

**Southern California Edison**

**Documentation for Compliance**

**With the**

**Opinion Granting a Certificate of**

**Public Convenience and Necessity (CPCN)**

**Notice to Proceed Request for the**

**Devers Substation Expansion**

**Devers-Palo Verde No. 2 Transmission Line Project**

**(DPV2)**

**April 10, 2012**

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## Acronyms

APM	Applicant Proposed Measure
BLM	Bureau of Land Management
BO	Biological Opinion
CM	Conservation Measure (from the Biological Opinion)
CPUC	California Public Utilities Commission
CY	Cubic Yards
D-RB2	Devers-Red Bluff No. 2 Transmission Line
D-V2	Devers-Valley No. 2 Transmission Line
DPV1	Devers-Palo Verde No. 1 Transmission Line
DPV2	Devers-Palo Verde No. 2 Transmission Line Project
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
I-10	Interstate 10
kV	Kilovolt
MM	Mitigation Measure
MMCRP	Mitigation Monitoring, Compliance, and Reporting Program
NTP	Notice to Proceed
NTPR	Notice to Proceed Request
OPGW	Optical Ground Wire
SCE	Southern California Edison
USGS	United States Geological Survey

## 1.0 INTRODUCTION

This Notice to Proceed Request (NTPR) describes approved improvements associated with the Devers Substation Expansion Project (Project), located entirely within SCE-owned private property, subject to California Public Utilities Commission (CPUC) approval. The Devers Substation will be upgraded and expanded to accommodate the installation of the new Devers to Red Bluff No. 2 (D-RB2) and Devers to Valley No. 2 (D-V2) 500-kV transmission lines.

Upgrades within the existing Devers Substation fence line include the extension of the 500-kV operating buses approximately 180 feet east, the installation of two new 135-foot-high by 90-foot-wide dead-end structures, circuit breakers, and disconnect switches to terminate the new D-RB2 and D-V2 transmission lines. The terminating transmission towers or turning poles will be the tallest structures at the substation, ranging between 150 feet to 180 feet in height. The existing Devers-Palo Verde No.1 line will be modified to include breakers on the existing line reactors. This work will require the addition of foundations, conduit and equipment installation adjacent to the existing line reactors. In addition, the asphalt paved helipad currently located within the substation footprint and a portion of its interior asphalt roadway will be relocated slightly east, but still within the relocated substation fence line. The relocation of the existing helipad and associated interior roadway is necessary to maintain adequate clearances following the installation of new equipment and structures required at the Devers Substation Expansion. Other existing facilities (e.g. firewater line, spare line reactor, perimeter security) will also be relocated and/or improved to accommodate the physical changes described.

These improvements will require an expansion of the existing substation pad outside of the current substation fence line, totaling approximately 3 acres of permanent and temporary disturbance areas. The Substation expansion will permanently disturb approximately 2.5 acres of undeveloped land adjacent to the east side of the existing Devers Substation fence line. This area is required to extend the existing 500-kV operating bus two positions to the east. As a result, grading, foundations, and drainage improvements will be required in the

expansion area. The bus will be equipped with breakers, disconnects, and associated equipment and controls for the new D-RB2 and D-V2 lines. In addition, a portion of the interior paved road to the existing helipad site will be re-routed from the southwest corner of the expansion area to the northeast corner of the expansion area, to provide access to the relocated helipad site, also shown on Figure 1.

A telecom conduit will also be installed from existing transmission line tower M0-T1, located south of the expansion area, into an existing telecom ductbank within the substation, to accommodate the new optical ground wire required for the expansion, as shown in Figure 1. Within the Devers Substation, underground fiber optic cable will be installed from the Devers-RB2 tower structure to the Devers Substation 500kV MEER building.

In addition, the Devers 220 kV circuit breakers will be upgraded in the southern portion of the existing substation site footprint, as shown in Figure 1. This work will include replacing seven (7) existing circuit breakers within the 220kV switchrack area with new circuit breakers having higher short-circuit duty ratings and the installation of other miscellaneous equipment in the existing 220kV switchrack area to provide increased short-circuit duty ratings.

The work described above will be constructed as part of Southern California Edison's (SCE) Devers-Palo Verde No. 2 Transmission Line Project (DPV2). Figure 1 is a project location map and Appendix A references the applicable figures (contained within Project Site and Access Mapbook) that depict the improvements relative to the Devers Substation Expansion footprint.

This project element was evaluated in the DPV2 Final Environmental Impact Report and Final Environmental Impact Statement (Final EIR/EIS). Applicable Final EIR/EIS Applicant Proposed Measures (APMs), Mitigation Measures (MMs), California Department of Fish and Game Code Section 2080.1 Consistency Determination measures, and Federal Endangered Species Act Section 7 Biological Opinion Conservation Measures (BO) have been identified,

and will be implemented or completed prior to commencement of the construction associated with this NTPR, as applicable.

The checklist tables attached to this NTPR summarize the applicable environmental requirements, such as APMs, MMs, and BO measures in Table 1 and the permits and documentation in Table 2. Monitoring and reporting on implementation of APMs, MMs, and BO measures will be conducted in accordance with the DPV2 Mitigation Monitoring, Compliance, and Reporting Program (MMCRP). Additionally, required pre-construction surveys for biological resources will be conducted prior to start of construction, as applicable.

## **2.0 SITE LOCATION AND CONDITIONS**

The Devers Substation is located within the Desert Hot Springs USGS 7.5' topographic quadrangle. The coordinates for the approximate center of the site are Latitude 33.93 N, Longitude 116.9 W. The Substation is located in unincorporated Riverside County, California, near the City of Palm Springs. The substation is located north of Power Line Road and east of Diablo Road, approximately 2.1 miles north of the Interstate 10.

Temporary access to the expansion area will be provided from an interior paved road to the west of the expansion area leading to Diablo Road and from the existing dirt tower access road to the south leading to Powerline Road, as shown in Figure 1.

### **2.1 Biological Resources**

Comprehensive literature reviews were conducted to determine which sensitive plant and animal species may occur within the Project area. Focused surveys and habitat assessments were based on the results of these reviews (BRC, 2008; Dudek, 2008a; Dudek, 2008b; Dudek, 2008c; Dudek, 2009a; Dudek, 2009b; Dudek, 2009c; EPG, 2007; GANDA 2011a, 2011b, 2011c) and are summarized below.

Additionally, required pre-construction surveys for biological resources will be conducted prior to start of construction, as applicable, and as described in Appendix C (Required Environmental Submittals).

Each summary below provides an overview of the biological resources in the vicinity, references previously prepared survey reports that describe the resources in more detail, and references tables in Appendix E that identify disturbance areas by habitat type.

### **2.1.1 Vegetation Communities**

Vegetation mapping for the vicinity of the Devers Expansion was conducted by Dudek in 2008 and 2009 (Dudek, 2010), and updated by Garcia and Associates (GANDA) in 2011 (GANDA, 2011a, b). A total of two vegetation communities/land cover types, creosote bush scrub and disturbed land, were mapped within the Devers Expansion area.

Temporary and permanent impacts to each vegetation community/land cover type are listed in Appendix E, Table E-1 (Biological Resource Impacts Summary Tables).

SCE will implement the applicable Project APMs and MMs (CPUC, 2006), BO conservation measures (USFWS, 2011), and Consistency Determination (CD) measures (CDFG, 2011) to mitigate impacts to special-status vegetation communities. Additionally, habitat restoration activities for temporary disturbance areas are described in the Project's *Habitat Restoration and Compensation Plan* (CH2M HILL, 2012b).

### **2.1.2 Special-status Plants**

Focused surveys and habitat assessments for the vicinity of the Devers Expansion were conducted by EPG (2007), BRC (2008), Dudek (2008a and 2009c) and GANDA (2011a, 2011b, and 2011c). One special-status plant species was found during focused rare plant surveys within the Project area. Several California barrel cactus (*Ferocactus cylindraceus* var. *cylindraceus*) individuals were observed in the vicinity of the Project during survey efforts conducted by GANDA (2011a, 2011b). On December 20, 2011, one California barrel cactus that occurred within the disturbance area was removed from the site in accordance with the Project's *Transplant Plan* (CH2M HILL, 2012a) and transplanted in a new location. Focused surveys for Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*; Federally Endangered, CNPS 1B.2) were also conducted with negative results (Dudek, 2008a; GANDA, 2011a; GANDA, 2011b).

Special-status plant locations are shown in Appendix B-2: Special-status Plants Mapbook (under separate cover), Figures DV2-001 and DV2-002. Temporary and permanent impacts to special-status plants are listed in Appendix E, Table E-2 (Biological Resource Impacts Summary Tables).

SCE will implement the applicable Project APMs and MMs (CPUC, 2006), BO CMs (USFWS, 2011), and CD measures (CDFG, 2011) to mitigate impacts to special-status plant species. In particular, special-status plant species suitable or required for transplanting are described in the Project's *Special-status Plant Impact Minimization and Avoidance Plan* (CH2M HILL, 2012a).

### **2.1.3 Special-status Wildlife**

Focused surveys and habitat assessments for the vicinity of the Devers Expansion were conducted by EPG (2007), BRC (2008), Dudek (2008b, 2008c, 2009a, 2009b, 2009c) and GANDA (2010 and 2011c). No special-status wildlife species were detected within the Project area. However, the Devers Expansion area is located within modeled desert tortoise habitat.

Temporary and permanent impacts to modeled desert tortoise habitat that occur in the Project area are listed in Appendix E, Table E-3 (Biological Resource Impacts Summary Tables).

SCE will implement the applicable Project APMs and MMs (CPUC, 2006), BO conservation measures (USFWS, 2011), and CD measures (CDFG, 2011) to mitigate impacts to special-status wildlife species and their habitats.

### **2.1.4 Jurisdictional Waters**

The Devers Expansion area contains United States Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), and California Department of Fish and Game (CDFG) jurisdictional non-wetland waters (Dudek, 2010b; Dudek, 2011a). Impacts to jurisdictional feature types include narrow ephemeral channels (Dudek, 2010b; Dudek, 2011a).



Temporary and permanent impacts to jurisdictional waters that occur within the Project area are listed in Appendix E, Table E-4 (Biological Resource Impacts Summary Tables).

SCE will implement the applicable Project APMs and MMs (CPUC, 2006) and jurisdictional water permit conditions (USACE, 2012; CDFG, 2012; and SWRCB, 2012) to mitigate impacts to jurisdictional waters.

## **2.2 Cultural Resources**

There are no known cultural resources within the Devers Substation Expansion area. Therefore, no cultural resource monitoring is required.

## **3.0 PROJECT COMPONENTS AND DISTURBANCE AREAS**

This section describes the main project elements and disturbance areas associated with the Devers Substation Expansion. Construction operating hours are planned to generally be from 7:00 a.m. to 6:00 p.m., Monday through Saturday, in compliance with the applicable noise ordinance, or a variance from the ordinance restrictions will be requested. In addition, construction may occasionally occur on Sundays.

SCE has established a DPV2 toll-free information line (866-602-3782) and website ([www.sce.com/dpv2](http://www.sce.com/dpv2)). The information line is the designated public notification contact for DPV2.

### **3.1 Existing Substation Site Upgrades**

Major elements of the existing substation site upgrades and activities include:

- New dead-end structures
- New disconnect switches
- Helipad and associated internal road relocation
- Circuit breaker replacements and upgrades

### 3.2 New Substation Expansion Improvements

The new substation expansion improvements are shown on Figure 1. Major elements and activities include:

- Relocated Helipad Access Road – approximately .5 acre
- Remaining Grading Area – approximately 2 acres
- Temporary Work Area Limits – approximately .5 acre

### 3.3 Site Work

The table below identifies the primary construction activities associated with the substation improvements.

EXPANSION CONSTRUCTION ACTIVITIES
• Grading, fill, and compaction
• Installation of drainage infrastructure
• Application and compaction of road base
• Installation of pavement
• Below ground construction
• Above ground construction

#### 3.3.1 Preconstruction Activities

Delineation of the limits of disturbance, installation of SWPPP BMPs, and installation of screened temporary construction fencing. Double drive gates will be installed on the existing substation fence line for access into the expansion area from the two access routes shown in Figure 1. The existing security guard station will be relocated from the south gate entrance to the north gate entrance off Diablo, for ingress and egress to and from the northern access route, through the substation, to the expansion area. Existing facilities will be sawcut and demolished, in preparation for removal and reconfiguration into the expansion area. Construction equipment and materials will be stored within the existing Devers Substation, in designated storage areas.

### **3.3.2 Grading Activities**

Grading, foundations, and drainage improvements will be required in the expansion area. Approximately 44,000 CY of weed free fill will be imported to the site to meet the existing substation pad finish grade, in the expansion area. The haul route will be provided by the Contractor upon award.

Approximately .5 acres of temporary work areas, as shown in Figure 1, is required for equipment access to facilitate the construction of these activities in the expansion area.

Water sources for dust control will be from the existing Devers Substation, nearby fire hydrants, or other approved water sources whose locations have not yet been identified. Water sources will be identified as part of the bid and award process.

### **3.3.3 Access Road Improvements**

A portion of the existing substation road, including the route to the existing helipad area, will be shifted to the east through the expansion area, to provide access to the new helipad area and other areas of the substation, as shown in Figure 1. Approximately 700 linear feet of 20 foot wide concrete finished roadway will be constructed through the expansion area to provide this relocated access.

Construction of the new access road will involve grading and compaction, road base placement and compaction, and application of pavement. These activities will likely occur sequentially.

Temporary access to the expansion area will be provided from the interior paved road to the west of the expansion area leading to Diablo Road and from the existing dirt tower access road to the south leading to Powerline Road, as shown in Figure 1.

### **3.3.4 Above Ground Construction**

The existing 500-kV operating bus will be extended two positions to the east into the expansion area. One of the two new positions will be equipped with breakers, disconnects, and associated equipment for the new D-V2 transmission line. An existing position will be

equipped with breakers, disconnects, and associated equipment for the new D-RB2 transmission line.

Permanent chain link fencing will be installed to enclose the expansion area at finished grade.

## 4.0 ACTIVITY SCHEDULE

The anticipated activity schedule for the Devers Substation construction activities is shown in the table below.

