CHAPTER 6.0
SIGNIFICANT AND POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION OF THE PROPOSED PROJECT

6.1 DEVERS-HARQUAHALA 500kV TRANSMISSION LINE

6.1.1 Introduction

The BLM Right-of-Way Grant CA-17905/AZ-23805 Exhibit B (1989) was used in compiling mitigation measures for the resources addressed in this document. The mitigation measures in the following sections were drawn from the mitigation measures appended to the Right-of-Way Grant. In some instances, additional mitigation measures also are provided. The measures will be applied to federal, state, and private lands crossed by the proposed project. The Right-of-Way Grant is included in this PEA as Appendix B.

6.1.2 Land Use

6.1.2.1 Arizona

No significant impacts to existing or planned land uses would result from construction and operation of the Arizona portion of the Devers-Harquahala transmission line. Mitigation measures as required by the BLM Right-of-Way Grant will be implemented during construction of the transmission line on public lands.

Construction of the first mile of the line on Link 1a, east of the Harquahala Switchyard, would cross agricultural land. Less than 0.1 acre of prime and unique cropland would be permanently removed from production by the tower structure foundations.

Impacts corresponding to 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. Impacts would not be significant after mitigation is incorporated.

The following mitigation measures as specified in the BLM Right-of-Way Grant (under Access Roads) would be applied to reduce impacts to land use:

1. Although the Holder may restore and maintain existing access roads, they cannot be either widened or upgraded without approval of the Authorized Officer.

2. New access road construction will be kept to a minimum.

Where feasible, the following additional mitigation measures would be implemented:

- Matching of tower spans
- Aligning towers adjacent 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

6.1.2.2 California

No significant impacts to existing or planned land use would result from construction and operation of the California portion of the Devers-Harquahala transmission line. Mitigation measures as required by the BLM Right-of-Way Grant would be implemented during construction of the transmission line on public lands.

Construction of 10.5 miles of the proposed line along Link 10 in the Palo Verde Valley would permanently displace prime farmland. The 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.

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.

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.

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.

6.1.3 Socioeconomics, Population, and Housing

No potentially significant impacts were identified for socioeconomics, population, and housing.

6.1.4 Geology and Soils

No potentially significant impacts were identified for geology and soils.

6.1.4.1 Arizona and California

Mitigation measures as required by the BLM Right-of-Way Grant would be implemented during construction of the transmission line on public lands to reduce impacts to geology and soils as follows.

Geology

1. The line will be located to minimize the disruption of any active mining operations.

2. 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 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 BLM Authorized Officer. 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.

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.

4. Appropriate tower design will be used to mitigate the potential for very strong seismic ground shaking. In general, an appropriate tower design which accounts for lateral wind loads and conductor loads during line stringing exceeds any credible seismic loading (ground shaking).

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.

6. Wherever possible to minimize the potential for slope instability, towers will be located to avoid gullies or active drainages, and over-steepened slopes.

7. 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 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.

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. 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.

9. Appropriate design of tower foundations will be used to reduce the potential for settlement and compaction.

Soils

1. 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.

2. 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.

3. Side casting of soil during grading will be minimized. Excess soil will be properly stabilized or, if necessary, end-hauled to an approved disposal site.

6.1.5 Hydrology

No potentially significant impacts were identified for hydrology.

Mitigation measures as required by the BLM Right-of-Way Grant would be implemented during construction of the transmission line on public lands to reduce impacts to hydrological resources as follows:

1. During the first year following construction, potential soil erosion sites will be inspected by the Holder 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).

2. Construction equipment will be kept out of flowing stream channels except when absolutely necessary to construct crossings.

3. Erosion control and hazardous material plans will be incorporated into the construction bidding specifications to ensure compliance.

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.

5. Towers will 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.

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 exempted by the BLM Authorized Officer.

7. Runoff from roadways will be collected and diverted from steep, disturbed, or otherwise unstable slopes.

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.

9. Cut and fill slopes will be minimized by a combination of benching and following natural topography where possible.

6.1.6 Air Quality

Potentially significant impacts for air quality could occur depending on the phasing of the project construction. The following mitigation measures would be applied, where appropriate, to reduce impacts to air quality:

- Heavy duty off-road diesel engines would be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.

- 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.

- 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.

- Surfaces permanently disturbed by construction activities would be covered or treated with a dust suppressant after completion of activities at each site of disturbance.

- Vehicle speeds on unpaved roadways would be restricted to 15 miles per hour.

- Vehicles hauling dirt would be covered with tarps or by other means.

- Site construction workers would be staged off-site 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.

- Emissions credits would be purchased to offset any emissions levels which are over the emissions thresholds.

6.1.7 Traffic and Transportation

No potentially significant impacts were identified for traffic and transportation.

6.1.8 Biology

The following discussion presents mitigation measures for the proposed Devers-Harquahala 500kV transmission line that are specified in the BLM Right-of-Way Grant, Exhibit B (1989). References to specific mitigation measures listed in the right-of-way grant are annotated as either vegetation (V#), or wildlife (W#). The right-of-way grant is provided in Appendix B. Table 6-1 summarizes mitigation measures for resources potentially affected by the construction and operation of the proposed Devers-Harquahala 500kV transmission line.

TABLE 6-1
A SUMMARY OF POTENTIAL IMPACTS AND MITIGATION MEASURES FOR THE DEVERS-HARQUAHALA 500KV TRANSMISSION LINE

Impact Types – Arizona	**Mitigation Measures**
Vegetation removal	Span washes, careful tower placement, transplant cacti, avoid large trees, minimize access road construction
Sonoran desert tortoise	Avoid upland areas, monitor construction, provide pre-construction education to workers
Desert bighorn sheep	Limit construction activities in lambing areas during lambing season
Native plants	Avoid large ironwood, paloverde, and mesquite trees, avoid barrel cacti and saguaros, minimize access road construction, adjust tower locations
Impact Types – California	**Mitigation Measures**
Vegetation removal	Span washes, careful tower placement, transplant cacti, avoid large trees, minimize access road construction
Mohave desert tortoise	Monitor construction activities, provide pre-construction education to workers, minimize access/spur road construction in tortoise habitat, limit construction vehicle speeds to 25 mph or less, keep construction and other work areas clean to avoid attracting ravens, provide habitat compensation pursuant to latest BLM requirements
Flat-tailed horned lizard	Minimize access road construction in potential habitat, limit construction vehicle speeds to 25 mph, provide pre-construction education to workers
Coachella Valley fringe-toed lizard	Minimize access road construction in potential habitat, do not place concrete batch plants or materials storage site in suitable habitat, monitor construction in suitable habitat, provide habitat compensation pursuant to latest BLM or Coachella Valley MSHCP requirements
Least Bell's vireo	Conduct pre-construction surveys in suitable habitat, avoid removal of riparian vegetation, site towers to avoid potential habitat, avoid construction in suitable habitat during the nesting season
Coastal California gnatcatcher	Conduct pre-construction surveys in suitable habitat, avoid removal of coastal sage scrub habitat, avoid construction in suitable habitat during the nesting season
Stephens' kangaroo rat	Minimize access road construction, keep construction vehicles on existing roads to the extent practicable, provide habitat compensation pursuant to latest Riverside County HCP requirements
Sensitive native plants	Avoid known populations by spanning, minimize ground disturbing activities, minimize access road construction, conduct pre-construction surveys for Coachella Valley milkvetch

6.1.8.1 Arizona

Impacts to sensitive plants and wildlife are expected to be less than significant. The application of appropriate mitigation measures as required by the BLM Right-of-Way Grant would provide additional reductions in impacts associated with construction of the proposed Devers-Harquahala transmission line in Arizona.

Links 1a and 1b - Potential impacts on plants and wildlife on Links 1a and 1b of the proposed Devers-Harquahala transmission line would be less than significant. There is potential tortoise habitat present, primarily at the southern end of the Big Horn Mountains, a BLM Category 3 area for desert tortoise. However, tortoise densities in this area are very low. Direct temporary impacts could include collapse of tortoise burrows and disturbance and removal of existing native vegetation that provides food and shelter for tortoises. Bighorn sheep present could be disturbed by human presence and construction noise. Some loss to avian nesting habitat along washes could occur. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Mitigation efforts to reduce potential impacts could include careful local adjustment in tower foundation placement (V1), minimizing access road construction (V7;W10), avoiding upland areas of desert tortoise habitat (W17), imposing seasonal limitations on construction activities to minimize impacts to bighorn sheep (W13), and possibly, transplanting cacti (particularly smaller saguaros) (V4). Potential impacts to desert tortoise could be reduced by identifying site-specific occurrences (W9) and by having an SCE contracted biological monitor certified by USFWS present during construction activities that involve earth-moving equipment (W5). The monitor would move any tortoises (in burrows, cover-sites, or free-roaming on the surface) that could be impacted (W5;8). An SCE contracted tortoise biologist would present a pre-construction class on tortoise ecology and mitigation to project personnel (W4). The first approximately 3 miles of this link cross agricultural lands where no impacts to any sensitive species would occur.

