers and conductors.** The following design measures are to be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities: **(a)** all new structures are to as closely as possible match the design of the existing structures with which they will be seen; **(b)** all new structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements; **(c)** all new structures are to match the heights of the existing D-V1 structures to the extent possible as dictated by variation in terrain; **(d)** all new spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as SR 62, I-10, SR 111, SR 243, SR 79, Gilman Springs Road, Ramona Expressway, Menifee Road, and SR 74; **(e)** all new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast, and **(f)** no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for skylining. SCE shall provide to the CPUC, BLM, and Forest Service a Project Design Plan demonstrating implementation of this measure at least 90 days prior to the start of construction, and shall not commence construction until the Project Design Plan has been approved by the CPUC, BLM, and Forest Service.
Location	Applies to all tower locations and route segments.
Monitoring / Reporting Action	CPUC, BLM, and Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC, BLM on BLM-administered lands, Forest Service on National Forest Lands
Timing	CPUC, BLM, and Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

MITIGATION MEASURE	**V-40b: Reduce visual contrast of towers and conductors on San Bernardino National Forest land.** The following design measures are to be applied to all new structures and conductors on SBNF land based on SCE's consultation with SBNF staff prior to completion of final design. The details of these measures shall be developed: In all areas: • Transmission lines should have a permanent coloring of dark gray. • All towers not back-dropped on mid-slope should have permanent coloring of cool mid-gray (battleship gray). In mid-slope areas (as defined by SBNF): • All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab. • Tower pads should be left uneven without leveling. • No construction roads shall be built. • Towers shall be constructed by air support. At ridge crossing and mid-slope (as defined by SBNF): • Towers should be constructed of lower profile to closer "hug" the top of the ridge to avoid tower silhouetting. • Graphic studies from dominant view sites should be used to best place towers where they would be best back-dropped from expected viewing points. • All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab. • Tower pads should be left uneven without leveling. • No construction roads shall be built. • Towers should be constructed by air support.
Location	All new structures and conductors on SBNF land
Monitoring / Reporting Action	CPUC, BLM, and Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized in SBNF.
Responsible Agency	CPUC, BLM on BLM-administered lands, Forest Service on National Forest Lands
Timing	CPUC, BLM, and Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.
MITIGATION MEASURE	**V-40c: Reduce visual contrast of towers and conductors near the Pacific Crest Trail.** For towers located south of I-10 and outside of the SBNF, the following provisions apply: • Where towers could be practicably back-dropped, utilize mitigation suggested for mid-slope and Ridge Crossing on SBNF lands (as defined in Mitigation Measure V-40b). • The PCT shall not be crossed with construction roads. • Locate towers so that the PCT is in the middle of the span (if this does not involve placement of extra or taller span towers to accomplish such action).
Location	Towers located south of I-10 and outside of the SBNF
Monitoring / Reporting Action	CPUC, BLM, and Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized near PCT.
Responsible Agency	CPUC, BLM on BLM-administered lands, Forest Service on National Forest Lands
Timing	CPUC, BLM, and Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

IMPACT V-41	**Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing the San Jacinto Mountains from BLM-managed lands within the Santa Rosa and San Jacinto Mountains National Monument (in the vicinity of KVP 33) (Class I)**
MITIGATION MEASURE	**V-40a** (see above)
Location	Applies to all BLM-administered lands within the National Monument
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-42	**Inconsistency with U.S. Forest Service Scenic Integrity Objective (SIO) due to introduction of structure contrast and industrial character. (Class I)**
MITIGATION MEASURE	**V-40a** (see above)
Location	Applies to all Forest Service-administered lands crossed by the route
Monitoring / Reporting Action	Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	Forest Service
Timing	Forest Service to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-43	**Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 34 in the residential community in Cabazon (Class I)**
MITIGATION MEASURE	**V-40a** (see above)
Location	Applies to all tower locations along the Alternative route.
Monitoring / Reporting Action	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC
Timing	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-44	**Impact V-44: Increased structure contrast and skylining when viewing the San Jacinto Mountains and San Gorgonio Pass from Key Viewpoint 35 on southbound State Route 243 (Class I)**
MITIGATION MEASURE	**V-40a** (see above)
Location	Applies to all tower locations along the Alternative route.
Monitoring / Reporting Action	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.

Table D.3-11. Mitigation Monitoring Program – Visual Resources

Responsible Agency	CPUC
Timing	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-45	**Impact V-45: Increased structure contrast, skylining, and view blockage when viewed from residential areas in southern Banning and Beaumont (Class I)**
MITIGATION MEASURE	**V-40a** (see above)
Location	Applies to all tower locations along the Alternative route.
Monitoring / Reporting Action	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC
Timing	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-46	**Inconsistency with BLM VRM Class II management objective due to introduction of structure contrast and industrial character when viewing from BLM-managed lands within the Potrero ACEC (Class I)**
MITIGATION MEASURE	**V-40a** (see above)
Location	Applies to all BLM-administered lands within the Potrero ACEC
Monitoring / Reporting Action	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	BLM
Timing	BLM to review Project Design Plan prior to start of construction and verify implementation following construction.
IMPACT V-47	**Increased structure contrast, skylining, and view blockage when viewed from Key Viewpoint 36 on Mapes Road (Class I)**
MITIGATION MEASURE	**V-40a** (see above)
Location	Applies to all tower locations along the Alternative route.
Monitoring / Reporting Action	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from towers and conductor spans will be minimized. Asynchronous tower spans will be minimized.
Responsible Agency	CPUC
Timing	CPUC to review Project Design Plan prior to start of construction and verify implementation following construction.

D.3.12 References

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EXHIBITS

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PART 1 OF 3
BAR CODE # 0000063069

To review remaining Exhibits please see the following:

PART 1 OF 3 BAR CODED #0000063069

PART 2 OF 3 BAR CODED #0000064946

PART 3 OF 3 BAR CODED #0000064947