<b>Construction Schedule</b>		
<b>Construction Activity</b>	<b>Construction Duration</b>	<b>Start Date</b>
Site Grading	2 months	May 2012
Access Road Improvements	1 month	July 2012
Above Ground Construction	2 months	August 2012

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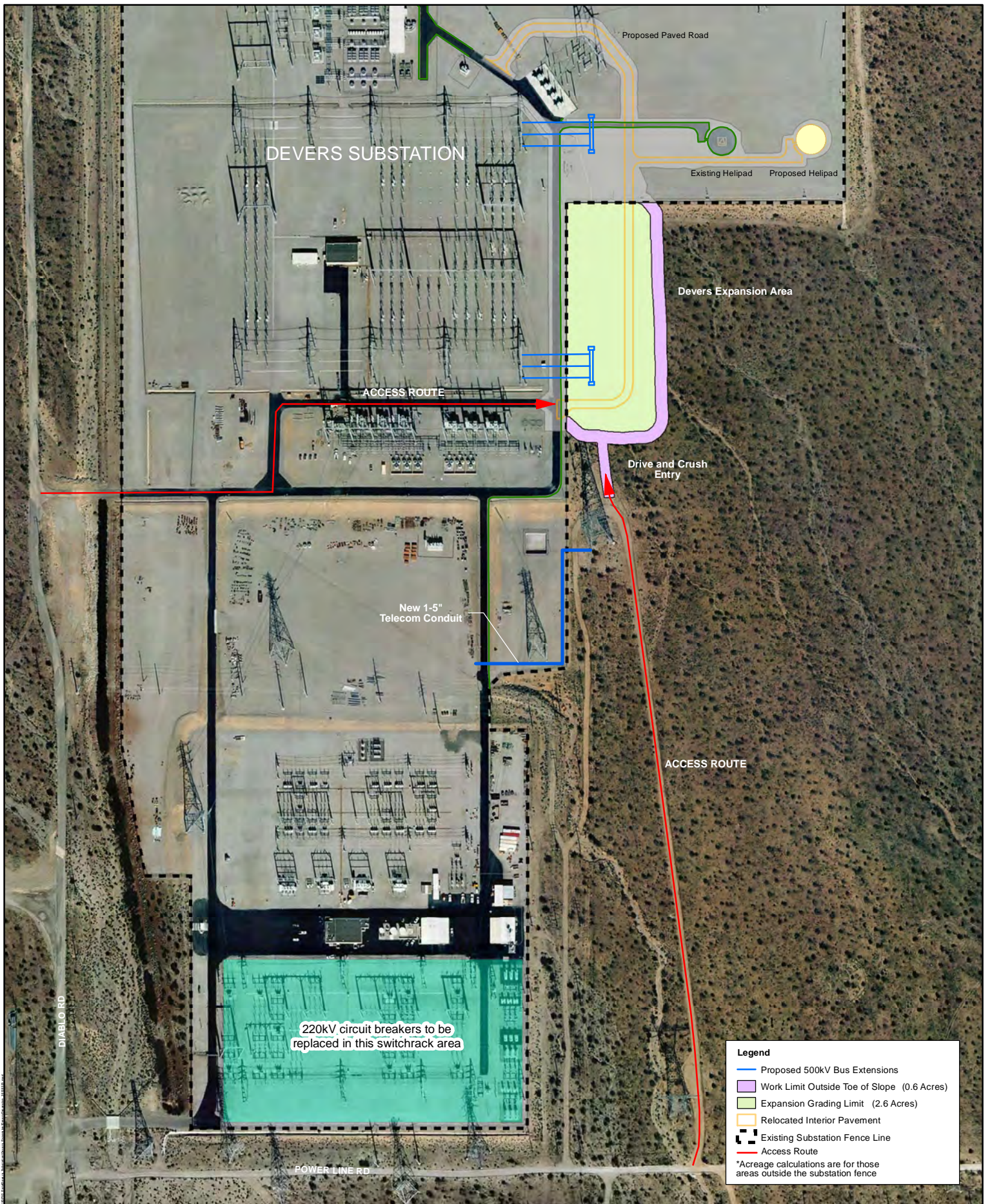
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## Figures



**Legend**

- Proposed 500kV Bus Extensions
- Work Limit Outside Toe of Slope (0.6 Acres)
- Expansion Grading Limit (2.6 Acres)
- Relocated Interior Pavement
- Existing Substation Fence Line
- Access Route

\*Acreage calculations are for those areas outside the substation fence

## **Appendix A**

### **Project Site and Access Mapbook**

#### **Devers Substation, DPV2**

**(Under Separate Cover)**

The project elements are shown in Figures 2-1 & 2-2 in the Devers-Valley Project Site and Access Map Book

**Appendix B**

**Biological Resources Mapbooks**

**(Under Separate Cover)**

The project elements are shown in the Biological Resources Mapbooks comprised of the following:

B-1: Vegetation Communities Mapbook,

B-2: Special-status Plants Mapbook, and

B-3: Special-status Wildlife Mapbook.

The project elements are shown in Figures 2-1 & 2-2 in the Devers-Valley Project Site and Access Map Book




## **Appendix C**

### **Required Environmental Submittals: APM, MM, and BO Table**



TABLE 1  
 Required Environmental Submittals: APM, MM and BO Measure Table  
 Devers Substation Expansion, DPV2  
 April 4, 2012

Note: This table contains USFWS Conservation Measures (BO) in addition to the Mitigation Measures (MM) and Applicant Proposed Measures (APM) from the MMCPRP.

 Preconstruction\*  During Construction  Post Construction

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Agriculture	MM AG-1a	<p>Establish agreement and coordinate construction activities with agricultural Landowners. Sixty (60) days prior to the start of project construction, Southern California Edison (SCE) shall secure a signed agreement with property owners of Farmland (Prime Farmland, Farmland of Statewide Importance, Unique Farmland) and Williamson Act lands that will be used for construction and operation of the project, access and spur roads, staging areas, and other project-related activities. The purpose of this agreement will be to set forth the use of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Williamson Act lands during construction in order to: (1) schedule proposed construction activities at a location and time when damage to agricultural operations would be minimized, and (2) ensure that any areas damaged or disturbed by construction are restored to a condition mutually agreed upon by the landowner and SCE. SCE shall coordinate with the agricultural landowners in the affected areas where Farmland or Williamson Act land will be temporarily disturbed in order to determine when and where construction should occur in order to minimize damage to agricultural operations. This includes avoiding construction during peak planting, growing, and harvest seasons. If damage or destruction does occur, SCE shall perform restoration activities on the disturbed area in order to return the area to a pre-determined condition or the pre-construction condition, whichever option is agreed upon by the landowner and SCE. This could include activities such as soil preparation, regarding, and reseeded. This measure applies to agricultural landowners with land that is impacted by the Proposed Project. SCE shall provide proof of the continued use of Farmland and/or Williamson Act lands through the submittal of a signed agreement between an individual property owner and SCE. The signed agreements shall be submitted to the CPUC and BLM for review and approval prior to the start of construction.</p>	Pre-construction, during and post construction	No	Not applicable. The substation elements will not require disturbances in farmlands
Agriculture	MM AG-4a	<p>Locate transmission towers and pulling/splicing stations to avoid agricultural operations. SCE shall site transmission towers and pulling/splicing stations in locations that minimize impacts to active agricultural operations. Specifically, SCE shall comply with the following measures when siting transmission towers and splicing/pulling stations within areas where active cultivated farmland would be removed through the presence of structures:</p> <ul style="list-style-type: none"> <li>• SCE shall avoid orchards, vineyards, row crops, and furrow-irrigated crops where towers would interfere with irrigation and harvest activities.</li> <li>• SCE shall avoid irrigation canals and ditches.</li> <li>• SCE shall align towers adjacent to field boundaries and parallel to rows (if located in row crops), and shall avoid diagonal orientations and angular alignments within agricultural land.</li> <li>• SCE shall match tower spans with existing DPV1 towers within agricultural land.</li> <li>• SCE shall construct towers with heights and spacing to minimize safety hazards to aerial applicators flying in the Palo Verde Valley (CA) and other agricultural areas;</li> <li>• SCE shall consult with the Palo Verde Irrigation District (PVID) regarding tower placement to minimize disruption to PVID facilities;</li> <li>• SCE shall document and provide proof of compliance with the above listed items 90 days prior to the start of Proposed Project construction. This documentation shall be submitted to the CPUC and the BLM for review and approval prior to the start of construction, and reviewed with affected landowners during coordination presented in Mitigation Measure AG 1a (Establish agreement and coordinate construction activities with agricultural landowners).</li> </ul>	Pre-construction	No	Not applicable. The substation elements are not towers that will be installed in farmland.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Air Quality	MM AQ-1a	<p>Develop and Implement a Fugitive Dust Emission Control Plan: SCE shall develop and implement a Fugitive Dust Emission Control Plan (FDECP) for construction work. Measures to be incorporated into the plan include, but are not limited to the APMs (A-1 and A-5 through A-7) and the following, which also incorporate and revise the requirements of APMs A-2 through A-4 to make them definitive and enforceable:</p> <p>CARB certified non-toxic soil binders shall be applied to all active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout construction (as allowed by responsible agencies such as the BLM or USFWS) in amounts meeting manufacturer's recommendations to meet the CARB certification fugitive dust reduction efficiency of 84 percent.</p> <p>Water the disturbed areas of the active construction sites, where CARB certified soil binders have not been applied, at least three times per day.</p> <p>Enclose, cover, water three times daily, or apply non-toxic soil binders according to manufacturer's specifications to exposed piles with a five percent or greater silt content.</p> <p>Install wheel washers/cleaners or wash the wheels of trucks and other heavy equipment where vehicles exit the site or unpaved access roads and sweep paved streets daily with water sweepers if visible soil material from the construction sites or unpaved access roads are carried onto adjacent public streets.</p> <p>Establish a vegetative ground cover or allow natural revegetation to occur on temporarily disturbed areas following the completion of construction (in compliance with biological resources impact mitigation measures), or otherwise create stabilized surfaces on all unpaved areas at each of the construction sites within 21 days after active construction operations have ceased.</p> <p>Increase the frequency of watering, or implement other additional fugitive dust mitigation measures, to all disturbed fugitive dust emission sources when wind speeds (as instantaneous wind gusts) exceed 25 miles per hour (mph).</p> <p>Travel route planning will be completed to identify required travel routes to minimize unpaved road travel to each construction site to the extent feasible.</p>	Pre-Construction and during construction	Yes	This measure is addressed through the Project-wide Mitigation Plan approved on 4/18/11. This plan will be implemented during construction.
Air Quality	MM AQ-1b	Use ultra low-sulfur diesel fuel. CARB-certified ultra low-sulfur diesel (ULSD) fuel containing 15 ppm sulfur or less shall be used in all diesel-powered construction equipment.	During construction	Yes	This measure will be implemented during construction. Fuel purchase records will be kept onsite.
Air Quality	MM AQ-1c	Restrict engine idling to 10 minutes	During construction	Yes	This measure will be implemented during construction.
Air Quality	MM AQ-1d	Use lower emitting off-road diesel-fueled equipment. All off-road construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless certified by engine manufacturers that the use of such devices is not practical for specific engine types. Equipment properly registered under and in compliance with CARB's Statewide Portable Equipment Registration Program are considered to comply with this mitigation measure.	During construction	Yes	This measure will be implemented during construction. Off-road equipment records shall be kept and made available to the monitors if requested.
Air Quality	MM AQ-1e	Use on road vehicles that meet California on road standards. All on road construction vehicles working within California shall meet all applicable California on road emission standards and shall be licensed in the State of California. This does not apply to construction worker personal vehicles.	During construction	Yes	This measure will be implemented during construction.
Air Quality	MM AQ-1f	Use lower emitting off-road gasoline-fueled equipment. All off-road stationary and portable gasoline powered equipment shall have EPA Phase 1/Phase 2 compliant engines, where the specific engine requirement shall be based on the new engine standard in effect two years prior to the initiating project construction.	During construction	Yes	This measure will be implemented during construction.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Air Quality	MM AQ-1g	Reduce helicopter use during construction. Helicopter use shall be limited in California to that necessary for conductor installation, using helicopters of the smallest practical size and helicopters shall not be used for delivering supplies or personnel within California federal or State ozone nonattainment areas except as specifically excepted by the CPUC due to limitations in road access and/or to reduce other adverse environmental impacts associated with road construction/travel (such as to biological resources or cultural resources).	During construction	No	Not applicable. Substation construction activities do not require the use of helicopters.
Air Quality	MM AQ-1h	Schedule deliveries outside of peak hours. For marshalling and construction yards west of the eastern border of the City of Indio, all material deliveries to the yards and from the yards to the construction sites shall be scheduled to occur outside of peak "rush hour" traffic hours (7:00 to 10:00 a.m. and 4:00 to 7:00 pm) to the extent feasible, and other truck trips during peak traffic hours shall be minimized to the extent feasible.	During construction	No	Not applicable. This measure only applies to marshalling and construction yards.
Air Quality	MM AQ-1i	Obtain NOx emission offsets. SCE shall obtain NOx emission reduction credits or offsets in sufficient quantities to offset construction emissions of NOx that exceed the South Coast Air Basin ozone nonattainment area federal General Conformity Rule applicability threshold as determined in the General Conformity analysis for the project. The emission offset method shall comply with SCAQMD rules and regulations, and offsets shall be obtained by SCE prior to construction.	Pre-construction	Yes	Projectwide offsets have been purchased for 2012.
Air Quality	APM A-1	Heavy duty off-road diesel engines would be properly tuned and maintained to manufacturers specs to ensure minimum emissions under normal operations	During construction	Yes	This measure will be implemented during construction.
Air Quality	APM A-2	Water or chemical dust suppressants would be applied to unstabilized disturbed areas and/or unpaved roads in sufficient quantity and frequency to maintain a stabilized surface	During construction	Yes	This measure will be implemented during construction.
Air Quality	APM A-3	Water or water-based chemical additives would be used in such quantities to control dust on areas with extensive traffic including unpaved access roads; water, organic polymers, lignin compounds, or conifer resin compounds would be used depending upon availability, cost and soil type.	During construction	Yes	This measure will be implemented during construction.
Air Quality	APM A-4	Surfaces permanently disturbed by construction activities would be covered or treated with a dust suppressant after completion of activities at each site of disturbance	During and post construction	Yes	This measure will be implemented during and post construction as applicable.
Air Quality	APM A-5	Vehicle speeds on unpaved roadways would be restricted to 15 mph.	During construction	Yes	This measure will be implemented during construction, with the exception of grading equipment, operating during the grading process.
Air Quality	APM A-6	Vehicles hauling dirt would be covered by tarps or other means.	During construction	Yes	This measure will be implemented during construction consistent with MMCRP interpretation and Approach.
Air Quality	APM A-7	Site construction workers would be staged offsite at or near paved intersections and workers would be shuttled in crew vehicles to construction sites as part of the construction contract SCE would require bidders to submit a construction transportation plan describing how workers would travel to the jobsite.	Pre-construction and during construction	No	Construction workers will be staged at the existing substation parking area or construction yard.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	MM B-1a	<p>Prepare and implement a Habitat Restoration/Compensation Plan. SCE shall restore all areas disturbed by project construction, including temporary disturbance areas around tower construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations that are removed during construction of the Proposed Project. Where onsite restoration is planned for mitigation of temporary impacts to sensitive vegetation communities, SCE shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC/BLM. Hydroseeding, drill seeding, or an otherwise proved restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC/CDFG/ADGF/FWS and BLM. SCE shall flag the limits of disturbance at each construction site. The Plan shall incorporate the measures identified in the June 2006 Memorandum of Understanding regarding vegetation management along rights-of-way for electrical transmission and distribution facilities on Federal lands. In project areas that occur in the WRCMSHCP plan area, SCE shall use the applicable Best Management Practices identified in the WRCMSHCP.</p> <p>The creation or restoration of habitat shall be monitored for five years after mitigation site construction, or until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the CPUC/BLM.</p>	Pre-construction, during and post construction	Yes	Applies to vegetated areas disturbed by construction activities. CH2M HILL. 2011a.
Biology	MM B-2a	<p>Conduct invasive and noxious weed inventory. SCE shall survey the project corridor, including access roads, for populations of invasive and noxious weeds prior to the start of construction. All populations of invasive and noxious weeds within 500 feet of each tower location shall be flagged prior to construction. The Applicant shall submit a Noxious Weed Control Plan to BLM, CPUC, ADGF, CDFG, and/or USFWS at least 60 days prior to the start of construction. The weed control plan shall specify the location of existing weed populations; measures to control introduction and spread of noxious weeds in the project corridor; worker training, specifications, and inspection procedures for construction materials and equipment used in the project corridor; post-construction monitoring for noxious weeds; and eradication and control methods.</p> <p>Known populations of invasive and noxious weeds in the project corridor shall be evaluated by BLM, CPUC, CDFG, and USFWS to identify candidates for eradication. Selected weed populations shall then be eradicated prior to construction. All seeds and straw material shall be certified weed free. All gravel and fill material used during project construction and maintenance shall be certified weed free by the local County Agriculture Commissioner's Office.</p>	Pre-construction and during construction	Yes	A project-wide Noxious Weed Control Plan has been prepared which addresses this measure. CH2M HILL, 2011b
Biology	MM B-2b	<p>Implement control measures for invasive and noxious weeds. SCE shall adhere to the BLM management guidelines for reducing the potential for the introduction of noxious weeds and invasive, non-native plant species by implementation of the following standards:</p> <p>Wash all equipment and vehicles. Vehicles and all equipment must be washed BEFORE AND AFTER entering all project sites unless otherwise directed in writing by the BLM. This includes wheels, undercarriages, bumpers and all parts of the vehicle. In addition, all tools such as chain saws, hand clippers, pruners, etc., must also be washed BEFORE AND AFTER entering all project areas. For example, vehicles traveling into contaminated areas are the main dispersal mechanism for yellow star-thistle. All washing must take place where rinse water is collected and disposed of in either a sanitary sewer or a landfill.</p> <p>Keep written logs. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used and staff present. The log shall contain the signature of the responsible crewmember. Written logs will be available for CPUC/BLM inspection and shall be turned in to BLM on a weekly basis.</p> <p>Post-construction weed abatement on the Coachella Valley Preserve. Post-construction follow-up weed abatement will be conducted on the work areas within the Coachella Valley Preserve and Kofa National Wildlife Refuge. Weed abatement will be conducted during the spring following construction and prior to when the weeds establish flowers or produce seeds.</p>	During and post construction	Yes	CH2M HILL, 2011b