Link 2 - Potentially adverse impacts to wildlife are possible on this segment, primarily associated with the known and expected occurrences of desert bighorn sheep in the KOFA NWR. There is a known high-density bighorn population and movement corridor between the New Water Mountains and the KOFA Mountains through which a portion of this link would traverse (Milepost 18.0 and Milepost 34.0). Additionally, due to the presence of bighorn ewes throughout the year in the Livingston Hills, south of the corridor from Mileposts 29.0-34.0, it is assumed that the Livingston Hills are utilized as a lambing area (Henry 2003). However, mitigation measures would be effective in minimizing impacts. While this link lies in a BLM Category 2 area for desert tortoise, recent field observations indicate that actual densities of desert tortoise are low in this area. Highly diverse wash complexes (primarily at Alamo and Tyson washes), and other wash crossings that provide avian nesting habitat and resources for a variety of wildlife species, would not be substantially impacted by construction or operation of the proposed transmission line.

Direct temporary impacts could include disturbance to bighorn sheep from human presence and construction related noise, collapse of tortoise burrows, disturbance and removal of existing native vegetation that provides food and shelter for tortoises, and loss of some avian nesting habitat along washes. Impacts to native vegetation would include clearing of vegetation from tower sites and some disturbance of vegetation at wire-pulling and splicing sites. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site and therefore would be less than significant.

Mitigation to reduce potential impacts could include imposing seasonal limitations on construction activities to minimize conflict with bighorn sheep, specifically during lambing season (January 1 through April 30) (W13). However, the lambing areas in the Livingston Hills are approximately 1 mile southwest of the proposed transmission line right-of-way, and should not be impacted by construction noise or human presence. Additionally, careful local adjustment in tower foundation placement (V1), minimizing access road construction (V7;W10), avoiding

upland areas of desert tortoise habitat (W17), and possibly, transplanting cacti (particularly smaller saguaros) (V4) would minimize impacts. Potential impacts to desert tortoise could be reduced by identifying site-specific occurrences (W9) and by having an SCE contracted biological monitor certified by USFWS present during construction activities that involve earth-moving equipment (W5). The monitor would move any tortoises (in burrows, cover-sites, or free-roaming on the surface) that could be impacted (W5;8). An SCE contracted tortoise biologist would present a pre-construction class on tortoise ecology and mitigation to project personnel (W4).

Additionally, within the KOFA NWR (Milepost 9.0 to Milepost 34.1), no destruction or damage would be allowed to any saguaro, barrel cacti, mesquite, or ironwood trees, either during construction or maintenance of the transmission line. Some clearing of vegetation, at the direction of the compliance officer, may require use of hand tools to protect resources (V6). Scalping of topsoil and removal of low-growing vegetation would be permitted only under the direction of the compliance officer (V6).

Link 6 - A potentially significant impact exists on this link, primarily associated with a low-density bighorn area at Copper Bottom Pass in the Dome Rock Mountains. Additionally, bighorn lambing areas are present between Milepost 0.0 through 6.0. Potential habitat for desert tortoise exists for approximately the first 8.4 miles of this link (Milepost 0.4 to Milepost 8.8). This area is designated a Category 3 area for desert tortoise by the BLM, but tortoise density in this area is very low. Vegetation is about equally divided between creosote bush-bursage scrub and mixed paloverde-creosote scrub.

Direct temporary impacts could include disturbance to bighorn sheep from human presence and construction related noise, collapse of tortoise burrows, disturbance and removal of existing native vegetation that provides food and shelter for tortoises, and loss of some avian nesting habitat along washes. Impacts to native vegetation would include clearing of vegetation from tower sites and some disturbance of vegetation at wire-pulling and splicing sites. Direct

permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Mitigation to reduce impacts could include imposing seasonal limitations on construction activities to minimize conflict with bighorn sheep, specifically during lambing season (January 1 through April 30) (W13). Additionally, careful local adjustment in tower foundation placement (V1), minimizing access road construction (V7;W10), and avoiding upland areas of desert tortoise habitat (W17) would reduce impacts. Potential impacts to desert tortoise could be reduced by identifying site-specific occurrences (W9) and by having an SCE contracted biological monitor certified by USFWS present during construction activities that involve earth-moving equipment (W5). The monitor would move any tortoises (in burrows, cover-sites, or free-roaming on the surface) that could be impacted (W5;8). An SCE contracted tortoise biologist would present a pre-construction class on tortoise ecology and mitigation to project personnel (W4). Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Link 8 - This section of the line would cross the Colorado River. Wildlife present here would be limited primarily to some birds, principally waterfowl, which are attracted to the water in the river. However, at the crossing point, the river is channelized and lined with riprap. This has precluded the development of riparian and emergent vegetation that could provide nesting and cover for waterfowl species. Vegetation along this section consists of creosote-bursage scrub on the foothills east of the river, descending to medium height salt cedar and mesquite riparian thicket on the current floodplain, and continuing west of the river as agricultural fields in California.

Direct temporary impacts for this section of the transmission line would include clearing of vegetation from access, spur roads, and tower sites. Due to the short distance of this link, wire-pulling and splicing sites could be placed outside the area of influence to the Colorado River, and would not contribute to disturbance in this area. Some minor unavoidable long-term collision

hazard for birds (especially waterfowl) would be present where the line crosses the Colorado River. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site. No impacts to aquatic species should occur from the construction or operation of this transmission line.

Mitigation to reduce potential impacts could include careful local adjustment in tower foundation placement (V1) and minimizing access road construction in riparian habitats (V7;W10). Due to the large size of the 500kV conductor wire bundles, the potential collision hazard this presents for birds is less than significant. Matching the spans and conductor heights between the proposed Devers-Harquahala towers and the existing DPV1 towers would reduce the potential for bird impacts (W1) at the river crossing. The Colorado River can be successfully spanned at this crossing due to its relatively narrow width at this point, and no mitigation for any aquatic species present would be required (V1;8;W2).

6.1.8.2 California

Impacts to sensitive plants and wildlife are expected to be less than significant. The application of appropriate mitigation measures as required by the BLM Right-of-Way Grant would provide additional reductions in impacts with construction of the proposed Devers-Harquahala transmission line in California. SCE will compensate for loss of tortoise habitat via monetary contribution to an appropriate fund.

Link 10 - The first 11 miles of this section traverse existing agricultural lands. This link crosses numerous irrigation canals in this area, some of which support permanent stands of cattail and other aquatic vegetation. The remaining portion of this section (Milepost 11.0 to 17.9) is through sandy soils in creosote bush-bursage scrub habitat. This latter section is potential habitat for the flat-tailed horned lizard.

Direct temporary impacts to wildlife in the agricultural lands portion of this link could occur where the line crosses irrigation canals. Impacts would be limited to disturbance of waterfowl by human presence and construction noise. Direct temporary impacts to flat-tailed horned lizard habitat would occur to approximately 31 acres from ground-disturbing activities at tower sites, and wire-pulling and splicing sites between Milepost 11.0 and Milepost 17.9 based on ground disturbance estimates noted in Table 3-5, Chapter 3. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Since the irrigation canals are no more than 20 feet in width, potential impacts to these areas would be avoided by siting towers to span the canals (V1;8;W2). The ground disturbance impacts to the creosote-bursage habitat in the western portion of this link are reversible by post-construction reseeding efforts and naturally occurring erosional process of wind and water on the sandy soils present in the area. The BLM has established planning boundaries for the flat-tailed horned lizard, but none of these are within the Devers-Harquahala study corridor, and do not require specific mitigation. The resulting level of impact for this link would be less than significant.

Link 12 – This short section (2.9 miles) of the transmission line traverses creosote-bursage habitat for its full length. Potential for significant impacts to wildlife species and habitat exist on this segment, and are associated with the presence of desert tortoise and its habitat, and potential flat-tailed horned lizard habitat.

This proposed transmission line could result in potentially significant impacts to the desert tortoise if impacts are not adequately mitigated. The transmission line passes through critical habitat for the Mojave desert tortoise in the Chuckwalla Desert Wildlife Management Area (DWMA) of the Eastern Colorado Recovery Unit established by the Desert Tortoise (Mojave Population) Recovery Plan (USFWS 1994). The entire Link 12 is considered Category 1 habitat for desert tortoise by the BLM.

Direct temporary impacts would occur primarily during construction and could result in the loss of habitat including collapse of tortoise burrows and disturbance and removal of existing native vegetation that provides food and shelter for tortoises. Loss of individual desert tortoises could also occur. However, because the proposed Devers-Harquahala transmission line would parallel the existing DPV1 line, no new access roads are expected to be created and, thus, no additional collection or mortality of desert tortoises by private individuals related to new access is expected. Since most operation and maintenance activities for the two lines would be performed concurrently, additional operations and maintenance impacts to the tortoise from the proposed transmission line are expected to be less than significant. A significant impact in the decline of the desert tortoise has been due to the increase in the presence of ravens in tortoise habitat. Although the proposed Devers-Harquahala transmission line would provide additional perch and nesting sites for ravens, raven predation of young desert tortoises should not be a significant problem in desert tortoise habitat along the line. Research has indicated that the largest concentrations of ravens occur in areas that provide food opportunities, such as sanitary landfills, sewage disposal facilities, agricultural fields, and along heavily used major roads. With the exception of I-10, the proposed Devers-Harquahala transmission line would not pass near any such facilities within desert tortoise habitat. No additional impacts are expected to occur, however, because studies indicate that desert tortoise populations are generally depleted within 1 mile of major, paved roads (Nicholson 1978) such as I-10, and the proposed Devers-Harquahala and existing DPV1 500kV lines are close to I-10.

Approximately 13 acres of this habitat would be impacted by ground-disturbing activities during construction of tower sites based on ground disturbance estimates noted in Table 3-5, Chapter 3. Because Link 12 is only 2.9 miles long, wire-pulling and splicing sites are unlikely to be needed along this transmission line link. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site and therefore would be less than significant.

Potential impacts for Link 12 would be reduced by spanning washes (V1;8;W2), careful local adjustment in tower foundation placement (V1), minimizing construction access in xeroriparian wash woodlands (V7;W10), and identifying site-specific occurrences of sensitive species (W9). Potential impacts to desert tortoise could be reduced by identifying site-specific occurrences (W9) and by having an SCE contracted biological monitor certified by USFWS present during construction activities that involve the use of earth-moving equipment in desert tortoise habitat (W5). The monitor would move any tortoises (in burrows, cover-sites, or on the surface) that could be impacted (W5;8). An SCE contracted tortoise biologist would present a pre-construction class on tortoise ecology and mitigation to project personnel (W4). A maximum 25 mph speed limit would be in effect along all access roads associated with the project (W6).

The BLM has established planning boundaries for the flat-tailed horned lizard, but none of these are within the proposed Devers-Harquahala transmission line study corridor, and do not require specific mitigation. Mitigation for this section would be limited to post-construction reseeding of affected areas (W12).

Application of the mitigation measures as stated would reduce impacts for this link to less than significant.

Link 13 - Potentially significant impacts to plant and wildlife species and habitat may occur on this link, and are associated with the presence of desert tortoise and its habitat, flat-tailed horned lizard habitat, xeroriparian wash woodlands, wash crossings, and occurrences of Alverson's pincushion cactus, Coachella Valley milkvetch, California silverbush, and California barrel cactus. However, mitigation measures should be effective in reducing any impacts to these resources on this link to less than significant.

Potentially significant impacts to the desert tortoise may occur if impacts are not adequately mitigated. The proposed Devers-Harquahala transmission line passes through critical habitat for

the Mojave desert tortoise in the Chuckwalla DWMA of the Eastern Colorado Recovery Unit established by the Desert Tortoise (Mojave Population) Recovery Plan (USFWS 1994). The lands through which the proposed transmission line passes on this link are classified by the BLM as Category 1 desert tortoise habitat between approximately Milepost 0.0 to Milepost 7.0 and Milepost 23.0 to Milepost 69.5. Milepost 7.0 to Milepost 23.0 are placed in the BLM Category 3 habitat. Potential impacts to desert tortoise would be the same as discussed for Link 12 above.

Habitat for desert tortoise is present for the full length of this link, and approximately 310 acres of this habitat could be impacted by ground-disturbing activities during construction of tower sites, based on ground disturbance estimates noted in Table 3-5, Chapter 3. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Habitat for the flat-tailed horned lizard is present between Milepost 0.0 and Milepost 5.0, and Milepost 55.8 to Milepost 61.0 of this link. Direct temporary impacts to flat-tailed horned lizard habitat would occur to approximately 45 acres from ground-disturbing activities at tower sites, and wire-pulling and splicing sites. This assumes that neither a materials storage facility, nor a concrete batch plant would be placed within these short distances. There could be some minor loss of avian nesting habitat along washes due to the removal of trees and other vegetation. Impacts to Alverson's pincushion cactus, California silverbush, California barrel cactus, and other native vegetation would include clearing of vegetation from tower sites and crane pads, and some disturbance of vegetation at wire-pulling and splicing sites. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Potential impacts on this segment would be reduced by spanning washes (V1;8;W2), careful local adjustment in tower foundation placement (V1), minimizing construction access in xeroriparian wash woodlands (V7;W10), and identifying site-specific occurrences of sensitive species (W9). Potential impacts to desert tortoise could be reduced by identifying site-specific

occurrences (W9) and by having a SCE contracted biological monitor certified by USFWS present during construction activities that involve the use of earth-moving equipment in desert tortoise habitat (W5). The monitor would move any tortoises (in burrows, cover-sites, or on the surface) that could be impacted (W5;8). An SCE contracted tortoise biologist would present a pre-construction class on tortoise ecology and mitigation to project personnel (W4). A maximum 25 mph speed limit would be in effect along all access roads associated with the project (W6).

The BLM has established planning boundaries for the flat-tailed horned lizard, but none of these are within the proposed Devers-Harquahala study corridor, and do not require specific mitigation. However, ground-disturbance impacts to flat-tailed horned lizard are reversible by post-construction reseeding efforts (W12) and naturally occurring erosional process of wind and water on the sandy soils present in the area. Where applicable, impacts to California barrel cactus and Alverson's pincushion cactus would be reduced by transplanting in areas where these plants occur on tower sites or access roads (V4). In the case of California silverbush, it may be necessary to adjust tower site locations to avoid larger populations of this plant (V1). Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Direct temporary impacts could include removal of plants and disturbance of habitat of the Coachella Valley milkvetch. The Coachella Valley milkvetch is known within the area of Mileposts 27.9-30.2, with additional habitat for the species present between Mileposts 26.5-27.9 and Mileposts 30.2-31.8. Additionally, ground-disturbing activities could encourage establishment of invasive non-native plants that could compete with the Coachella Valley milkvetch. However, the Coachella Valley milkvetch would probably benefit from the kinds of soil disturbance associated with the construction of a transmission line. Pre-construction surveys for Coachella Valley milkvetch would need to be completed prior to construction of towers to minimize impact to this species (V2). Post-construction reseeding efforts (W12), along with the naturally occurring erosional process of wind and water on the sandy soils present in the area, would help restore the habitat for this species.

Application of appropriate mitigation measures would reduce potentially significant impacts on this link to less than significant.

Link 14 - Potentially significant impacts to wildlife are possible on this segment, primarily associated with the known and expected occurrences of the Coachella Valley milkvetch, suitable habitat for the Coachella Valley fringe-toed lizard, and the presence of desert tortoise and its habitat. This segment of the line passes through suitable habitat for the Coachella Valley fringe-toed lizard in the Coachella Valley Preserve and other areas. Presence of desert tortoises and suitable tortoise habitat are present for approximately 7.5 miles of this segment (Milepost 0.0 to Milepost 7.5). There is potential habitat for the flat-tailed horned lizard in areas of creosote bush scrub. Suitable habitat for California barrel cactus is present for approximately the first 7 miles of this segment. Palm oases are located north of the centerline of the project, but are not close enough to be affected by the construction of the transmission line.

The Coachella Valley fringe-toed lizard could be impacted by taking of individuals and disturbance of habitat during construction operations. Other impacts could include collapse of tortoise burrows and disturbance and removal of existing native vegetation that provides food and shelter for tortoises. Additional concerns for the desert tortoise would be similar to those discussed for Link 13 above.