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	MM B-5a	<p>Conduct pre-construction surveys and monitoring for breeding birds. SCE shall conduct protocol level surveys for nesting birds if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, and access road/spur road locations. SCE shall be responsible for designating a CPUC/BLM-approved qualified biologist who can conduct pre-construction surveys and monitoring for breeding birds. If State or federally listed birds with active nests are found, a biological monitor shall establish a 500-foot buffer around the nest and no activities will be allowed within the buffer until the young have fledged from the nest or the nest fails. The biological monitor shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the 500-foot buffer until the nesting cycle is complete or the nest fails. The biological monitor shall be responsible for documenting the results of the surveys and the ongoing monitoring. A 300-ft buffer shall be implemented in the event that raptors or other species protected under the MBTA are located. This buffer will be evaluated after consultation with the CPUC/BLM/CDFG and USFWS.</p>	Pre-construction and during construction	Yes	<p>Due to potentially suitable nesting habitat for some avian species, preconstruction nesting bird surveys will be required during the appropriate time of year. If breeding birds with active nests are found, a biological monitor will establish a suitable buffer around the nest for ground based construction activities.</p>
Biology	MM B-6a	<p>Develop a transplanting plan. In coordination with the BLM, SCE shall prepare a transplanting plan in compliance with both Arizona and California laws and regulations regarding native and sensitive plants, prior to project construction activities. The plan will provide details on the plants being transplanted, including which species and how many individuals of each species; where the plants will be transplanted; how the plants will be transplanted; how the plants will be maintained during the transplanting efforts; and if the plants will be used to re-vegetated disturbed areas of the construction site. As a condition of the plan, a pre-construction survey will be conducted to mark (using bright-colored flagging) all plants that will be transplanted. Some cacti will need to be transplanted facing the same direction as they currently face (in other words, the north side of the plant must stay facing the north); these cacti will be identified in the plan and appropriately marked to identify which side faces north. For listed plant species SCE shall identify if the plants can be avoided. If avoidance is not possible, SCE shall purchase off site mitigation in coordination with the USFWS and CDFG.</p>	Pre-construction and during construction	Yes	<p>A project-wide mitigation plan has been prepared which addresses this measure. One cactus was found onsite and was transplanted on December 20, 2011. CH2M HILL, 2011c</p>

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	MM B-7b	<p>Conduct pre-construction tortoise surveys. Prior to construction, SCE shall survey the transmission line corridor for desert tortoise burrows and pallets within fourteen (14) days preceding construction. Tortoise burrows and pallets encountered within the construction zone (if any) will be conspicuously flagged by the surveying biologist(s) and avoided during all construction activities.</p> <p>During construction activities, SCE shall inspect under equipment and vehicles prior to moving equipment. If tortoises are encountered, the vehicle will not be moved until such animals have voluntarily moved to a safe distance away from the parked vehicle or a qualified biologist moves the tortoise.</p> <p>SCE shall monitor construction activities in all areas with the potential to support desert tortoise.</p> <p>Desert tortoises will be handled only by a FWS/CDFG permitted and authorized tortoise handler and only when necessary. New latex gloves will be used when handling each desert tortoise to avoid the transfer of infectious diseases between animals. Desert tortoises will be moved the minimum distance possible within appropriate habitat to ensure their safety. In general, desert tortoises will not be moved in excess of 1,000 feet for adults and 300 feet for hatchlings.</p> <p>Desert tortoises that are found above ground and need to be moved will be placed in the shade of a shrub. All desert tortoises removed from burrows will be placed in an unoccupied burrow of approximately the same size as the one from which it was removed. All excavation of desert tortoise burrows will be done using hand tools, either by, or under the direct supervision of, an authorized tortoise handler. If an existing burrow is unavailable, an authorized tortoise handler will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original burrow. Desert tortoises moved during inactive periods will be monitored for at least two days after placement in the new burrows to ensure their safety. An authorized tortoise handler will be allowed some judgment and discretion to ensure that survival of the desert tortoise is likely.</p> <p>If desert tortoises need to be moved at a time of the day when ambient temperatures could harm them (less than 40 degrees F or greater than 90 degrees F), they will be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of an authorized tortoise handler under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes will be appropriately discarded after one use.</p> <p>All desert tortoises moved will be marked for future identification. An identification number using the acrylic paint/epoxy covering technique should be placed on the fourth costal scute. No notching would be authorized.</p>	Pre-construction and during construction	Yes	<p>The Project elements occur in modeled desert tortoise habitat; therefore, this measure will be implemented.</p> <p>USFWS, 2011</p>
Biology	MM B-7c	<p>Purchase mitigation lands for impacts to tortoise habitat. Following construction, SCE shall acquire lands to compensate for the loss of tortoise habitat within the Category II and III management areas in Arizona and California. The amount of land to be acquired will depend on the acreage of disturbance within these management areas. Acquired lands will be in a nearby area of good tortoise density and within tortoise habitat. BLM and SCE shall conduct a field inspection of the disturbed areas after completion of construction of the transmission line to determine the exact acreage required for compensation. The lands purchased will be transferred to the United States and be administered by the BLM. Land may be transferred to the BLM and/or incorporated into an existing management area.</p>	Post-Construction	Yes	<p>The Project elements occur in modeled desert tortoise habitat; therefore, this measure will be implemented.</p> <p>USFWS, 2011</p>

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	MM B-7d	<p>Purchase mitigation lands for impacts to fringe-toed lizard habitat. SCE shall purchase or enhance lands for all permanent loss of habitat that are within the Coachella Valley fringe-toed lizard Critical Habitat unless otherwise directed by the USFWS Biological Opinion for the Proposed Project. Mitigation Lands shall be determined in consultation with the USFWS, CDFG, and CPUC.</p> <p>Clearing work areas of CVFTL in the Coachella Valley Preserve. A temporary fence or other effective barrier that does not allow lizards to enter the work areas shall be constructed around the perimeter of each of the work areas in the refuge. Any lizards found within the barrier shall be relocated outside of the work areas.</p> <p>Duration of Surveys for fringe-toed lizard and flat-tailed horned lizard. Surveys for CVFTL and FTHL shall be conducted during the appropriate seasons (May 1 through the end of summer) and conditions for species identification. The duration of the surveys shall coincide with the duration of construction activities in potential habitat for these species (particularly on the Coachella Valley Preserve) that occurs during the summer season. For any areas of suitable habitat, this measure shall apply. Construction shall not occur on the Preserve or in other potential habitat areas outside of the detection period for FTHL.</p>	During and Post construction	No	The Project elements do not support suitable fringe-toed lizard or flat-tailed horned lizard habitat; therefore, this measure does not apply.
Biology	MM B-7e	<p>Conduct focused surveys for California gnatcatchers. SCE shall conduct protocol level surveys for California Gnatcatchers in all areas supporting suitable coastal sage or Riversidean sage scrub habitats that may be affected by the project (San Bernardino to Vista Substation and San Bernardino Junction to San Bernardino Substation). This will include a minimum 300 foot buffer around construction areas. Presence/absence of this species shall be determined prior to construction activities. If direct impacts to coastal California gnatcatcher occupied habitat cannot be avoided, then impacts to this species shall be addressed through either the Section 7 or Section 10(a)(1)(B) Process under the Federal Endangered Species Act of 1973, as amended and consistent with the WRCMSHCP. SCE shall complete compliance with the Federal Endangered Species Act prior to Project construction. After definition of suitable habitat, the following requirements apply:</p> <ul style="list-style-type: none"> <li>• Construction activities shall be restricted within coastal sage scrub habitat during the gnatcatcher breeding season (March 15 July 31);</li> <li>• SCE shall implement the applicable Best Management practices in the WRSMSHCP;</li> <li>• SCE shall restore, create, or enhance on site coastal sage scrub habitat; and/or</li> <li>• SCE shall purchase land or mitigation bank credits at an appropriate ratio to offset impacts to gnatcatchers and their habitat.</li> </ul>	Pre-construction, during and post construction	No	The Project elements do not support suitable habitat for coastal California gnatcatchers; therefore, focused surveys are not required.
Biology	MM B-7f	<p>Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat. Prior to the implementation of construction in areas that support suitable habitat for Stephens' kangaroo rat and San Bernardino kangaroo rat (Calimesa and San Timoteo Canyon). SCE shall conduct focused surveys to determine if sign (burrows, scat, and etc.) of these species is present in all areas within 100 feet that would be permanently or temporarily affected by construction activities. All surveys shall be conducted by a qualified biologist who holds the appropriate Federal FWS permits to conduct trapping surveys for these species. If sign is found to be present, then SCE shall conduct focused trapping surveys according to accepted protocols to determine presence/absence of these species. If these species are found, then SCE shall implement measure to avoid direct impacts, including the placement of exclusion fencing around work areas where impacts will occur, trapping of animals from inside impact areas, and placement of those animals outside of exclusion fencing until construction is completed. A qualified biological monitor shall be present during construction to ensure that animals are not harmed. Following completion of construction, SCE shall remove all exclusion fencing and recontour the soils to the pre-construction condition.</p>	Pre-construction, during and post construction	No	The Project elements do not contain suitable habitat for Stephens' kangaroo rat or San Bernardino kangaroo rat; therefore, focused surveys are not required. Dudek 2009