Direct temporary impacts could include removal of plants and disturbance of habitat of the Coachella Valley milkvetch. Impacts and mitigation would be similar to those discussed for Link 13 above.

Direct temporary impacts to flat-tailed horned lizard habitat would occur to approximately 108 acres from ground-disturbing activities at tower sites, and wire-pulling and splicing sites between Milepost 7.5 and Milepost 31.8, based on ground disturbance estimates noted in Table 3-5, Chapter 3. Impacts to California barrel cactus and other native vegetation would include clearing of vegetation from tower sites and crane pads, materials storage sites, and some disturbance of

vegetation at wire-pulling and splicing sites. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

A qualified SCE contracted biological monitor certified by USFWS would be present with construction crews on a daily basis to clear areas for the Coachella Valley fringe-toed lizard, flat-tailed horned lizard, and other sensitive species in the Coachella Valley Preserve and other sand dune communities within this link between Milepost 7.6 and Milepost 31.8 (W11). Despite crossing designated critical habitat for the Coachella Valley fringe-toed lizard, construction impacts of this segment would be less than significant by avoiding habitat occupied by this species (W2;10). These areas would be delineated in pre-construction surveys (V2).

The USFWS issued a Section 10(a) incidental take permit in 1986 for the Coachella Valley fringe-toed lizard that allowed take of this species during land use development provided the requirements of the Coachella Valley Habitat Conservation Plan were met. The compensation for right-of-way take mitigation is currently $600/acre for previously undisturbed land that is cleared during land use development projects (California Regulatory Notice Register 2001; Barrows 2003).

The proposed California Desert Conservation Area Plan Amendment for the Coachella Valley and FEIS does not describe mitigation measures for any specific special status species other than desert bighorn sheep (BLM 2002a). This document states that the BLM will defer to recommendations from available recovery plans, research information and data, and other documents on special status species in establishing management prescriptions and guidelines for these species. The goal of the management prescriptions selected should be to prevent additional listings of sensitive species in the Coachella Valley. Because of the lack of specific mitigation guidelines in the Coachella Valley amendment, and the deference to existing plans and methods, the following mitigation measures from the Northern and Eastern Colorado Desert Coordinated

Management Plan FEIS, Appendix D (BLM 2002c), would be an appropriate application for the Coachella Valley region.

Mitigation measures for desert tortoise that apply to all construction and maintenance of power transmission lines are as follows:

- 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.

- Access - To the maximum extent possible, access for transmission line construction and maintenance should occur from public roads and designated routes.

- 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.

- Restoration - Whenever possible, spur and access roads and other disturbed sites created during construction should be recontoured and restored.

- 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 the USFWS's Division of Law Enforcement to take common ravens or their nests.

Potential impacts to desert tortoise could be reduced to less than significant by identifying site-specific occurrences (W9) and by having a SCE contracted biological monitor certified by USFWS present during construction activities that involve the use of earth-moving equipment in desert tortoise habitat (W5). The monitor would move any tortoises (in burrows, cover-sites, or on the surface) that could be impacted (W5;8). Additionally, careful local adjustment in tower foundation placement during construction could minimize impacts (V1). An SCE contracted tortoise biologist would present a pre-construction class on tortoise ecology and mitigation to project personnel (W4). A maximum 25 mph speed limit would be in effect along all access roads associated with the project (W6).

The BLM has established planning boundaries for the flat-tailed horned lizard, but none of these are within the Devers-Harquahala study corridor, and do not require specific mitigation. Other areas to be avoided are occurrences of California barrel cactus and desert tortoise habitat, which could be identified once tower sites and spur road alignments have been established in the field.

Application of the appropriate mitigation measures on this link would reduce impact levels to less than significant.

Link 16 - Potentially significant impacts to plants and wildlife are possible on this segment, and are associated with suitable habitat for Coachella Valley milkvetch, Coachella Valley fringe-toed lizard, and probable habitat for flat-tailed horned lizard. However, these impacts could be reduced to less than significant by implementation of the efforts discussed below. Vegetation is mostly creosote bush scrub with a sand dune community present between Milepost 1.2 and Milepost 2.4. Wash crossings are vegetated with white burrobrush, a few smoketrees, and other associated vegetation.

Direct temporary impacts could include removal of plants and disturbance of habitat of the Coachella Valley milkvetch. Additionally, ground-disturbing activities could encourage

establishment of invasive non-native plants that could compete with the Coachella Valley milkvetch. However, the Coachella Valley milkvetch would probably benefit from the kinds of soil disturbance associated with the construction of a transmission line. The Coachella Valley fringe-toed lizard could be impacted by crushing of individuals and disturbance of habitat during construction operations. Direct temporary impacts to flat-tailed horned lizard habitat would occur to approximately 13 acres from ground-disturbing activities at tower sites, and wire-pulling and splicing sites between Milepost 0.0 and Milepost 3.0, based on ground disturbance estimates noted in Table 3-5, Chapter 3. Direct permanent impacts would be limited to minor habitat loss from the placement of tower foundations, but would not exceed 0.01 acre per tower site.

Pre-construction surveys for Coachella Valley milkvetch would be completed prior to construction of towers to minimize impact to this species (V2). Post-construction reseeding efforts (W12), along with the naturally occurring erosional process of wind and water on the sandy soils present in the area, would help restore the habitat for this species. An SCE contracted biological monitor certified by USFWS would be present with construction crews on a daily basis to clear areas for the Coachella Valley fringe-toed lizard, flat-tailed horned lizard, and other sensitive species in sand dune communities in this link between Milepost 0.0 and Milepost 5.0 (W11). Despite crossing designated critical habitat for the Coachella Valley fringe-toed lizard, construction impacts of this segment would be minimized by avoiding habitat occupied by this species. These areas could be delineated in pre-construction surveys (V2). Reducing impacts to populations of the Coachella Valley fringe-toed lizard could be aided by avoiding any activities that would tend to create wind barriers that might result in sand stabilization and by spanning areas of windblown sand where possible (W18). The BLM has established planning boundaries for the flat-tailed horned lizard, but none of these are within the proposed Devers-Harquahala transmission line study corridor, and do not require specific mitigation. It is likely that avoidance of Coachella Valley fringe-toed lizard habitat would also avoid impacts to the flat-tailed horned lizard because of their similar habitat requirements.

Application of the appropriate mitigation measures on this link would reduce impact levels to less than significant.

In addition to significance determinations and mitigation measures to be developed through the Section 7 Consultation process and utilization of BLM measures from the Right-of-Way Grant, the following mitigation and minimization measures from the Coachella Valley Multiple Species Habitat Conservation Plan (California Department of Fish and Game, et al. October 15, 2004 – Public Review Draft) would be followed:

- 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 plan.

- 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 plan.

- 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.

- Avoid vehicular travel in washes to protect triple-ridged milkvetch.

- No activities whatever should occur in wetland areas.

- 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.

- Avoid impact to mesquite-dominated habitats to protect crissal thrasher.

- Minimize impact to or removal of creosote bush to benefit LeContes's thrasher.

- Avoid any alterations to the vegetation structure of Washington fan palm oases to benefit southern yellow bat.

- Avoid any alterations of mesquite hummock habitat to benefit the Coachella valley round-tailed ground squirrel.

6.1.9 Noise

Noise impacts expected to occur from construction or operation of the proposed Devers-Harquahala transmission line would be less than significant.

The proposed construction would comply with local noise ordinances. Typical municipal ordinances stipulate that activities producing ambient noise should not exceed 55-50 dBA during nighttime hours (10 p.m. to 7 a.m.) and 60-55 dBA during daytime hours (7 a.m. to 10 p.m.) at residential property lines or sensitive areas. However, exemptions include temporary construction during daytime hours except on Sundays and federal holidays. 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.

6.1.10 Public Services and Utilities

No potentially significant impacts were identified for public services and utilities.

6.1.11 Visual Resources

Visual impacts are expected to be less than significant as a result of construction and operation of the proposed Devers-Harquahala 500kV transmission line.

Significant visual impacts can occur where the visual contrast resulting from construction disturbances (e.g., roads and vegetation clearing) and the presence of the transmission line would substantially alter the scenic quality of the landscape and dominate views from sensitive viewpoints resulting in high impacts to these viewers. These conditions occur in areas where the transmission line would be in the immediate foreground zone, with no existing transmission facilities obstructing or dominating views from sensitive viewpoints, in previously undisturbed landscapes. Other areas of potentially significant impact include locations where the transmission line would cross previously undisturbed, highly scenic landscape (Class A), or conflict with the existing or planned future image type(s). Because the proposed transmission line would be constructed within an existing utility corridor, impacts to highly scenic landscapes and sensitive viewers would be less than significant.

Following is a summary of potential impacts as defined by CEQA, and mitigation measures that would be effective in reducing impacts for the proposed transmission project.

6.1.11.1 Arizona and California

Substantially Degrade the Existing Visual Quality of the Site and its Surroundings

While the proposed 500kV transmission line crosses areas designated as Class A scenery, agricultural, and other developed lands (e.g., residential areas), the potential impacts to scenic quality visual image types and sensitive viewers are anticipated to be less than significant. The new facilities would be constructed and maintained within a modified utility corridor, requiring

no additional long-term disturbance outside of this corridor. Mitigation measures that avoid and minimize new access in the corridor would further reduce impacts.

Adversely Impact Scenic Vistas

There are no state-designated scenic vistas located within or adjacent to the Devers-Harquahala study corridor, and therefore no scenic vistas would be impacted by the proposed upgrade.

Adversely Affect State Scenic Roads

The proposed 500kV transmission line would not cross or be located adjacent to any state-designated scenic roads, and therefore no scenic road would be impacted.

Create a New Source of Substantial Light or Glare Adversely Impacting Views

Impacts resulting from the presence of conductors and transmission line towers will be less than significant, as non-specular conductors will be utilized and the finish on structures will be dulled.

Mitigation Measures

The following mitigation measures including those identified in the BLM Right-of-Way Grant Exhibit B, in Appendix B, would be implemented to reduce potential visual impacts:

1. Non-specular conductors will be used to reduce glare and visual contrast.

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 (see Mitigation Measure 2).

4. Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils.

8a. 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.

8b. 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).

The following mitigation measure was also included in the BLM right-of-grant, Exhibit B Appendix B:

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.

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, and in some locations tower spacing may not correspond to the adjacent DPV1 structures, to provide adequate ground clearance.

6.1.12 Cultural Resources

Cultural resource impacts are expected to be less than significant from construction and operation of the proposed Devers-Harquahala 500kV transmission line. The following sections describe potential impacts and mitigation measures that would be effective in minimizing impacts to archaeological, ethnographic, historic, and paleontological resources.

Impacts to significant or potentially significant cultural resources result from earth-disturbing effects of project construction and operation. The impacts are most likely associated with tower pad or access road grading, digging of tower footings, tower erection, or conductor pulling and splicing. As specified in the BLM Right-of-Way Grant, measures to mitigate these effects include:

1. Prior to construction and all other surface disturbing activities, the Holder 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.

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.

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.

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.

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.

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.

7. When necessary to relocate the proposed line, ancillary facilities, temporary facilities, or work areas as a result of inventory, on-site 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.

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.

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.

10. Vehicles and equipment shall be confined and operated only within areas specified by the Authorized Officer.

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.

6.1.12.1 Arizona

Archaeology

No NRHP eligible or potentially eligible archaeological resources appear threatened by impact from the proposed project. Therefore, no mitigation measures are offered.

Ethnography

Because the project is proposed to be constructed adjacent to an existing high voltage transmission line, indirect effects to TCPs are considered negligible. No TCPs or potential TCPs have been identified within the project APE (defined as within 100 feet of project tower pads and access roads). Apart from archaeological sites within the APE, about which Native Americans have expressed a general concern, no significant ethnographic values have been identified that could be affected by the project. Therefore, no site specific mitigation is offered for ethnographic resources. As a generic mitigation measure, however, the applicant has, at the suggestion of BLM staff, agreed to undertake an appropriate update of the landmark ethnographic study Persistence and Power (Bean and Vane 1978), which was prepared for the DPV1 project.

History

No NRHP eligible or potentially eligible archaeological resources have been identified in the project APE. Therefore, no mitigation measures are offered.

Paleontology

Approximately 88.7 miles of high or undetermined areas of paleontological sensitivity are crossed by the proposed transmission line between Harquahala and the California border. Impacts to significant paleontological resources will be mitigated by conducting a preconstruction 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 areas of high sensitivity.

6.1.12.2 California

Archaeology

Eighteen NRHP eligible or potentially eligible archaeological resources have been identified within the project APE. These resources are designated RIV-53T(c), RIV-53T(d), RIV-250T, RIV-343T(b), RIV-343(c), RIV-650T, RIV-673T, RIV-1119, RIV-1383, RIV-1813, RIV-1814, RIV-1815, RIV-1816, RIV-1819, RIV-1821, RIV-1822, P33-13574, and P33-13576. These resources may be affected by project construction and operation. Project impacts to these resources can be mitigated to acceptable levels by avoiding these resources through minor adjustments to the location of earth-disturbing project activities, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these methods combined. In accordance with federal regulations at 36 CFR 800, an Historic Properties Management Plan (HPMP) will be prepared for the project addressing resource management issues. The HPMP will be consummated by preparation and execution of a two-party agreement document between the BLM and California SHPO.

Ethnography

Because the proposed 500kV transmission line would be constructed adjacent to an existing high voltage transmission line, indirect effects to TCPs are considered negligible. Only one TCP or potential TCP has been identified with the project APE (defined as within 100 feet of the project tower pads and access roads). This resource is Edom Hill forming the northwestern end of the Indio Hills. Edom Hill is considered sacred to the Agua Caliente Indian Tribe. The project corridor crosses approximately 3 miles of the lower slopes of Edom Hill including 0.1 mile of Agua Caliente Indian Reservation land. Incremental effects to the Agua Caliente Native American belief system from construction and operation of the proposed project are thought to be minimal due to the presence of the DPV1 transmission line and a gas pipeline in the same

area. Native Americans also have expressed a general concern regarding archaeological sites within the APE.

No site specific mitigation has been identified for ethnographic resources in the project APE. As a generic mitigation measure, however, the applicant has at the suggestion of BLM staff agreed to undertake an appropriate update of the landmark ethnographic study Persistence and Power (Bean and Vane 1978), which was prepared for the DPV1 project.

History

Thirteen NRHP eligible or potentially eligible historic-era resources have been identified within the project APE. These resources are designated RIV-1117H(a), RIV-1117H(b), RIV-1809H, RIV-1818H, RIV-7489H, RIV-7490, P33-13588, P33-13596, P33-13598, P33-13600, P33-13601, P33-13602, P33-13603. These resources could be affected by project construction and operation. Project impacts to these resources could be mitigated to acceptable levels by avoiding these resources through minor adjustments to the location of earth-disturbing project activities, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these mitigation measures combined. In accordance with federal regulations at 36 CFR 800, an HPMP would be prepared for the project addressing resource management issues. The HPMP would be consummated by preparation and execution of a two party agreement document between the BLM and California SHPO.

Paleontology

Between the California border and Devers, the proposed transmission line would traverse approximately 31 miles of high or undetermined areas of paleontological sensitivity. Project impacts to significant paleontological resources would be mitigated by conducting a

preconstruction 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 would occur in project areas of high sensitivity.

6.1.13 Public Health and Safety

No potentially significant impacts to public health and safety are anticipated.

6.2 WEST OF DEVERS 230kV TRANSMISSION UPGRADE

6.2.1 Introduction

Mitigation measures for the proposed west of Devers 230kV transmission upgrade would be similar to the measures previously listed under Section 6.1.

6.2.2 Land Use

Impacts to existing or planned land uses from construction and operation of the proposed west of Devers transmission upgrade would be less than significant.

Potential impacts where Link 102 crosses Summit Cemetery would be avoided by installation of new towers to match the spans with the existing towers within the existing utility corridor.

Two sand and gravel mines are crossed along Link 101, resulting in potential impacts. Impacts would be mitigated during construction to avoid critical mining periods and high volume earth-moving days. Operational mitigation would include spanning the mine.

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.

6.2.3 Socioeconomics, Population, and Housing

No potentially significant impacts were identified for population and housing.

6.2.4 Geology and Soils

No potentially significant impacts were identified for geology and soils.

The following general mitigation measures would be applied to reduce impacts to geology and soils:

- The line would be located to minimize the disruption of any active mining operations.

- Appropriate tower design would be used to mitigate the potential for impacts from very strong seismic ground shaking. In general, an appropriate tower design which accounts for lateral wind loads and conductor loads during line stringing exceeds any credible seismic loading (ground shaking).