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	MM B-8a	Conduct surveys for listed plant species. SCE shall conduct focused surveys for listed and sensitive plants prior to construction, Surveys shall be conducted during the appropriate floristic period necessary for the identification of sensitive plant species in all suitable habitat located within the Project ROW and within 100' of all surface disturbing activities. Populations of sensitive plants shall be flagged and mapped prior to construction. If listed plants are located during the focused surveys, then modification of the placement of towers, access roads, laydown areas, and other ground disturbing activities would be implemented in order to avoid listed plants. If listed plants cannot be avoided, SCE shall be responsible for the translocation of plants and/or collection of seeds from existing populations that would be impacted and the planting/seeding of these plants in adjacent suitable portions of the ROW that would not be affected by Proposed Project construction or maintenance activities. Impacts to listed plant species would addressed through the context of a biological opinion.	Pre-construction and during construction	Yes	Pre-construction surveys will be conducted to identify listed and sensitive plants prior to construction. If sensitive plants are found the measure will be implemented.
Biology	MM B-9b	Conduct biological monitoring. SCE shall conduct biological monitoring of the project area including the laydown, staging, access roads, and any area subject to project disturbance. The biological monitor shall look for sensitive wildlife species (including forest watchlist animals and Forest Service Region 5 sensitive species) that may be located within or immediately adjacent to the construction areas. If sensitive species are found, the biological monitor shall move them out of harm's way (listed species require take authorization) to avoid direct impacts to these species. In the event that the wildlife species may cause harm to the biologist, the biologist shall notify the construction crews and monitor the species until it moves out of harms way. The results of all monitoring shall be recorded in daily monitoring notes that shall be included as part of the required monitoring reports for the project. The SCE shall notify the CPUC/BLM if any sensitive species are located during construction of the project. The SCE shall notify the Forest Service of all sensitive species found on Forest Service land.	During construction	Yes	Biological monitors will be present during construction activities.
Biology	MM B-9c	Implement a Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist(s) provided by SCE and approved by the CPUC/BLM prior to the commencement of construction activities. Training materials and briefings shall include but not be limited to, discussion of the Federal and State Endangered Species Acts, the consequences of noncompliance with these acts, identification and values of sensitive plant and wildlife species and significant natural plant community habitats, fire protection measures, sensitivities of working on forest service lands and identification of Forest Service sensitive species and MIS wildlife species, hazardous substance spill prevention and containment measures, and review of mitigation requirements. Training materials and a course outline shall be provided to the CPUC and BLM for review and approval at least 30 days prior to the start of construction. Training materials and updates of training materials shall also be provided to the Forest Service for review and comment. SCE shall provide to the CPUC and BLM a list of construction personnel who have completed training, and this list shall be updated by SCE as required when new personnel start work. No construction worker may work in the field for more than 5 days without receiving the WEAP.	Pre-construction, and during construction	Yes	WEAP training is required for all field personnel working on the Project.
Biology	MM B-9d	Conduct pre-construction reptile surveys. Prior to construction, SCE shall conduct surveys in areas of suitable habitat for Sonoran desert tortoise, common chuckwalla, banded Gila monster, and desert rosy boa within 48 hours prior to the start of construction activities. If common chuckwallas, banded Gila monsters and/or desert rosy boas are found on the construction site, they will be relocated to nearby suitable habitat outside the construction area. Following the clearance surveys, exclusion fencing will be erected or a biological monitor will be onsite during construction activities. <ul style="list-style-type: none"> <li>If potentially suitable burrows or rock piles are found, they will be checked for occupancy. Occupied burrows will be flagged and avoided (employing a 50 foot buffer) during construction. If the burrow cannot be avoided, it will be excavated and the occupant relocated to an unoccupied burrow outside the construction area and of approximately the same size as the one from which it was removed. If an existing burrow is unavailable, the biologist will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original. Trenches, holes, or other excavations will be examined for banded Gila monster prior to filling. If individuals are found, the biological monitor will relocate them to nearby suitable habitat.</li> <li>During construction, if a common chuckwalla, banded Gila monster, and/or desert rosy boa occur on the project site, construction activities adjacent</li> </ul>	Pre-construction and during construction	Yes	The Project elements support suitable reptile habitat; therefore, this measure will be implemented.  USFWS, 2011



Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	MM B-9e	<p>Conduct pre-construction surveys and owl relocation. Prior to construction, SCE shall conduct pre-construction surveys for the western burrowing owl. Surveys shall be conducted prior to ground disturbance activities in appropriate areas within the potential impact areas of the project to determine the presence of burrowing owls and to ensure clearance of these areas. If active owl burrows are discovered during pre-construction surveys, owls would be evicted from the burrows using either active or passive techniques as recommended by the BLM and Burrowing Owl Consortium. Owl relocation, as well as discouragement of owls from returning to the site, will occur in the following manner:</p> <p>During the non-breeding season (September 1 through January 31), burrowing owls occupying the Proposed Project site will be evicted by passive relocation. Passive relocation would include installation of one-way doors on burrow entrances that would let owls out of the burrow but would not let them back in.</p> <p>If construction is to occur during the breeding season (February 1 through August 31) and prior to the relocation of the owls, 75 meter (246 foot) protective buffers would be maintained around burrows occupied by owls until a BLM approved biologist approves other action. Other actions could include passive relocation if it is determined that owls have not begun laying eggs or postponement of construction in the area until the young are fledged and no longer dependent upon the nest burrow.</p> <p>Once fledglings are capable of independent survival and adult non-breeding owls have successfully been relocated offsite, potential owl habitat (squirrel burrows) would be collapsed in order to keep the owls from returning. Ground squirrels would be removed from the site by trapping and relocation or by other approved means. Following squirrel removal, existing ground squirrel burrows would be destroyed.</p>	Pre-construction and during construction	Yes	Pre-construction burrowing owl surveys will be conducted. If burrowing owls are found onsite and cannot be avoided, passive relocation will be conducted.
Biology	MM B-9f	Perform construction outside of breeding and lambing period. Construction activities conducted within suitable habitat near Burnt Mountain, Harquahala Mountain, and Kofa NWR shall not occur during the period of the year when bighorn sheep are lambing (from January 1 to April 30). A pre-construction survey for bighorn sheep shall be conducted on Forest Service lands prior to construction and maintenance of the transmission lines. If bighorn sheep are found, then SCE shall consult with the Forest Service, USFWS, and Bighorn Institute to identify appropriate avoidance measures.	Pre-construction and during construction	No	The Project elements do not support bighorn sheep habitat; therefore this measure does not apply.
Biology	MM B-9g	Conduct pre-construction surveys and relocation for American badger. Prior to construction, SCE shall conduct pre-construction surveys for American Badger. Surveys will be conducted prior to ground disturbance activities in areas that contain habitat for this species. Badger dens located outside the project area shall be flagged for avoidance. Unoccupied dens located in the right of way shall be covered to prevent the animal from re-occupying the den prior to construction. If occupied dens are identified in the area of the ROW that must be disturbed, the CDFG/BLM/Forest Service shall be consulted regarding options for action. Hand-excavation is an option if occupied dens cannot be avoided, but alternatives shall be considered due to potential danger to biologists. Dens shall only be hand-excavated before or after the breeding season (February 1–May 30). Any relocation of badgers shall take place after consultation with the BLM, Forest Service, and CDFG.	Pre-construction and during construction	No	The Project elements do not support American badger habitat; therefore, this measure does not apply.
Biology	MM B-9h	Conduct pre-construction surveys for roosting bats. SCE shall conduct surveys focused surveys for suitable roosting habitat or nursery sites for sensitive bats at the tower location, access/spur roads, and laydown/staging areas that occur in rocky areas or in areas where caves or old mines are present. If suitable roosting/nursery sites are found, then focused surveys shall be conducted to determine if the sites support sensitive bat species. If sensitive bat species occur at these sensitive roosting/nursery sites, then tower-specific adjustments and adjustments of the locations of access/spur roads and laydown/staging areas shall be made to avoid these sites. If towers, access/spur roads, and/or laydown/staging areas cannot avoid these sites, then construction of the towers, roads, and establishment of laydown/staging areas shall be delayed until the breeding cycles for the sensitive bats are completed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the sensitive bats are completed. SCE shall document the results of the surveys and any avoidance of roosting/nursery sites for sensitive bats.	Pre-construction	No	The Project elements do not support bat roosting habitat; therefore, this measure does not apply.
Biology	MM B-9i	Schedule construction when the Coachella Valley round-tailed squirrel is dormant. SCE shall conduct pre-construction surveys for Coachella Round Tailed Squirrels prior to construction to identify locations of nesting colonies. Placement of footings, roads, and laydown areas shall avoid nesting colonies of this species. If this species is identified within the ROW, construction activities shall be scheduled only during periods when this species is dormant (between August 1 and February 28).	Pre- construction	No	The Project elements fall within the range of the Coachella Valley round-tailed ground squirrel; however, no nesting colonies or suitable habitat was observed. Dudek, 2009

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	MM B-13a	Demonstrate compliance with the Western Riverside County MSHCP. SCE shall provide documentation that it has complied with the provisions of the MSHCP.	Pre-construction and during construction	No	This measure applies to locations within the San Gorgonio River/San Bernardino-San Jacinto Mountains Linkage of the Western Riverside County MSHCP.
Biology	MM B-13b	Implement the Best Management Practices required by the Western Riverside County MSHCP. SCE shall provide documentation that is has implemented the Best Management Practices set forth in Appendix C of the Western Riverside MSCHP.	During construction	No	This measure applies to locations within the the San Gorgonio River/San Bernardino-San Jacinto Mountains Linkage of the Western Riverside County MSHCP. Erosion control measures and Best Management Practices (BMPs) will be implemented as directed in the Stormwater Pollution Prevention Plans (SWPPP).
Biology	MM B-15a	Utilize collision-reducing techniques in installation of transmission lines. SCE shall install the transmission line utilizing APLIC standards for collision-reducing techniques as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994 (APLIC, 1996)." <ul style="list-style-type: none"> <li>• Placement of towers and lines will not be located significantly above existing transmission line towers and lines, topographic features, or tree lines to the maximum extent practicable.</li> <li>• Overhead lines that occur significantly above the above-mentioned features and that are located in highly utilized avian flight paths will be marked utilizing aerial marker spheres, swinging plates, spiral vibration dampers, bird flight diverters, avifauna spirals, or other diversion device as to be visible</li> </ul>	Pre-construction and during construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	MM B-16a	Prepare and implement a raven control plan. SCE shall prepare a common raven control plan that identifies the purpose of conducting raven control, provides training in how to identify raven nests and how to determine whether a nest belongs to a raven or a raptor species, describes the seasonal limitations on disturbing nesting raptors species (excluding ravens), describes the procedure for obtaining a permit from the USFWS's Division of Migratory Birds, and describes procedures for documenting the activities on an annual basis. SCE shall gain approval of the plan from the USFWS's Division of Migratory Birds. SCE shall provide this raven control plan to all transmission line companies that conduct operations within the ROW.	Pre-, during, and post-construction	Yes	The Project elements are located within modeled desert tortoise habitat; therefore this measure will be implemented.
Biology	MM B-18a	No Activities in Riparian Conservation Areas. The final project design will include protective measures that prohibit construction activities on NFS lands in Riparian Conservation Areas in compliance with the Forest Plan. Examples of activities that will NOT be allowed include ground disturbance, adding potable water to these areas while implementing erosion control measures, and removing water from the waterways.	Pre-construction and during construction	No	This measure applies to areas within the San Bernardino National Forest; therefore, this measure does not apply.
Biology	APM B-1	Vegetation: Avoid direct disturbance of highly sensitive features (as identified in E. Linwood Smith's (1985) Impact Assessment/Mitigation Planning Chart; see Appendix E) with spanning and careful local adjustment in tower footing placement. (BLM B-5.1 Vegetation) <sup>4</sup> [Note: The reference to Appendix E is unknown. There is no Appendix E as part of the BLM right-of-way grant (provided from PEA Appendix A). However, the Smith report itself is found in FSEIS (1988) as Appendix B, Study of Desert Bighorn Sheep.]	Pre-construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-2	Vegetation: Avoid the introduction of noxious weeds and/or other invasive species through standard noxious weed measurements. This will benefit most of the species covered by the [Coachella Valley Multiple Species Habitat Conservation] plan. (SCE)	During construction	Yes	Standard weed control measures will be implemented as stated in the project's Noxious Weed Control Plan. CH2M HILL, 2011b

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	APM B-4	Vegetation/Wildlife: Avoid sand compaction at all sites in the Coachella Valley. This will benefit such species as the giant sand treader cricket, Coachella Valley Jerusalem cricket, and Coachella Valley milkvetch. (SCE)	During construction	No	The Project elements are located in scrub and disturbed vegetation communities. However, vehicles will remain on established roads to the maximum extent feasible.
Biology	APM B-6	Vegetation: Avoid vehicular travel in washes to protect triple-ribbed milkvetch. (SCE)	During construction	No	No triple-ribbed milkvetch have been documented at the Project elements; therefore this measure does not apply.
Biology	APM B-7	Vegetation/Wildlife: No activities whatever should occur in wetland areas. (SCE)	During construction	No	No jurisdictional federal wetlands were identified at these Project elements. Dudek, 2011
Biology	APM B-8	Vegetation: Provide additional detailed surveys and tower-specific adjustments as needed prior to construction for major sensitive feature sites (e.g., concentrations of sensitive plants, individual palm trees, woody dune or wash communities) which cannot be easily avoided by spanning. (See Appendix B of the Devers–Palo Verde No. 2 EIR [1987] and Appendix E of the SEIS [1988].) The methodologies and results of these surveys must be submitted to and approved in writing by the BLM Authorized Officer. (BLM B-5.2 Vegetation)	Pre-construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-9	Vegetation: Initiate transplant efforts for <i>Ferocactus</i> and <i>Coryphantha</i> as soon as probable losses can be determined. Any plans for transplanting must be developed in consultation with a BLM botanist and approved in writing by the BLM Authorized Officer. (BLM B-5.4 Vegetation)	Pre-construction and during construction	Yes	One <i>Ferocactus</i> was observed within the Project element and was relocated on December 20, 2012.
Biology	APM B-11	Vegetation: The Authorized Officer may require vegetation in certain areas to be cleared by hand tools. Scalping of top soil and removal of low growing vegetation will not be allowed unless authorized by the Authorized Officer. (BLM B-5.6 Vegetation)	Pre-construction and during construction	No	No sensitive vegetation communities were observed on site. Dudek, 2009
Biology	APM B-12	Vegetation: Where possible, towers or access roads will be located so as to avoid sensitive plants or plant communities. Where this is not feasible, affected individual plants will be transplanted. Towers will also be placed so that lines will span critical wildlife habitat. (BLM B-5.7 Vegetation)	Pre-construction and during construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-13	Vegetation: Tower sites will be selected to allow maximum spacing of sensitive features. (BLM B-5.8 Vegetation)	Pre-construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-14	Vegetation: Minimize the area needed for equipment operation and material storage and assembly. (BLM B-5.3 Vegetation)	Pre-construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-18	Wildlife: Disturbed areas – To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites should be sited in a manner that avoids desert tortoise burrows. (SCE)	Pre-construction and during construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-19	Wildlife: Restoration – Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored. (SCE)	Pre-construction, during and post construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	APM B-20	Wildlife: Ravens – All transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS's Division of Migratory Birds to take common ravens or their nests. (SCE)	Pre-construction, during and post construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-21	Wildlife: No clearing of or other disturbance to riparian habitats. If unavoidable, riparian habitats must be replaced or restored. This action will benefit several riparian bird species including summer tanager, yellow warbler, yellow breasted chat, least Bell's vireo, and southwestern willow flycatcher. (SCE)	Pre-construction and during construction	No	This measure was originally for the West of Devers project alternative that is no longer under consideration. No riparian habitat is expected to be impacted by Project activities at the Project elements.
Biology	APM B-22	Wildlife: Avoid impact to mesquite-dominated habitats to protect crissal thrasher. (SCE)	Pre-construction and during construction	No	The Project elements do not support mesquite-dominated habitats; therefore this measure does not apply.
Biology	APM B-23	Wildlife: Minimize impact to or removal of creosote bush to benefit LeConte's thrasher. (SCE)	Pre-construction and during construction	Yes	The Project elements contain suitable habitat for LeConte's thrasher. Impacts to creosote bush scrub will be minimized to the extent feasible.
Biology	APM B-24	Wildlife: Avoid any alterations to the vegetation structure of Washington fan palm oases to benefit southern yellow bat. (SCE)	Pre-construction and during construction	No	The Project elements do not support Washington fan palm oases; therefore, this measure does not apply.
Biology	APM B-25	Wildlife: Avoid any alterations of mesquite hummock habitat to benefit Coachella Valley round-tailed ground squirrel. (SCE)	Pre-construction and during construction	No	The Project elements do not support mesquite hummock habitat; therefore, this measure does not apply.
Biology	APM B-26	Wildlife: Wash communities along the entire route and sand dune communities in the Coachella Valley (see Map 10-AZ in the Draft SEIS and Figure 4.5-1 in the CPUC Draft EIR, 1987) will be spanned to the extent possible. (BLM B-5.2 Wildlife)	Pre-construction and during construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-27	Wildlife: Prior to construction activities, the Holder shall have a qualified tortoise biologist present a class or briefing to construction workers. Subjects addressed shall include tortoise sensitivity to human disturbance, daily and seasonal activity patterns, and proper handling for removal from roadways. (BLM B-5.4 Wildlife)	Pre-construction and during construction	Yes	WEAP training is required for all construction personnel working on the Project.
Biology	APM B-28	Wildlife: The Holder shall hire a qualified tortoise biologist to conduct daily inspections of roads and work areas within tortoise habitat during the tortoise season of activity (February 15 to June 15, July 15 to October 15). Tortoises found to be in jeopardy will be removed to a nearby site. Tortoises may be held for short periods, if judged necessary, to allow construction crews to pass through an area. The Holder will provide proper facilities for such temporary holding. (BLM B-5.6 Wildlife)	During construction	Yes	The Project elements contain desert tortoise habitat. A biological monitor will ensure compliance with all desert tortoise conservation measures per the requirements in the USFWS Biological Opinion. USFWS,2011