- Wherever possible to minimize the potential for slope instability, towers would be located to avoid gullies or active drainages, and over-steepened slopes.

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.

6.2.5 Hydrology

No potentially significant impacts were identified for hydrological resources.

The following general mitigation measures would be applied to reduce impacts to hydrological resources:

- Construction equipment would be kept out of flowing stream channels except when absolutely necessary to construct crossings.

- Erosion control and hazardous material plans would be incorporated into the construction bidding specifications to ensure compliance.

- 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.

- 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.

- 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.

- Runoff from roadways would be collected and diverted from steep, disturbed, or otherwise unstable slopes.

- 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.

- Cut and fill slopes would be minimized by a combination of benching and following natural topography where possible.

6.2.6 Air Quality

Potentially significant impacts for air quality could occur depending on the phasing of the project construction. The following mitigation measures would be applied, where appropriate, to reduce impacts to air quality:

- Heavy duty off-road diesel engines would be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.

- Apply water or chemical dust suppressants to unstabilized disturbed areas and/or unpaved roadways in sufficient quantity and frequency to maintain a stabilized surface.

- 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.

- Surfaces permanently disturbed by construction activities would be covered or treated with a dust suppressant after completion of activities at each site of disturbance.

- Vehicle speeds on unpaved roadways would be restricted to 15 miles per hour.

- Vehicles hauling dirt would be covered with tarp or other means.

- Site construction workers would be staged off-site 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.

- Emissions credits would be purchased to offset any emissions levels which are over the emissions thresholds.

6.2.7 Traffic and Transportation

No potentially significant impacts were identified for traffic and transportation.

6.2.8 Biology

Potentially significant impacts to desert tortoise, Coastal California gnatcatcher, least Bell's vireo, and Stephens' kangaroo rat were identified in Chapter 5, Section 5.2.8 with the indication that such impacts could be mitigated to less than significant with application of the appropriate mitigation measures.

For impacts to desert tortoise habitat affected by the proposed west of Devers transmission upgrade, the mitigation measures identified in Section 6.1.8.2, would be appropriate.

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.

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 acre of suitable habitat potentially affected by the proposed west of Devers 230kV 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.

Stephens' kangaroo rat habitat would be avoided, where possible.

6.2.9 Noise

No potentially significant noise impacts are expected to occur from construction or operation of the proposed west of Devers 230kV transmission upgrade.

The proposed construction would comply with local noise ordinances. Typical municipal ordinances stipulate that activities producing ambient noise should not exceed 55-50 dBA during nighttime hours (10 p.m. to 7 a.m.) and 60-55 dBA during daytime hours (7 a.m. to 10 p.m.) at residential property lines or sensitive areas. However, exemptions include temporary construction during daytime hours except on Sundays and federal holidays. 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 established by local authorities if a variance is needed.

6.2.10 Public Service and Utilities

No potentially significant impacts were identified for public service and utilities.

6.2.11 Visual Resources

Construction and operation of the proposed west of Devers 230kV transmission line upgrade would result in less than significant impacts to visual resources.

Significant visual impacts can occur where the visual contrast resulting from construction disturbances (e.g., roads and vegetation clearing) and the presence of the transmission line would substantially alter scenic quality and dominate views from sensitive viewpoints. For example, significant impacts could occur where the transmission line would be seen in the foreground to middleground distance zones in previously undisturbed landscapes, or where the transmission line would traverse previously undisturbed, highly scenic landscape (Class A), or conflict with the existing or planned future image type(s). Because the proposed 230kV upgrade would be limited to an existing, highly modified corridor, and the proposed transmission upgrade would result in a net decrease in the number of structures and conductors present in this existing corridor, visual impacts to visual quality, scenic vistas, and scenic roads are anticipated to be less than significant. In addition, the proposed upgrade would not create a new source of substantial light or glare.

Following is a discussion of potential impacts as defined by the CEQA significance criteria.

Substantially Degrade the Existing Visual Quality

The proposed 230kV transmission upgrade corridor does not cross areas designated as Class A scenery. Potential impacts to scenic quality visual image types and sensitive viewers are anticipated to be less than significant as new facilities would be constructed and operated within an existing, highly modified utility corridor, requiring no additional long-term disturbance outside of this corridor. Mitigation measures proposed for construction of the upgrade facilities would further minimize the potential for visual impacts, and are listed below.

Adversely Impact Scenic Vistas

There are no state-designated scenic vistas located within or adjacent to the west of Devers study corridor, and therefore no scenic vistas would be impacted by the proposed upgrade.

Adversely Affect State Scenic Roads

The proposed west of Devers transmission upgrade would be parallel to existing transmission facilities and span the roadway at the location where the corridor crosses CA 62, minimizing impacts. Therefore, impacts to scenic roads would be less than significant.

Create a New Source of Substantial Light or Glare Adversely Impacting Views

Impacts resulting from the presence of conductors and transmission line towers would be less than significant, as non-specular conductors will be utilized and the finish on structures would be dulled.

Implementing mitigation measures as proposed for construction of the upgrade facilities could reduce visual impacts that may result from the proposed west of Devers 230kV transmission upgrade. Visual mitigation would reduce the visibility of the proposed new transmission facilities from sensitive viewers and reduce visual contrast associated with the towers, conductors, and insulators. The following mitigation measures would generally apply for the proposed transmission upgrade, and would minimize impacts along the entire proposed transmission corridor to less than significant.

- The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction.

- Non-specular conductors would be used to reduce glare and resulting visual contrast.

- 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.

- 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.

6.2.12 Cultural Resources

No potentially significant cultural resource impacts are expected to occur from construction and operation of the proposed west of Devers 230kV transmission upgrade. The following sections describe potential impacts and mitigation measures that would be effective in minimizing impacts to archaeological, ethnographic, historic, and paleontologic resources.

6.2.12.1 Archaeology

Class I records search data identified eight previously recorded prehistoric archaeological sites and one isolated occurrence potentially within the 1-mile-wide study corridor for the proposed west of Devers 230kV transmission upgrade. Two of these sites (RIV-179 and RIV-197), and one isolated occurrence, appeared to be potentially within the 300-foot-wide project APE. Based on the Class III archaeological survey of the 300-foot-wide project APE, RIV-179 could not be

relocated, RIV-197 was found to be outside the APE, and two new sites were recorded (P33-13429, and P33-13430) (Eckhardt and Walker 2004b).

6.2.12.3 Ethnography

Apart from the recorded archaeological sites and the portion of the proposed transmission upgrade that crosses the Morongo Indian Reservation, there are no known areas of ethnographic sensitivity with the project APE. In addition, Native American groups have an interest in the disposition of prehistoric archaeological sites as evidence of the presence of their ancestors. Construction and operation of the proposed project is not expected to have effects on Native American TCPs or other resources of cultural value. Therefore, impacts to traditional cultural properties would be less than significant, and no site-specific mitigation is offered.

6.2.12.4 History

The Class III archaeological survey of the 300-foot-wide project corridor resulted in the identification of nine historic-era sites in the APE (RIV-7462H/P33-13427, P33-13428, RIV-2262H, RIV-4768H/SBR-7168H/P36-007168, SBR-11624H/P36-011624, P33-13431, P33-13434, P33-007888, and P36-020240). Three of these resources (RIV-4768H/SBR-7168H/P36-007168, RIV-2262H, and P33-007888) are assessed potentially eligible for listing on the NRHP. These resources are subject to potential effects from project construction and operation.

Project effects to RIV-4768H/SBR-7168H/P36-077168, RIV-2262H, and P33-007888 could be mitigated to acceptable levels by avoiding these resources through minor adjustments to the location of earth-disturbing project elements, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these methods combined. In accordance with federal regulations at 36 CFR 800, a HPMP would be prepared for the project

addressing resource management issues. The HPMP would be consummated by preparation and execution of a two-party agreement document between the BLM and California SHPO.

6.2.12.5 Paleontology

The proposed 230kV transmission upgrade corridor traverses approximately 26 miles of high or undetermined areas of paleontological sensitivity. The undetermined or high-sensitivity areas include Pleistocene older alluvium in Links 102 and 103, Canebrake Conglomerate or Palm Springs Formation in Link 102, and San Timoteo Formation in Links 102 and 103. Potentially significant paleontolgical specimens could be impacted by excavation of tower footings and grading of access spur roads in these areas.

Impacts to significant paleontological resources will be mitigated by conducting a preconstruction 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.

6.2.13 Public Health and Safety

No potentially significant impacts were identified for public health and safety.

6.3 SUBALTERNATE TRANSMISSION LINE ROUTES

6.3.1 Introduction

Mitigation measures applied to the alternatives would be similar to those applied to the proposed Devers-Harquahala transmission line. Mitigation measures specific only to the subalternate routes are presented in the following sections.

6.3.2 Land Use

No potentially significant impacts were identified for land use on the Harquahala-West and Palo Verde subalternate routes. Potential impacts could occur to agricultural land affected by the Harquahala-West Subalternate Route. Tubular steel poles would be placed adjacent or parallel to agricultural field boundaries where possible to minimize ground disturbance.

Other mitigation measures to be applied to the subalternate routes are described in Section 6.1.2.

6.3.3 Socioeconomics, Population, and Housing

No potentially significant impacts to the subalternate routes were identified for socioeconomics, population, and housing.

6.3.4 Geology and Soils

No potentially significant impacts to the subalternate routes were identified for geology and soils.

Mitigation measures to be applied to the subalternate routes are described in Section 6.1.4.

6.3.5 Hydrology

No potentially significant impacts to the subalternate routes were identified for hydrology.

Mitigation measures to be applied to the subalternate routes are described in Section 6.1.5.

6.3.6 Air Quality

No potentially significant impacts to the subalternate routes were identified for air quality.

Mitigation measures to be applied to the subalternate routes are described in Section 6.1.6.

6.3.7 Traffic and Transportation

No potentially significant impacts to the subalternate routes were identified for traffic and transportation.

6.3.8 Biology

6.3.8.1 Harquahala-West Subalternate Route

Potential impacts to vegetation and wildlife on the Harquahala-West Subalternate Route would be less than significant. The corridor bypasses Category 2 desert tortoise habitat in the Eagletail Mountains and vegetation types likely to be affected are not sensitive. Some vegetation removal would probably occur between the Harquahala switchyard and CAP lateral canal, since access would be constructed or upgraded.

Mitigation actions that would be effective include careful tower placement to avoid large, mature trees and cacti, similar placement of new access and spur roads, spanning xeroriparian habitat along washes, and transplanting rather than bulldozing small saguaro cacti.

6.3.8.2 Palo Verde Subalternate Route

Potentially significant impacts on the Palo Verde Subalternate Route could occur to Sonoran desert tortoise as a result of construction. Impacts could take the form of tortoise burrow crushing, crushing of tortoises themselves, and loss of habitat via vegetation removal. There are also habitat components present for cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) in the form of saguaro cacti, ironwood, mesquite, and paloverde trees. Surveys for cactus ferruginous pygmy-owl conducted for the Harquahala-Hassayampa 500kV transmission line proved negative, however. Although there are habitat components present for this species, it is highly unlikely that the area is occupied by this species.

Mitigation to reduce potential impacts includes pre-construction tortoise surveys and monitoring of construction activities within Category 2 Desert Tortoise habitat. Mitigation for cactus

ferruginous pygmy-owl habitat would include careful tower and construction access placement to avoid removal of potential owl habitat components.

6.3.9 Noise

No potentially significant impacts to the subalternate routes were identified for noise.

Mitigation measures to be applied to the subalternate routes are described in Section 6.1.9.

6.3.10 Public Services and Utilities

No potentially significant impacts to the subalternate routes were identified for public services and utilities.

6.3.11 Visual Resources

6.3.11.1 Harquahala-West Subalternate Route

Significant impacts to residential viewers would occur within the Harquahala-West Subalternate corridor. Mitigation of potentially significant impacts to residential viewers, as described in Section 4.2.11, would not be adequate to reduce the impacts.

6.3.11.2 Palo Verde Subalternate Route

There would be no potentially significant impacts to viewers or scenic quality for this subalternate route.

6.3.12 Cultural Resources

6.3.12.1 Harquahala-West Subalternate Route

Archaeology

In addition to the records search, only a Class II sample archaeological survey was conducted for the Harquahala-West Subalternate Route. No NRHP eligible or potentially eligible archaeological resources were identified in the 300-foot-wide study area corridor. The discovery of only two isolated archaeological occurrences in the areas of the 2-mile-long survey transects suggests that the archaeological sensitivity of this area is only moderate, and potential impacts to NRHP eligible resources are minimal.

Prior to construction of the Harquahala-West Subalternate Route, a Class III archaeological survey would be conducted of the project tower sites, access roads, pull sites, laydown areas, and any other ground-disturbing activities. If NRHP eligible archaeological resources are identified in the project APE, impacts to these resources would be mitigated to acceptable levels by avoiding these resources through minor adjustments to the location of earth-disturbing project elements, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these methods combined. In accordance with federal regulations at 36 CFR 800, a HPMP would be prepared for the project addressing resource management issues. The HPMP would be consummated by preparation and execution of a two-party agreement document between the BLM and the Arizona SHPO.

Ethnography

No TCPs or potential TCPs have been identified within the project APE (defined as the 300-foot-wide study corridor for the Class II study). Apart from archaeological sites that may occur within the APE, about which Native Americans have expressed a general concern, no significant ethnographic values have been identified that could be affected by the project. Therefore, no site specific mitigation is offered. As a generic mitigation measure for Native American resources, the applicant has, at the suggestion of BLM staff, agreed to undertake an appropriate update of the landmark ethnographic study Persistence and Power (Bean and Vane 1978), which was prepared for the DPV1 project.

BLM staff has indicated that they will consult with appropriate Native American groups regarding project effects on traditional cultural values within the context of the BLM's government-to-government responsibility with Native American tribes (personal communication, Wanda Raschkow 2004).

History

The Class I records search and Class II sample survey of the Harquahala-West Subalternate Route resulted in the identification of no historic-era sites and one isolated historic-era occurrence (a rock cairn that may be associated with a mining claim) within the 300-foot-wide project corridor. At this time there are no known historic-era resources in the project area that are listed on or potentially eligible for listing on the NRHP. Therefore, there are no known NRHP eligible historic-era resources in the APE threatened by potential project construction and operation effects.

Prior to construction of this subalternate route, a Class III archaeological survey would be conducted of the project tower sites, access roads, pull sites, laydown areas, and any other

ground-disturbing activities. If NRHP eligible historic-era resources are identified in the project APE, impacts to these resources would be mitigated to acceptable levels by avoiding these resources through minor adjustments to the location of earth-disturbing project elements, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these methods combined. In accordance with federal regulations at 36 CFR 800, a HPMP would be prepared for the project addressing resource management issues. The HPMP would be consummated by preparation and execution of a two party agreement document between the BLM and Arizona SHPO.

Paleontology

Virtually the entire length of the Harquahala-West Subalternate Route crosses undifferentiated Pleistocene older alluvium and Holocene alluvium in the Harquahala Plain. The Pleistocene older alluvium has a high paleontological sensitivity ranking.

Impacts to significant paleontological resources would be mitigated by conducting a preconstruction 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 would occur in project areas of high sensitivity.

6.3.12.2 Palo Verde Subalternate Route

Archaeology

Four of the seven archaeological sites identified within the project APE (AZ T:9:12 [ASM], AZ T:9:13 [ASM], AZ T:9:21 [ASM], and AZ T:9:64 [ASM]) are assessed NRHP eligible or

potentially eligible, and the portion of AZ T:9:64 (ASM) that contains the important data does not appear to be located within the project APE. All four sites appear NRHP eligible or potentially eligible.

Project impacts to these resources could be mitigated to acceptable levels by avoiding these resources through minor adjustments to the location of earth-disturbing project elements, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these methods combined. In accordance with federal regulations at 36 CFR 800, a HPMP would be prepared for the project addressing resource management issues. The HPMP would be consummated by preparation and execution of a two party agreement document between the BLM and Arizona SHPO.

Ethnography

Because the project is proposed to be constructed adjacent to an existing high voltage transmission line, indirect effects to TCPs or potential TCPs are considered negligible. No TCPs or potential TCPs have been identified within the project APE (defined as within 100 feet of project tower pads and access roads). Apart from archaeological sites within the APE, about which Native Americans have expressed a general concern, no significant ethnographic values have been identified that could be affected by the project. Therefore, no site-specific mitigation is offered. As a generic mitigation for Native American resources, the applicant has, at the suggestion of BLM staff, agreed to undertake an appropriate update of the landmark ethnographic study Persistence and Power (Bean and Vane 1978), which was prepared for the DPV1 project.