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	APM B-29	Wildlife: The Holder shall restrict the speed on all roads within tortoise habitat to a maximum of 25 miles per hour. The Holder is responsible for ensuring compliance with this limit by its employees. (BLM B-5.6 Wildlife)	During construction	Yes	The Project elements contain desert tortoise habitat. A biological monitor will ensure compliance with all desert tortoise conservation measures per the requirements in the USFWS Biological Opinion. Speeds will be posted per the requirements in the USFWS Biological Opinion. USFWS, 2011
Biology	APM B-30	Wildlife: Within tortoise habitat in California, spur roads shall not be bladed except where necessary to allow access for construction vehicles. Required vehicles shall enter on one pathway which is flagged and developed only by the passage of vehicles crushing vegetation. The spur shall be flagged by a qualified tortoise biologist prior to use. The spur shall avoid tortoise burrows and large perennial plants, yet be as short as possible within these requirements.	Pre-construction and during construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction. USFWS, 2011
Biology	APM B-31	Wildlife: Any desert tortoise observed on access roads or work areas will be moved immediately away from the roadway into safe areas. (BLM B-5.8 Wildlife)	During construction	Yes	The Project elements contain desert tortoise habitat. A biological monitor will ensure compliance with all desert tortoise conservation measures per the requirements in the USFWS Biological Opinion. GANDA, 2011b
Biology	APM B-32	Wildlife; In areas considered to comprise suitable tortoise habitat, or other areas where tortoise are observed, all access roads and tower construction sites will be surveyed by a qualified biologist to delineate burrows or individuals for protection. Burrows near construction sites will be clearly delineated on the ground. Road, footing, and work area alignments should be modified to the extent possible to avoid adversely affecting any tortoise burrows encountered during these surveys. Where tortoise burrows will be unavoidably destroyed, they should be excavated carefully using hand tools, under the supervision of a field biologist with demonstrated prior experience with this species. See Map 11-AZ in Appendix F in the Draft EIS (1988) and Figure 4.5-2 in the Devers-Palo Verde No. 2 EIR (1987). Also see Appendix E for link and milepost descriptions and mitigation measures. (BLM B-5.9 Wildlife)	Pre-construction and during construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction. USFWS, 2011
Biology	APM B-33	Wildlife: If possible, no new roads, tower sitings, or spur roads will be built in blow sand areas. However, if new spur roads are required through wind-blown sand habitat, the road will be returned to natural conditions and effectively closed (gated or bermed) following construction. Pre-construction surveys will identify wind-blown sand dune habitats. (BLM B-5.10 Wildlife)	Pre-construction and during construction	No	This measure applies to transmission line construction; therefore, this measure does not apply.
Biology	APM B-34	Wildlife: Where the project crosses through the Coachella Valley Preserve, the Holder will cooperate with the Preserve in closing (gating) existing access roads. (a) A qualified biologist will also be present with work crews to survey and clear work areas daily for Coachella Valley fringe-toed lizard (CVFTL), flat-tailed horned lizard (FTHL), and other sensitive species in the Preserve and sand dune communities from Link 14 (Milepost 7.6) to Link 16 (Milepost 5.0) to identify if any additional areas of occupied CVFTL and FTHL habitat are present along the route or at construction staging areas. (b) This survey will be conducted during appropriate seasons (March 15 to May 15) and conditions for species identification. For any areas of suitable habitat, this measure will apply.  In the Coachella Valley, compacted soils should be scarified and seeded with a mix of native plant seeds, including bugseed ( <i>Dicoria canescens</i> ), to promote revegetation of plant species valuable to the lizard.	During construction and post construction.	No	This measure applies for the project components that fall within the Coachella Valley Preserve.
Biology	APM B-35	Wildlife: Avoid upland areas where desert tortoises might occur and/or have a biologist present during construction activities that involve earth moving in order to move any tortoises (in burrows or cover-sites, or on the surface) that would likely be impacted. (BLM B-5.17 Wildlife)	During construction	Yes	The Project elements contain desert tortoise habitat. The biological monitor will ensure compliance with all desert tortoise conservation measures in the USFWS Biological Opinion. USFWS, 2011

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	APM B-36	Wildlife: Avoid construction activities that would tend to create wind barriers that might result in sand stabilization in order to minimize impacts to populations of the Coachella Valley fringe-toed lizard. (BLM B-5.18 Wildlife)	During construction	No	The Project elements do not support fringe-toed lizard habitat; therefore, this measure does not apply.
Biology	APM B-37	Wildlife: Mitigation for the coastal California gnatcatcher should include protocol-driven pre-construction surveys. If gnatcatchers are found to be present, suitable habitat should be avoided, including relocating towers and access. If habitat cannot be avoided, SCE should either restore damaged habitat, as at the Weapons Support Facility, Fallbrook Detachment, San Diego County (Soil Ecology and Research Group, 2004), or participate in land set-aside programs such as the Natural Community Conservation Planning program (NCCP). Another potential mitigation action would be that of assisting in the provision of funding for monitoring programs that may be undertaken through the Western Riverside County Multiple Species Habitat Conservation Plan.	Pre-, during, and post construction.	No	The Project elements do not support suitable coastal California gnatcatcher habitat; therefore, this measure does not apply. GANDA 2001a and 2011b
Biology	APM B-38	Wildlife: For least Bell's vireo, suitable habitat would be completely avoided by relocating tower sites and/or associated access roads. 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.	Pre-construction and during construction	No	This measure applied to the West of Devers alternative that is no longer under consideration. Additionally, the Project elements do not support potential least Bell's vireo habitat; therefore, this measure does not apply.
Biology	APM B-39	Wildlife: Stephens' kangaroo rat habitat would be avoided, where possible.	Pre-construction and during construction	No	The Project elements do not support suitable habitat for the Stephens' kangaroo rat; therefore, this measure does not apply.
Biology	MM (SEIR) B-8b	Minimize off-site impacts to Harwood's eriastrum, Harwood's milk-vetch, and flat-seeded spurge habitat. SCE and their contractors or affiliates shall avoid adverse impacts to Harwood's eriastrum, Harwood's milk-vetch, and flat-seeded spurge habitat (i.e., sandfields and dunes) adjacent to the project site that may result from project construction or operation, such as equipment staging, spoils transport or storage, weed control, soil tackifiers or stabilization agents, collection and disposal of accumulating aeolian sand, or erosion. SCE shall prepare and implement a focused Special-Status Plant Impact Avoidance and Minimization Plan to describe specific measures to be taken during substation construction and operation to minimize impacts to Harwood's eriastrum, Harwood's milk-vetch, and flat-seeded spurge habitat. The Plan shall include consideration of the following components: 1. Delineation of the limits of construction disturbance area on-site prior to beginning of construction (the construction disturbance area includes equipment staging areas, spoils transport or storage areas, access routes and all other areas that may be temporarily disturbed by construction); 2. Preconstruction surveys to identify and designate suitable habitat (whether occupied or not) for any of these species throughout the construction disturbance area and a 250-foot buffer are surrounding it; 3. Specific measures to be implemented and monitored throughout substation construction and operation, including but not limited to a. prevent overspray of herbicides, pesticides, soil tackifiers, or other potential toxins into suitable habitat during weed control or other site maintenance activities. b. on-site management of runoff to prevent nuisance runoff from draining into suitable habitat and prevent erosion of the habitat during heavy rains. c. management and control of weeds on and adjacent to the site to prevent weed invasions into suitable adjacent special-status plant habitat; d. prevent damage to suitable special-status plant habitat that may result from collecting or disposing accumulating sand; 4. Schedule and format for reporting to CPUC on implementation and progress of the components listed above. The Plan shall be reviewed and approved by the CPUC at least 60 days prior to construction.	Prior to start of construction	No	This measure applies to the Colorado River Substation.
Biology	MM (SEIR) B-9j	Provide compensatory mitigation and restoration/enhancement of protected land for impacts to sand dune habitat. To mitigate for habitat loss and direct impacts to Mojave fringe-toed lizards, SCE shall acquire compensatory habitat. If sufficient acreage (in accordance with the ratios below) is not available, SCE shall enhance or restore marginal MFTL habitat. Requirements and performance standards of each of these options is described below.	Pre-construction	No	This measure applies to the Colorado River Substation.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-1	At least 60 days prior to the initiation of ground-disturbing activities, SCE will designate a field contact representative (FCR) who will be responsible for overseeing compliance with project specifications and all conservation measures outlined in this biological/conference opinion.	Pre-construction	Yes	Field Contact Representatives have been designated by SCE.
Biology	CM-2	The FCR will be on site for all ground-disturbing activities within kangaroo rat, milk-vetch, fringe-toed and horned lizard, and tortoise habitat, and will have the authority to halt all work activities that are not in compliance with the project's conservation measures and incidental take statement requirements. The FCR will be responsible for ensuring that any activities found to be out of compliance with the conservation measures are corrected immediately and the corrective action documented. The following incidents will require immediate cessation of non-compliant construction activities causing the incident, including (1) imminent threat of injury or death to kangaroo rats, milk-vetch, fringe-toed lizard and horned lizards, and tortoises; (2) unauthorized handling of a kangaroo rat, milkvetch, fringe-toed and horned lizard, or tortoise, regardless of intent; (3) operation of construction equipment or vehicles outside the project footprint cleared of kangaroo rats, milk-vetch, fringe-toed or horned lizards, and tortoises, except on designated roads, and (4) construction activity without a Authorized or Qualified Biologist where one is required. If the Authorized or Qualified Biologist and FCR do not agree on an issue, the BLM's compliance officer will be contacted for resolution. All parties may refer the resolution to the BLM's authorized officer.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-3	The FCR will coordinate with the Authorized or Qualified Biologist to provide a monthly written report to the BLM, Service, and CDFG, detailing completed and ongoing construction-related compliance activities, any non-compliance issues pertaining to the kangaroo rat, milk-vetch, fringe-toed or horned lizard, and tortoise, and any incidental observations of healthy, injured, or dead individuals of these species. The Authorized or Qualified Biologist will coordinate his/her activities with the FCR as frequently as needed to effectively implement the project's conservation measures.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-4	All final contract documents involving project construction activities that relate to the project's conservation measures will ensure (a) the FCR is vested with oversight authority for all activities of contractors and subcontractors in the action area, including the halting of any project-related activities; (b) all contractors and subcontractors are obligated to adhere to any orders issued by the FCR addressing compliance issues with the project's conservation measures; (c) adherence of all project-related activities and designs to the requirements of the conservation measures; and (d) the obligation of all workers in the action area to complete the WEAP (see CM 14) and immediately report the observation of any healthy, injured, or dead kangaroo rats, milk-vetch, fringe-toed or horned lizards, or tortoises or crushed milk-vetch to the FCR or Authorized or Qualified Biologist, whoever is first available.	During Construction	Yes	This measure will be implemented.
Biology	CM-5	Should any kangaroo rats, milk-vetch, fringe-toed or horned lizards, or tortoises be injured or killed, or milk-vetch crushed during ground-disturbing activities, all activities in the immediate area will be halted, and the FCR and/or Authorized or Qualified Biologist will be immediately contacted. The FCR, Authorized or Qualified Biologist will be responsible for reporting the incident (via fax or email) to the BLM, Service, and CDFG within 24 hours of the incident.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-6	Prior to the initiation of ground-disturbing activities, all work area boundaries associated with temporary and permanent disturbances will be conspicuously staked, flagged, or marked to minimize surface disturbance activities. All workers will strictly limit activities and vehicles to the designated work areas.	Pre-construction	Yes	This measure will be implemented.
Biology	CM-7	Removal of perennial, native vegetation in work areas will be avoided to the maximum extent practicable, particularly while accessing pulling and splicing stations and during pulling and splicing activities. Access to work areas in undisturbed habitat will be achieved by crushing, instead of removal, to the maximum extent practicable.	During Construction	Yes	This measure will be implemented.
Biology	CM-8	To minimize harassment or killing of wildlife and to prevent the introduction of destructive animal diseases to native wildlife populations, project personnel will not be allowed to bring pets into the action area.	During Construction	Yes	This measure will be implemented.
Biology	CM-9	During construction-related activities, motor vehicles will be limited to maintained roads, designated routes, and areas identified as permanently or temporarily impacted by construction of the project.	During Construction	Yes	This measure will be implemented.
Biology	CM-10	Motor vehicle speed along project routes and existing access roads within modeled, critical, and/or occupied habitat for the kangaroo rat, fringe-toed or horned lizard, or tortoise will not exceed 25 miles per hour (mph). Speed limits will be clearly marked and all workers will be made aware of these limits.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-11	All project components (e.g., towers, spur roads, pulling/splicing stations, construction yards/staging areas) will be located as to avoid sensitive plants and plant communities, or sensitive animals (e.g., burrows) to the maximum extent practicable.	Pre-construction	Yes	This measure will be implemented.
Biology	CM-12	Construction yards and helicopter assembly sites will be located outside of kangaroo rat, fringe-toed lizard, and horned lizard habitat (modeled, critical, or occupied habitat).	Pre-construction	No	This measure applies to construction yards and helicopter assembly areas; therefore, this measure does not apply.
Biology	CM-13	All auger holes, trenches, pits, or other steep-sided excavations that pose a hazard to kangaroo rats, fringe-toed or horned lizards, or tortoises will be securely fenced or covered when unattended to prevent accidental death or injury. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. If found, trapped animals will be removed by the Authorized or Qualified Biologist.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented.
Biology	CM-14	SCE will prepare a Worker Education and Awareness Program (WEAP) that will be presented by the FCR or Authorized or Qualified Biologist to all existing and new employees/contractors prior to their involvement in any onsite project activities. The WEAP, at a minimum, will consist of the following elements for kangaroo rat, milk-vetch, fringe-toed lizard, horned lizard, and tortoise: (a) distribution, general behavior, and ecology, (b) species sensitivity to human activities, (c) legal protection, (d) penalties for violation of State and Federal laws, (e) worker responsibilities for trash disposal and safe/humane treatment of species found in the action area and associated reporting requirements, (f) handout materials summarizing all the contractual obligations and protective requirements specified in the biological/conference opinion, and (g) requirements and penalties regarding adherence to speed limits in the project footprint. The outline of the WEAP will be submitted to the BLM, Service, and CDFG for review and approval at least 60 days prior to the initiation of surface-disturbing activities. The names of all employees, contractors, etc., who have participated in the WEAP will be kept on file at the project field construction office.	Pre-construction and during construction	Yes	WEAP training is required for all field personnel.
Biology	CM-15	To prevent the spread of invasive nonnative plant species (as designated by BLM or the California Department of Food and Agriculture) into previously uninfested areas, a Qualified Botanist or Range Ecologist <sup>5</sup> will survey all proposed work areas prior to construction within the transmission line corridor. Any areas that contain BLM- and/or State-listed invasive plant species will be clearly demarcated in the field. All construction activities, vehicle operation, material and equipment storage, and any other surface disturbing activities will be prohibited in the demarcated area. If avoidance is not possible in the demarcated zone, the invasive plant species will be removed via acceptable mechanical, cultural, or herbicidal methods approved by the BLM, Service, and CDFG. Prior to entering the action area for the first time, all ground-disturbing equipment will be thoroughly cleaned at one of the wash stations at a construction yard to ensure against the introduction of invasive nonnative plants. The wash stations will be located outside of suitable habitat for kangaroo rat, milk-vetch, fringe-toed lizard, horned lizard, and tortoise.	Pre-construction and during construction	Yes	Invasive, non-native plant species will be addressed in accordance with the Project Noxious Weed Control Plan. Ground disturbing equipment will be washed at a local commercial wash station before arriving onsite and after leaving the site prior to arrival on the ROW within a different weed zone. In compliance with the plan, a daily log will be kept to document vehicle washing. CH2M HILL, 2011b
Biology	CM-16	Immediately after completion of construction-related activities, the FCR or designated representative will record the perimeter of the post-construction project footprint, including all tower pads, spur roads, pulling and splicing stations and access routes, substation components, and other project-related infrastructure in a GIS-compatible format to verify the extent of project disturbance. The GIS coverage layer will be provided to the BLM, Service, and CDFG within 90 days of completing construction; the coverage will be compared to impact acreages estimated in this biological/conference opinion to determine final ground-disturbance associated with project construction. If final impact acreages are less than those estimated in Table 1 of this biological/conference opinion, SCE will receive a mitigation credit that could be applied to mitigation for future activities along the DPV1/DVP2 ROW.	During Construction	Yes	This measure will be implemented.
Biology	CM-17	During construction-related activities in occupied habitat, a Qualified Biologist will install exclusion fencing around work areas where impacts will occur, trap animals from inside impact areas, and relocate trapped animals out of harm's way outside of exclusion fencing until construction is completed. The Qualified Biologist will be present during construction to ensure that animals are not harmed. Following completion of construction, SCE will remove all exclusion fencing and recontour the soils to the preconstruction condition. The name and qualifications of the Qualified Biologist will be submitted to the Service and CDFG for approval at least 30 days prior to project construction in occupied kangaroo rat habitat.	During Construction	No	The Project elements do not contain modeled or potential Stephens' kangaroo rat habitat; therefore, this measure does not apply.
Biology	CM-18	During construction in suitable habitat, work will only occur during daylight hours and no night lighting will be used in kangaroo rat habitat.	During Construction	No	The Project elements do not contain modeled or potential Stephens' kangaroo rat habitat; therefore, this measure does not apply.



Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-19	During construction in suitable habitat, a load spreading device (e.g., plywood) will be used to reduce impacts to burrow systems. Load spreading devices must be removed each night.	During Construction	No	The Project elements do not contain modeled or potential Stephens' kangaroo rat habitat; therefore, this measure does not apply.
Biology	CM-20	To reduce the potential for kangaroo rats to utilize access roads, and therefore be subject to impact, along the DPV2 alignment, earthen berm heights will not exceed 13 centimeter (cm) [5 inches (in)] in height in suitable habitat.	During Construction	No	The Project elements do not contain modeled or potential Stephens' kangaroo rat habitat; therefore, this measure does not apply.
Biology	CM-21	No fuel modification will be conducted in suitable habitat.	During Construction	No	The Project elements do not contain modeled or potential Stephens' kangaroo rat habitat; therefore, this measure does not apply.
Biology	CM-22	To partially offset the impacts of permanent and temporary/long-term losses of kangaroo rat habitat associated with the proposed project, SCE will acquire at least 0.08 ha (0.20 ac) and restore/enhance at least 1.13 ha (2.80 ac) of kangaroo rat habitat. The compensation ratio will be 1:1 for permanent and temporary/long-term impacts to kangaroo rat habitat [0.08 ha (0.20 ac) of permanent impacts $\times 1 = 0.08$ ha (0.20 ac); and 1.13 ha (2.80 ac) of temporary/long term impacts $\times 1 = 1.13$ ha (2.80 ac)]. Permanent impacts will be offset through the purchase of 0.08 ha (0.20 ac) of occupied kangaroo rat habitat within the Southwestern Riverside County Multiple Species Reserve. Payment of \$2,800 (at \$14,000/ac) will be made to the Metropolitan Water District of Southern California for acquisition of kangaroo rat habitat prior to any project work within kangaroo rat habitat. Temporary impacts will be offset by the restoration or enhancement of 1.13 ha (2.80 ac) of kangaroo rat habitat within the Lake Perris State Recreation Area portion of the San Jacinto Lake Perris Stephens' Kangaroo Rat Reserve as designated within the Habitat Conservation Plan for the Stephens' Kangaroo Rat in Riverside County. The habitat enhancement will consist of nonnative grass suppression by mowing, hand clearing and/or fusillade application in kangaroo rat habitat. The enhancement will be funded by SCE (at \$1,050/ac) and be carried out under the direction of the California Department of Parks and Recreation. SCE will provide payment of \$2,940 to the California Department of Parks and Recreation prior to the initiation of construction in kangaroo rat habitat.	Pre-construction	No	The Project elements do not contain modeled or potential Stephens' kangaroo rat habitat; therefore, this measure does not apply.
Biology	CM-23	To the extent possible, all construction activities in modeled habitat will be conducted outside of the seed germination and growing season, generally January to May.	During Construction	No	The Project elements do not contain modeled or potential Coachella Valley milk-vetch habitat; therefore, this measure does not apply.
Biology	CM-24	A Qualified Biologist will conduct preconstruction focused surveys in areas of the project in modeled habitat in the winter (generally January and February) preceding initiation of ground disturbing activities and be present throughout construction activities in modeled habitat. The name and qualifications of the Qualified Biologist will be submitted to the BLM and Service for approval at least 30 days prior to project construction in modeled habitat.	Pre-construction	No	The Project elements do not contain modeled or potential Coachella Valley milk-vetch habitat; therefore, this measure does not apply.
Biology	CM-25	Milk-vetch locations identified during the preconstruction surveys will be delineated on aerial photography, incorporated into the construction management plans, and avoided to the maximum extent possible. Where avoidance is not possible, SCE will develop a Plant Salvage Plan to be submitted to the BLM and Service for approval 30 days prior to the initiation of ground disturbing activities where milk-vetch will be impacted. The Salvage plan will include, but is not limited to, seed collection and storage at an appropriate facility (e.g., Rancho Santa Ana Botanical Garden), reseeding in appropriate existing or restored habitat, or other similar activities. Salvage will be conducted by a Qualified Biologist.	Pre-construction	No	The Project elements do not contain modeled or potential Coachella Valley milk-vetch habitat; therefore, this measure does not apply.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-26	To partially offset the impacts of permanent and temporary/long-term losses of milk-vetch modeled habitat associated with the proposed project, SCE will acquire at least 50.99 ha (126 ac) of milk-vetch habitat. The compensation ratio will be 2:1 for permanent and temporary/long-term impacts to milk-vetch modeled habitat [25.50 ha (63 ac) of impact ×2 = a total of 50.99 ha (126 ac)]. The lands will be purchased either by SCE or SCE can deposit funds with the National Fish and Wildlife Foundation (NFWF) account governed by the Renewable Energy Action Team/NFWF Memorandum of Agreement (REAT/NFWF MOA 2010); if funds are deposited with NFWF, a compensation fee will be assessed based on current fair market appraised value for the specific geographic area in which the acquisition occurs. The acquired lands will occur in milk-vetch habitat with equivalent function and value. The replacement habitat is intended to benefit the population of milk-vetch adversely affected by the project, and will be located within or adjacent to priority conservation areas in the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) with comparable or better habitat value. The BLM and Service will coordinate to reach mutual agreement on the selection and ownership/management of acquired lands. If funds are provided to NFWF, the compensation (1) funds will be provided prior to project construction, (2) lands will be acquired prior to completion of project construction, and (3) lands will be conserved in perpetuity by a legal mechanism agreed to by the three agencies. If the conservation lands are acquired directly by SCE, steps #2 and #3 will apply. Regardless of the acquisition method (by SCE or NFWF), SCE will establish a management fund for the agency that owns and manages the acquired lands. The management fund will consist of an interest-bearing account (as described in the REAT/NFWF MOA), with the amount of capital commensurate to generate sufficient interest to fund all monitoring, management, and protection of the acquired lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and other actions designed to protect or improve the habitat values of the acquired lands. A Property Analysis Record, as described at: <a href="http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155">http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155</a> or comparable method, will be conducted by SCE and reviewed by the BLM and Service to determine the management needs and costs described above, which then will be used to calculate the amount of capital needed for the management fund. This management fund will be held and managed by NFWF or another entity approved by the BLM and Service.	Pre-construction	No	The Project elements do not contain modeled or potential Coachella Valley milk-vetch habitat; therefore, this measure does not apply.
Biology	CM-27	To the extent possible, all construction activities within modeled/blow sand habitat will be conducted during the active season, between April and October (inclusive of both months). Construction activities in modeled/blow sand habitat may be extended beyond the active season if exclusionary fencing is installed during the active season.	During Construction	No	The Project elements do not contain modeled or potential habitat for Coachella Valley fringe-toed or flat-tailed horned lizard; therefore this measure does not
Biology	CM-28	A Qualified Biologist will conduct preconstruction clearance surveys immediately prior to the initiation of ground disturbing activities during the active season, between April and October inclusive of both months), in modeled/blow sand habitat and be present during all construction activities in these areas. The name and qualifications of the Qualified Biologist will be submitted to the BLM, Service, and CDFG for approval at least 30 days prior to project construction in modeled/blow sand habitat.	Pre-construction and during construction	No	The Project elements do not contain modeled or potential habitat for Coachella Valley fringe-toed or flat-tailed horned lizard; therefore this measure does not apply.
Biology	CM-29	If fringe-toed or horned lizards are found, the Qualified Biologist will capture and relocate any individuals to the nearest suitable habitat in modeled/blow sand habitat outside of the DPV1/DPV2 ROW.	During Construction	No	The Project elements do not contain modeled or potential habitat for Coachella Valley fringe-toed or flat-tailed horned lizard; therefore this measure does not apply.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-30	<p>To partially offset the impacts of permanent and temporary/long-term losses of fringe-toed lizard habitat, the security will be in the amount of \$413,600 based on the following estimated costs of implementing the mitigation, monitoring and reporting requirements: land acquisition costs for impacts to habitat, calculated at \$3,000.00/ac for 35.61 ha (88 ac): \$264,000; costs of enhancing mitigation lands, calculated at \$250.00/ac: \$22,000; long term maintenance and management, calculated at \$1,450.00/ac: \$127,600. Even if the security is provided, SCE must complete the required acquisition, protection and transfer of all lands and record the required conservation easements, deed restriction, or other protection measures no later than 18 months after the start of ground disturbing activities. lizard habitat, SCE will acquire at least 35.61 ha (88 ac) of fringe-toed lizard habitat. The compensation ratio will be 2:1 for permanent and temporary/long-term impacts to fringe toed lizard modeled habitat [7.28 ha (18 ac) of impact x2 = a total of 14.57 ha (36 ac)] and critical habitat [10.52 ha (26 ac) of impact x2 = a total of 21.04 ha (52 ac)]. The lands will be purchased either by SCE or SCE can deposit funds with the NFWF under the account governed by the REAT/NFWF MOA (REAT/NFWF MOA 2010); if funds are deposited with NFWF, a compensation fee will be assessed based on current fair market appraised value for the specific geographic area in which the acquisition occurs. The acquired lands will occur in fringe-toed lizard habitat with equivalent function and value. The replacement habitat is intended to benefit the population of fringe-toed lizard adversely affected by the project; therefore, replacement habitat to offset impacts to fringe-toed lizard modeled habitat will be located within or adjacent to priority conservation areas in the CVMSHCP with comparable or better habitat value and habitat acquired for impacts to fringe-toed lizard critical habitat will be located within designated critical habitat with comparable or better habitat value. The BLM, Service, and CDFG will coordinate to reach mutual agreement on the selection and ownership/management of acquired lands. If critical habitat for fringe-toed lizard is not available from willing sellers, alternative compensation lands of equivalent or better habitat function and value in modeled habitat will be considered. If funds are provided to NFWF, the compensation (1) funds will be provided no later than 30 days prior to ground disturbance, (2) lands will be acquired no later than 18 months after ground-disturbing activity, and (3) lands will be conserved in perpetuity by a legal mechanism agreed to by the three agencies. SCE will establish a management fund for the agency that owns and manages the acquired lands. The management fund will consist of an interest-bearing account (as described in the REAT/NFWF MOA), with the amount of capital commensurate to generate sufficient interest to fund all monitoring, management, and protection of the acquired lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and other actions designed to protect or improve the habitat values of the acquired lands. A Property Analysis Record, as described at: <a href="http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155">http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155</a> or comparable method, will be conducted by SCE and reviewed by the BLM, Service, and CDFG, to determine the management needs and costs described above, which then will be used to calculate the amount of capital needed for the management fund. This management fund will be held and managed by NFWF or another entity approved by the BLM, Service, and CDFG.</p>	Pre Construction	No	The Project elements do not contain modeled or potential habitat for Coachella Valley fringe-toed or flat-tailed horned lizard; therefore this measure does not apply.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-31	To partially offset the impacts of permanent and temporary/long-term losses of horned lizard habitat, SCE will acquire at least 12.95 ha (32 ac) of horned lizard habitat. The compensation ratio will be 2:1 for permanent and temporary/long-term impacts to horned lizard modeled habitat [6.47 ha (16 ac) of impact x2 = a total of 12.95 ha (32 ac)]. The lands will be purchased either by SCE or SCE can deposit funds with the NFWF under the account governed by the REAT/NFWF MOA (REAT/NFWF MOA 2010); if funds are deposited with NFWF, a compensation fee will be assessed based on current fair market appraised value for the specific geographic area in which the acquisition occurs. The acquired lands will occur in horned lizard habitat with equivalent function and value. The replacement habitat is intended to benefit the population of horned lizard adversely affected by the project, and will be located within or adjacent to priority conservation areas in the CVMSHCP with comparable or better habitat value. The BLM and Service will coordinate to reach mutual agreement on the selection and ownership/management of acquired lands. If funds are provided to NFWF, the compensation (1) funds will be provided prior to project construction, (2) lands will be acquired prior to completion of project construction, and (3) lands will be conserved in perpetuity by a legal mechanism agreed to by the three agencies. If the conservation lands are acquired directly by SCE, steps #2 and #3 will apply. Regardless of the acquisition method (by SCE or NFWF), SCE will establish a management fund for the agency that owns and manages the acquired lands. The management fund will consist of an interest-bearing account (as described in the REAT/NFWF MOA), with the amount of capital commensurate to generate sufficient interest to fund all monitoring, management, and protection of the acquired lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and other actions designed to protect or improve the habitat values of the acquired lands. A Property Analysis Record, as described at: <a href="http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155">http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155</a> or comparable method, will be conducted by SCE and reviewed by the BLM and Service to determine the management needs and costs described above, which then will be used to calculate the amount of capital needed for the management fund. This management fund will be held and managed by NFWF or another entity approved by the BLM and Service.	Pre-construction	No	The Project elements do not contain modeled or potential habitat for Coachella Valley fringe-toed or flat-tailed horned lizard; therefore this measure does not apply.
Biology	CM-32	To the extent possible, all construction activities in modeled, critical, and occupied habitat will be conducted when tortoises are less active, generally November to March.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented to the extent feasible during construction.
Biology	CM-33	An Authorized Biologist will be present during all construction activities in tortoise habitat modeled, critical habitat, and/or occupied habitat) during the tortoise's more active season (April thru May and September thru October). The name and qualifications of the Authorized Biologist will be submitted on the Service's Desert Tortoise Authorized Biologist Request Form (September 2009) or most current version to the BLM, Service, and CDFG for approval at least 30 days prior to initiation of ground-disturbing activities in tortoise habitat.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-34	The Authorized Biologist will conduct clearance surveys and tortoise handling following procedures outlined in the Service's Desert Tortoise Field Manual (December 2009) or more current Service guidance.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-35	The Authorized Biologist will conduct preconstruction clearance surveys immediately prior to initiation of ground disturbing activities in tortoise habitat regardless of the time of year. The goal of a clearance survey is to find all tortoises on the surface and in burrows that could be harmed by construction activities. Surveys will cover 100 percent of the acreage to be disturbed. All potential burrows within 30.5 m (100 ft) of construction activity will be marked and avoided to the extent practicable. Those that cannot be avoided will be excavated by the Authorized Biologist.	Pre-construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented.
Biology	CM-36	Tortoises found on the surface during preconstruction clearance surveys or during construction activities will be moved out of harm's way and released within 500 m (1,640 ft) from point of collection.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented.
Biology	CM-37	Tortoises found in burrows during preconstruction clearance surveys or during construction activities during the species' less active period (November to March) will be avoided to the extent practicable. Those that cannot be avoided will be excavated and the tortoise removed, blocked into an artificial or empty natural burrow within 500 m (1,640 ft) from the construction area, and monitored until construction activities in the area are complete. Excavation, creation of artificial burrows, and handling of eggs, juveniles and adults will be conducted in accordance with the Service's Desert Tortoise Field Manual (December 2009) or more current Service guidance.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-38	During construction, parked vehicles will be inspected prior to being moved. If a tortoise is found beneath a vehicle, the Authorized Biologist will be contacted to move the animal out of harm's way, or the vehicle will not be moved until the tortoise leaves on its own accord. The Authorized Biologist will be responsible for taking appropriate measures to ensure that any tortoises moved in this manner is not exposed to temperature extremes which could be harmful to the animal.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-39	Constructed road berms in modeled, critical, and occupied habitat will be less than 30.48 cm (12 in) in height and have slopes less than 30 degrees.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-40	A trash collection system will be established to ensure that all food and other trash that could attract tortoise predators is properly disposed of in self-closing, sealable containers with lids that latch to prevent wind, common ravens, and mammals from opening containers. All trash receptacles will be regularly inspected and emptied to prevent spillage and maintain sanitary conditions, and removed from the project footprint when construction activities are complete.	During Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented during construction.
Biology	CM-41	Road-killed animals or other carcasses detected in the DPV2 ROW access road during DPV2-related construction activities will be picked up and disposed of immediately (e.g., removal to a landfill or disposal at SCE facility). For special-status species road-kill, the Qualified Biologist or FCR will contact CDFG and Service within 1 working day of receipt of the carcass for guidance on disposal or storage of the carcass.	During Construction	Yes	This measure will be implemented during construction.