BLM staff has indicated that they will consult with appropriate Native American groups regarding project effects on traditional cultural values within the context of the BLM's

government-to-government responsibility with Native American tribes (personal communication, Wanda Raschkow 2004).

History

Three historic-era sites were identified in the Class III survey as occurring within or immediately adjacent to the project APE. These resources are recorded as AZ T:9:65 (ASM), AZ S:12:32 (ASM), and AZ S:12:36 (ASM), and not recommended eligible for NRHP listing.

Paleontology

Approximately 8 miles of the 15-mile Palo Verde Subalternate Route traverses areas of high paleontological sensitivity. Potentially significant paleontological specimens may be impacted by excavation of tower footings and grading of access spur roads in these areas.

Impacts to significant paleontological resources would be mitigated by conducting a preconstruction 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 would occur in project areas of high sensitivity.

6.3.13 Public Health and Safety

No potentially significant impacts would occur as a result of construction and operation of the Harquahala-West or Palo Verde subalternate routes.

6.4 MIDPOINT SUBSTATION ALTERNATIVES

6.4.1 Introduction

Mitigation measures that may be applied to the construction and operation of the Midpoint Substation at the preferred site, or either of the alternative sites, would be similar to those applied to the proposed Devers-Harquahala 500kV transmission line with respect to construction on BLM lands. Site-specific mitigation measures also are described for specific resources as follows.

6.4.2 Land Use

No potentially significant impacts were identified for land use.

Mitigation measures to be applied to the alternatives are described in Section 6.1.2.

6.4.3 Socioeconomics, Population, and Housing

No potentially significant impacts were identified for socioeconomics, population, and housing.

Mitigation measures to be applied to the alternatives are described in Section 6.1.3.

6.4.4 Geology and Soils

No potentially significant impacts were identified for geology and soils.

Mitigation measures to be applied to the alternatives are described in Section 6.1.4.

6.4.5 Hydrology

No potentially significant impacts were identified for hydrology as a result of construction and operation of the Midpoint Substation at the preferred or alternative sites.

Mitigation measures to be applied to the alternatives are described in Section 6.1.5.

6.4.6 Air Quality

No potentially significant impacts were identified for air quality as a result of construction and operation of the Midpoint Substation at the preferred or alternative sites.

Mitigation measures to be applied to the alternatives are described in Section 6.1.6.

6.4.7 Traffic and Transportation

No potentially significant impacts were identified for traffic and transportation as a result of construction and operation of the Midpoint Substation at the preferred or alternative sites, and no mitigation would be offered.

6.4.8 Biology

Potential impacts to vegetation and wildlife on the preferred or alternative sites would be less than significant. Surveys for desert tortoise would be conducted on site prior to initiating any construction activities. Depending on survey results, additional mitigation may be required. It also is possible that surveys for flat-tailed horned lizards would have to be conducted. Mitigation to compensate for impacts to Harwood's milkvetch could include purchasing land to set aside for conservation purposes based upon a percentage of land disturbed.

6.4.9 Noise

No potentially significant impacts were identified for noise as a result of construction and operation of the Midpoint Substation at the preferred or alternative sites.

Mitigation measures to be applied to the alternatives are described in Section 6.1.9.

6.4.10 Public Services and Utilities

No potentially significant impacts would occur to public services and utilities as a result of construction and operation of the Midpoint Substation at the preferred or alternative sites.

6.4.11 Visual Resources

6.4.11.1 Preferred Site

Construction and operation of the Midpoint Substation at the preferred site would result in less than significant impacts to visual resources.

Mitigation measures are described in Section 6.1.11.

6.4.11.2 Mesa Verde Alternative

Construction and operation of the Midpoint Substation at the Mesa Verde alternative site would result in less than significant impacts to visual resources.

Landscape screening could reduce the visibility of this alternative, thus lowering potentially adverse impacts to sensitive viewers.

6.4.11.3 Wiley Well Alternative

Construction and operation of the Midpoint Substation at the Wiley Well alternative site would result in potentially significant impacts to viewers, primarily travelers on I-10.

Landscape screening could reduce the visibility of the substation at this alternative site, thus lowering potentially adverse impacts to sensitive viewers.

6.4.12 Cultural Resources

6.4.12.1 Preferred Site

Archaeology

Archaeological surveys identified three archaeological sites within the preferred substation site boundaries (RIV-775T, P33-13659, and P33-13660), and all of these resources appear potentially eligible to the NRHP. Earth-disturbing project construction and operation activities, such as site preparation grading and digging, could result in impacts to these resources. Project impacts to RIV-775T, P33-13659, and P33-13660 could be mitigated to acceptable levels by avoiding these resources through minor adjustments to the location of earth-disturbing project activities, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these methods combined. In accordance with federal regulations at 36 CFR 800, a HPMP would be prepared for the project addressing resource management issues. The HPMP would be consummated by preparation and execution of a two party agreement document between the BLM and California SHPO.

Ethnography

Apart from archaeological sites within the preferred site boundaries, about which Native Americans have expressed a general concern, no significant ethnographic values have been identified that could be affected by construction and operation of the substation. Therefore, no site-specific mitigation is offered. As a generic mitigation for Native American resources, the applicant has, at the suggestion of BLM staff, agreed to undertake an appropriate update of the landmark ethnographic study Persistence and Power (Bean and Vane 1978), which was prepared for the DPV1 project.

History

No historic-era resources have been identified on the preferred site, and therefore no historic-era resources are subject to project impacts. No mitigation is therefore offered.

Paleontology

No potentially fossil-bearing lithic units have been identified at the preferred site, and no potentially significant paleontological specimens are expected to be affected by project construction or operation in this location. No mitigation is therefore offered.

6.4.12.2 Mesa Verde Alternative

Archaeology

Archaeological survey of the Mesa Verde alternative site resulted in the discovery of one previously unrecorded archaeological resource within the alternative switching station site boundaries (P33-13672). P33-13672 is a lithic scatter of petrified wood flakes and is potentially eligible to the NRHP. Earth-disturbing project construction and operation activities, such as site preparation grading and digging, could result in impacts to this resource. These impacts could be mitigated to acceptable levels by avoiding P33-13672 through minor adjustments to the location of earth-disturbing project activities, institution of protection measures, application of appropriate data recovery archaeological methods, or several of these mitigation measures combined. In accordance with federal regulations at 36 CFR 800, a HPMP would be prepared for the project addressing resource management issues. The HPMP would be consummated by preparation and execution of a two party agreement document between the BLM and California SHPO.

Ethnography

Apart from the archaeological site identified within the Mesa Verde alternative site boundaries, about which Native Americans have expressed a general concern, no significant ethnographic values have been identified that could be affected by construction and operation of the switching station. Therefore, no site-specific mitigation is offered. As a generic mitigation for Native American resources, the applicant has, at the suggestion of BLM staff, agreed to undertake an appropriate update of the landmark ethnographic study Persistence and Power (Bean and Vane 1978), which was prepared for the DPV1 project.

History

No historic-era resources have been identified on the Mesa Verde alternative site, and therefore no historic-era resources are subject to project impacts. No mitigation is therefore offered.

Paleontology

No potentially fossil-bearing lithic units have been identified at the Mesa Verde alternative site, and no potentially significant paleontological specimens are expected to be affected by project construction or operation in this location. No mitigation is therefore offered.

6.4.12.3 Wiley Well Alternative

Archaeology

No archaeological resources have been identified on the Wiley Well alternative site, and therefore no archaeological resources are subject to project impacts. No mitigation is therefore offered.

Ethnography

No significant ethnographic values have been identified that could be affected by construction and operation of the Midpoint Substation at the Wiley Well site. Therefore, no site-specific mitigation is offered. As a generic mitigation for Native American resources, the applicant has, at the suggestion of BLM staff, agreed to undertake an appropriate update of the landmark ethnographic study Persistence and Power (Bean and Vane 1978), which was prepared for the DPV1 project.

History

No historic-era resources have been identified on the Wiley Well alternative site, and therefore no historic-era resources are subject to project impacts. No mitigation is therefore offered.

Paleontology

No potentially fossil-bearing lithic units have been identified at the Wiley Well alternative site, and no potentially significant paleontological specimens are expected to be affected by project construction or operation in this location. No mitigation is therefore offered.

6.4.13 Public Health and Safety

No significant impacts to public health or safety are expected to occur with construction or operation of the Midpoint Substation at the preferred or either of the alternative sites.