Biology	CM-42	Raven Control Plan. SCE will implement a Raven Control Plan (RCP) to minimize avian predation on tortoise for the 30-year life of the proposed project. The goal of the RCP will be to utilize methods to deter raven depredation of juvenile tortoises, as well as other wildlife species that may be listed or may be considered sensitive, in order to ensure that overall numbers of tortoises along DPV2 do not decrease. The plan will incorporate an adaptive management strategy that will be implemented immediately following construction and evaluated after 5 years of monitoring. The following activities will be implemented as part of the RCP: (1) Common Raven Nest Monitoring and (2) Contribution to the Raven Management Plan. Common Raven Nest Monitoring: A Qualified Biologist(s) or Service-approved SCE designee with expertise identifying common raven nests and tortoise remains (e.g., carcass, shell and bone fragments) will conduct surveys for the presence of common raven nests on DPV2 tower structures and for the presence of tortoise remains within a 15-m (49-ft) radius of each tower in tortoise modeled, critical, and occupied habitat. The name and qualifications of the Qualified Biologist will be submitted to the BLM, Service, and CDFG for approval 30 days before the commencement of monitoring each year. Nest surveys will be conducted at least once per month, between the 15th and last day of each month, during the primary common raven nest building period (February to May) and will begin the first common raven nesting season following the completion of tower construction in tortoise habitat. Nest surveys methods may include vehicular windshield surveys or pedestrian surveys, as appropriate. In the event that a common raven is documented initiating a new nesting attempt during the May surveys, follow up visits to that nest will be made in the subsequent months to establish whether or not the pair is bringing tortoises back to the nest. Throughout the survey period, if tortoise remains are found below an active nest, SCE will document the remains and verify the nesting status of the common ravens (e.g., incubating, feeding nestlings), herein referred to as offending ravens, and notify the BLM, Service, and CDFG verbally (via phone call) and in writing (via email or fax) within 24 hours of documenting the remains. Upon being notified, the Service will contact the Common Raven Management Working Group which will coordinate immediate removal of the offending common raven(s). SCE will establish a Cooperative Service agreement with USDA/APHIS allowing for Wildlife Services to conduct the removal efforts of offending common raven(s) within the DPV2 ROW. SCE will be responsible for expenses attributed to removal of offending ravens nesting on DPV2 towers. Also, at least once per year outside of the avian breeding season and the tortoise's more active season (April thru May and September thru October), SCE will remove all previously documented offending raven nests from all DPV2 tower structures along the surveyed transmission line and completely dispose of the nesting material so that it is no longer available for use for nest building (e.g., removal to a landfill or disposal at SCE facility). Raven nest removal will be scheduled in a manner that does not impact personnel safety or system reliability. The Qualified Biologist(s) or Service-approved SCE designee will also conduct nest surveys at the Devers and Colorado River substations. Surveys will begin in February and will continue through May, occurring between the 15th and last day of each month. If an active common raven nest is located, searches for the presence of tortoise remains within a 15-m (49-ft) radius of the nest will be conducted. If tortoise remains are found, SCE will follow the same procedure outlined above. Similarly, offending ravens nesting on the substation facilities will be removed in accordance with the aforementioned procedures. Raven nest removal will be scheduled in a manner that does not impact personnel safety or system reliability. SCE will submit a report on the survey effort and a GIS layer to the Service of all the nests recorded during the year within 90 days of the last survey effort. The Service will be responsible for sharing the nest information with the Common Raven Management Work Group. An evaluation of the effectiveness of this conservation measure will be reviewed by SCE, the BLM, Service, and CDFG on an annual basis in order	Post Construction	Yes	The Raven Control Plan will be implemented post construction.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-43	To partially offset the impacts of permanent and temporary/long-term losses of tortoise habitat, SCE will acquire at least 670.16 ha (1,656 ac) of tortoise habitat. For impacts to habitat in the Chuckwalla Critical Habitat Unit (CHU) or Chuckwalla Desert Wildlife Management Area (DWMA) but outside of modeled habitat, the compensation ratio will be 5:1 for permanent and temporary/long-term impacts to tortoise habitat [63.54 ha (157 ac) of impact × 5 for a total of 1,939.78 ha (785 ac)]. For habitat in the Chuckwalla CHU or DWMA also identified as modeled habitat, the compensation ratio also will be 5:1 [43.71 ha (108 ac) of impact × 5 for a total of 218.53 ha (540 ac)]. For impacts to modeled habitat outside the Chuckwalla CHU or DWMA, the compensation ratio will be 1:1 for permanent and temporary/long-term impacts to tortoise habitat [72.84 ha (180 ac) of impact × 1 for a total of 72.84 ha (180 ac)]. For impacts to occupied habitat outside the Chuckwalla CHU, DWMA, or modeled habitat, the compensation ratio will also be 1:1 [61.11 ha (151 ac) of impact × 1 for a total of 61.11 ha (151 ac)]. The lands will be purchased either by SCE or SCE can deposit funds with the NFWF under the REAT account governed by the REAT/NFWF MOA (REAT/NFWF MOA 2010); if funds are deposited with the NFWF, a compensation fee will be assessed based on current fair market appraised value for the specific geographic area in which the acquisition occurs. The acquired lands will occur in tortoise habitat with equivalent function and value. The replacement habitat is intended to benefit the population of tortoises adversely affected by the project. Therefore, replacement habitat will be acquired to offset impacts as follows: (a) habitat intended to replace modeled habitat in the CVMSHCP area will be located within or adjacent to priority conservation areas in the CVMSHCP area, (b) habitat intended to compensate for impacts to critical habitat in the CVMSHCP area will be located within critical habitat in the CVMSHCP area, (c) habitat intended to compensate for impacts to critical habitat outside of the CVMSHCP area will be located within critical habitat in the NECO plan area, and (d) habitat intended to replace occupied habitat outside of the CVMSHCP area and outside of critical habitat will be located within the NECO plan area. The BLM, Service, and CDFG will coordinate to reach mutual agreement on the selection and ownership/management of acquired lands. If funds are provided to NFWF, the compensation (1) funds will be provided no later than 30 days prior to ground disturbance, (2) lands will be acquired no later than 18 months after ground-disturbing activity, and (3) lands will be conserved in perpetuity by a legal mechanism agreed to by the three agencies. SCE will establish a management fund for the agency that owns and manages the acquired lands. The management fund will consist of an interest-bearing account (as described in the REAT/NFWF MOA), with the amount of capital commensurate to generate sufficient interest to fund all monitoring, management, and protection of the acquired lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and other actions designed to protect or improve the habitat values of the acquired lands. A Property Analysis Record, as described at: <a href="http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155">http://cnlm.org/cms/index.php?option=com_content&amp;task=view&amp;id=21&amp;Itemid=155</a> or comparable method, will be conducted by the SCE and reviewed by the BLM, Service, and CDFG, to determine the management needs and costs described above, which then will be used to calculate the amount of capital needed for the management fund. This management fund will be held and managed by NFWF or another entity approved by the BLM, Service, and CDFG. If conservation lands are acquired directly by SCE they must meet the CDFG's fully mitigated standard. Lands purchased outside of the CVMSHCP area will be transferred in fee title to CDFG, a CDFG-approved non-profit organization qualified pursuant to California Government Code section 65065, or other government entity with either a conservation easement, deed restriction, or other protective	Pre Construction	Yes	The Project elements contain desert tortoise habitat. SCE will purchase compensatory mitigation land through Wildlands LLC.
Biology	CM-44	General O&M Plan. SCE will submit an O&M Plan for the DPV2 project to the BLM, Service, and CDFG within 90 days following the completion of construction activities. The project-specific O&M Plan will specify the location of maintained facilities, patrol and inspection procedures, detailed description of routine O&M activities, location of suitable habitat for listed plant and wildlife species covered in this biological/conference opinion, measures to avoid and minimize impacts to listed plants and wildlife, and procedures for action and reporting during non-routine maintenance activities. The O&M plan will include biological resource maps compiled during the DPV2 project's construction phase to be used to determine location of suitable habitat for listed species covered by this biological/conference opinion. The worker education program for sensitive biological resource prepared for project construction will be adapted for O&M activities and be provided to O&M crews when working in suitable habitat for listed species.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.
Biology	CM-45	Annual O&M Work Plan. SCE will submit an annual O&M work plan to the BLM, CDFG, and Service at least 3 months prior to the initiation of Class 1 and Class 2 O&M activities planned each calendar year. The annual O&M work plan will specify all routine O&M activities anticipated to occur in the given year and include maps depicting the location of anticipated O&M activities relative to the location of modeled, critical, and/or occupied habitat for the kangaroo rat, milk-vetch, fringe-toed and horned lizards, and tortoise, and list the conservation measures from this biological/conference opinion that will be implemented to avoid, minimize, and offset impacts to these species.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-46	Annual Reporting. SCE will report on the status of all O&M activities identified in the annual O&M work plan as part of the annual report [required as a Term and Condition of this biological/conference opinion (see "Terms and Conditions" section below)]. Annual reporting will include a description of the O&M activities initiated, in progress, and completed, the location of these activities, the amount of new ground disturbance in kangaroo rat, milk-vetch, fringe-toed and horned lizard, and tortoise modeled, critical and/or occupied habitat requiring additional habitat compensation.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.
Biology	CM-47	Class 4 (Emergency Repair) O&M Activities. During emergency repairs, all Conservation Measures will be followed to the extent practicable. Within 2 business days of the start of emergency repairs, SCE will notify the BLM, Service, and CDFG verbally (via telephone) of the type of repairs anticipated, the location of the repairs relative to sensitive species habitat, and whether or not an Authorized or Qualified Biologist will be on site during repairs. Once the emergency has been abated, any unavoidable environmental damage will be reported to the project FCR or Qualified Biologist, who will submit a written report of such impacts to the BLM, Service, and CDFG and any other government agencies having jurisdiction over the emergency actions within 14 days of completion of emergency repair activities. If required by the BLM, Service, CDFG, or government agencies, the FCR or Qualified Biologist will develop a reasonable and feasible mitigation plan consistent with the Conservation Measures and any permits previously issued for the project by the governmental agencies.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.
Biology	CM-48	SCE will offset additional impacts to kangaroo rat, milk-vetch, fringe-toed or horned lizard, and tortoise modeled, critical, occupied, or suitable habitat associated with Class 2 and Class 4 O&M activities following the process and compensation ratios identified in CMs 22, 26, 30, 31, and 43 above.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.
Biology	CM-49	Routine Maintenance Limits. The area limits of project maintenance activities will be limited to the permanent disturbance areas noted on the final design engineering drawings and the vegetation-free buffers [typically 0.61 to 1.52 m (2 to 5 ft) beyond berm's or road's edge] for access and fire prevention along roads as described in the Routine ROW road maintenance (Class 2) description. Routine maintenance activity will be restricted to and confined within those limits. In addition, maintenance personnel will keep vehicles on existing roads. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate limits of maintenance activity where any sensitive biological resources or wildlife habitats occur. Temporary demarcation methods such as flagging tape, pin flags, or wooden stakes will be used when necessary to ensure that all workers strictly limit activities and vehicles to the designated work areas.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.
Biology	CM-50	All existing and new employees/contractors will undergo the WEAP (see CM 14) prior to their involvement in all Class 1 and Class 2 O&M activities.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.
Biology	CM-51	During Class 2, ground-disturbing O&M activities in occupied habitat, a Qualified Biologist will determine if trapping is necessary to reduce harm to kangaroo rats. If kangaroo rats are found in the disturbance area, and the work will take less than 2 days to complete the Qualified Biologist will trap the area and hold kangaroo rats until the project is complete. If the Class 2 O&M activity will take more than 2 days, an exclusionary fence will be installed around the work areas where impacts will occur. The area will then be trapped and animals from inside the impact area will be relocated out of harm's way, outside of exclusion fencing until construction is completed. Following completion of O&M activities in the area occupied by kangaroo rats, SCE will remove all exclusion fencing and recontour the soils to the preconstruction condition. The name and qualifications of the Qualified Biologist will be submitted to the BLM, Service and CDFG for approval at least 30 days prior to O&M activities in occupied kangaroo rat habitat.	Post Construction	No	The Project elements do not support modeled Stephens' kangaroo rat habitat. Therefore, this measure does not apply.
Biology	CM-52	A Qualified Biologist will be present during Class 2, ground-disturbing O&M activities conducted in modeled habitat during the species' seed germination and growing season, generally January to May. The name and qualifications of the Qualified Biologist will be submitted to the BLM and Service for approval at least 30 days prior to project construction in modeled habitat. Milk-vetch locations identified during the preconstruction surveys will be surveyed to determine if additional germination has occurred. Any milkvetch locations found during O&M activities will be marked (e.g., flagging tape, pin flags, wooden stakes) and avoided to the maximum extent possible. Where avoidance is not possible, milk-vetch plants will be salvaged following the Plant Salvage Plan (see CM 25). The name and qualifications of the Qualified Biologist will be submitted to the BLM, Service, and CDFG for approval at least 30 days prior to O&M activities in modeled habitat.	Post Construction	No	The Project elements do not support modeled Coachella Valley milk-vetch habitat. Therefore, this measure does not apply.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Biology	CM-53	Class 2, ground-disturbing O&M activities within modeled/blow sand habitat, defined in the post-construction O&M Plan Maps, will be conducted between April and October (inclusive of both months) when air temperature is above 75 degrees Fahrenheit to minimize potential impacts to fringe-toed and horned lizards.	Post Construction	No	The Project elements do not support modeled or potential habitat for the Coachella Valley fringe-toed lizard or flat-tailed horned lizard. Therefore, this measure does not apply.
Biology	CM-54	To reduce direct impacts to fringe-toed and horned lizards during O&M activities, a Qualified Biologist will monitor all Class 2 ground-disturbing activities within modeled/blow sand habitat. The Qualified Biologist(s) will be present throughout ground disturbing O&M activities in modeled/blow sand habitat to identify, capture, and relocate any individuals to the nearest suitable habitat outside of the DPV1/DPV2 ROW. The name and qualifications of the Qualified Biologist will be submitted to the BLM, Service, and CDFG for approval at least 30 days prior to O&M activities in modeled/blow sand habitat.	Post Construction	No	The Project elements do not support modeled or potential habitat for the Coachella Valley fringe-toed lizard or flat-tailed horned lizard. Therefore, this measure does not apply.
Biology	CM-55	During the tortoise's most active season (April thru May and September thru October), operators of heavy equipment (such as road graders) will be accompanied by an Authorized Biologist during Class 2 ground-disturbing O&M activities in tortoise modeled, critical habitat, and/or occupied habitat. The Authorized Biologist will have the responsibility and authority to halt all project activity should danger to a tortoise arise. Work will proceed only after hazards to the tortoise are removed, the tortoise is no longer at risk, or the tortoise has been moved from harm's way of its own will or by the Authorized Biologist. The name and qualifications of the Authorized Biologist will be submitted on the Service's Desert Tortoise Authorized Biologist Request Form (September 2009) or most current version to the BLM, Service, and CDFG for approval at least 30 days prior to initiation of ground disturbing O&M activities in tortoise habitat.	Post Construction	Yes	The Project elements contain desert tortoise habitat. This measure will be implemented post-construction.
Biology	CM-56	During Class 2 ground-disturbing O&M activities conducted during the tortoise's less active period (generally November thru March) in modeled, critical habitat, and/or occupied habitat, an Authorized Biologist will conduct burrow searches prior to initiation of ground-disturbing activities that take place beyond existing permanent disturbance areas, such as existing access roads in modeled, critical, and occupied habitat. Tortoises found in burrows during the less active period during O&M activities will be avoided to the extent practicable. Burrows that cannot be avoided will be excavated and the tortoise removed, blocked into an artificial or empty natural burrow within 500 m (1,600 ft) from the construction area, and monitored until O&M activities in the area are complete. Excavation, creation of artificial burrows, and handling of eggs, juveniles and adults will be conducted in accordance with the Service's Desert Tortoise Field Manual (December 2009) or more current Service guidance.	Post Construction	Yes	This measure pertains to post-construction operations and maintenance phase activities and will be implemented within modeled, critical, or occupied habitat of covered species.
Biology	CM-57	During O&M activities, all workers in the action area will be required and reminded at least annually in writing to inspect underneath parked vehicles every time before starting and driving the vehicle. The written instruction will require that if a tortoise is found beneath vehicle, the vehicle will not be moved until the animal is no longer at risk of being run over, or the Authorized Biologist will be contacted to move the animal out of harm's way.	Post Construction	Yes	This measure pertains to post-construction operations and maintenance phase activities and will be implemented within modeled, critical, or occupied habitat of covered species.
Biology	CM-58	Debris from tree trimming and brush clearing done in modeled, critical, or occupied habitat will be completely disposed so that it is no longer available for use for raven nest building (i.e., removal to a landfill or disposal at SCE facility).	Post Construction	Yes	This measure pertains to post-construction operations and maintenance phase activities and will be implemented within modeled, critical, or occupied habitat of covered species.
Biology	CM-59	SCE will prepare an annual report by December 31 of each year of the project detailing construction and O&M activities and effects to milk-vetch, along with kangaroo rats, fringe-toed and horned lizards, and tortoises, as described in the "Terms and Conditions" section of this biological/conference opinion.	Post Construction	Yes	This measure pertains to post-construction operations and maintenance phase activities and will be implemented within modeled, critical, or occupied habitat of covered species.



Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Cultural and Paleontological	MM C-1a	Inventory and evaluate cultural resources in Final APE. Prior to construction and all other surface disturbing activities, the Applicant shall have conducted and submitted for approval by the BLM (and the USFS, on San Bernardino National Forest land and the THPO on Agua Caliente land) an inventory of cultural resources within the project's final Area of Potential Effect. The nature and extent of this inventory shall be determined by the BLM in consultation with the appropriate State Historic Preservation Officer (SHPO) and shall be based upon project engineering specifications (BLM B-9.1). Results of this inventory shall also be filed with appropriate State repositories and local governments. As part of the inventory, the Applicant shall conduct field surveys of sufficient nature and extent to identify cultural resources that would be affected by tower pad construction, reconductoring activities, 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, new tower sites, and any other projected areas of potential ground disturbance outside of the previously surveyed potential impact areas. Site-specific field surveys also shall be undertaken at all projected areas of impact within the previously surveyed corridor that coincide with previously recorded resource locations. The selected right-of-way shall be staked prior to the cultural resource field surveys (based on BLM B-9.2). As part of the inventory report, the Applicant shall evaluate the significance of all affected cultural resources on the basis of surface observations and provide recommendations with regard to their eligibility for the National Register of Historic Places (NRHP) or local registers. Preliminary determinations of NRHP eligibility will be made by the BLM, in consultation with the appropriate local governments, the USFS (on USFS land), and the appropriate SHPO or THPO (based on BLM B-9.3).	Pre-construction	Yes	These project facilities are located within the previously surveyed area for the DPV2 Project (Eckhardt et al. 2011) and have been submitted to the agencies under separate cover from this NTP. There are no known cultural resources within this APE.
Cultural and Paleontological	MM C-1b	Avoid and protect potentially significant resources. On the basis of preliminary National Register of Historic Places (NRHP) eligibility assessments (Mitigation Measure C-1a) the BLM 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 (based on BLM B-9.5). Where operationally feasible, potentially NRHP-eligible resources shall be protected from direct project impacts by project redesign.  Where the BLM decides that potentially NRHP-eligible cultural resources cannot be protected from direct impacts by project redesign, the Applicant shall undertake additional studies to evaluate the resources' NRHP-eligibility and to recommend further mitigative treatment. The nature and extent of this evaluation shall be determined by the BLM in consultation with the appropriate State Historic Preservation Officer (SHPO) and shall be based upon final project engineering specifications. Evaluations will be based on surface remains, subsurface testing, archival and ethnographic resources, and in the framework of the historic context and important research questions of the project area. Results of those evaluation studies and recommendations for mitigation of project effects shall be incorporated into a Historic Properties Treatment Plan consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan).  All potentially NRHP-eligible resources (as determined by the BLM) that will not be affected by direct impacts, but are within 50 feet of direct impact areas will be designated as Environmentally Sensitive Areas (ESAs). Protective fencing, or other markers, at the BLM's discretion, shall be erected and maintained to protect ESAs from inadvertent trespass for the duration of construction in the vicinity. Construction personnel and equipment shall be instructed on how to avoid ESAs. ESAs shall not be identified specifically as cultural resources. A monitoring program shall be developed as part of the Historic Properties Treatment Plan and implemented by the Applicant to ensure the effectiveness of ESAs.	Pre-construction and during construction	No	No cultural resources are located within the APE. In the event of unanticipated cultural resources, the HPMP will be implemented (Eckhardt et al. 2011).
Cultural and Paleontological	MM C-1c	Develop and implement Historic Properties Treatment Plan.	Pre-construction and during construction	Yes	The HPMP has been approved by the Agencies.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Cultural and Paleontological	MM C-1d	<p>Conduct data recovery to reduce adverse effects. If National Register of Historic Places (NRHP)-eligible resources, as determined by the BLM and SHPO, cannot be protected from direct impacts of the Proposed Project, data-recovery investigations shall be conducted by the Applicant to reduce adverse effects to the characteristics of each property that contribute to its NRHP eligibility. For sites eligible under Criterion d, significant data would be recovered through excavation and analysis. For properties eligible under Criteria a, b, or c, data recovery may include historical documentation, photography, collection of oral histories, architectural or engineering documentation, preparation of a scholarly work, or some form of public awareness or interpretation. Data gathered during the evaluation phase studies and the research design element of the Historic Properties Treatment Plan (HPTP) shall guide plans and data thresholds for data recovery; treatment will be based on the resource's research potential beyond that realized during resource recordation and evaluation studies. If data recovery is necessary, sampling for data-recovery excavations will follow standard statistical sampling methods, but sampling will be confined, as much as possible, to the direct impact area. Data-recovery methods, sample sizes, and procedures shall be detailed in the HPTP consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan) and implemented by the Applicant only after approval by the BLM and CPUC. Following any field investigations required for data recovery, the Applicant shall document the field studies and findings, including an assessment of whether adequate data were recovered to reduce adverse project effects, in a brief field closure report. The field closure report shall be submitted to the BLM and CPUC for their review and approval, as well as to appropriate State repositories and local governments. Construction work within 100 feet of cultural resources that require data recovery fieldwork shall not begin until authorized by the BLM or CPUC, as appropriate.</p>	Pre-construction, during and post construction	No	No NRHP are located within the Devers Substation Expansion. In the event of unanticipated cultural resources, the HPMP will be implemented (Ekhardt et al. 2011).
Cultural and Paleontological	MM C-1e	<p>Monitor construction. The Applicant shall implement archaeological monitoring by a professional archaeologist during subsurface construction disturbance at all locations identified in the Historic Properties Treatment Plan (HPTP). Full-time monitoring shall occur when ground disturbing activities take place at all archaeological High-Sensitivity Areas described above and at all cultural resource Environmentally Sensitive Areas (ESAs). These locations and their protection boundaries shall be defined and mapped in the HPTP. Intermittent monitoring may occur in areas of moderate archaeological sensitivity at the discretion of the BLM and CPUC. Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historical and prehistoric resources that could be encountered within the project, and under direct supervision of a principal archaeologist. The qualifications of the principal archaeologist and archaeological monitors shall be approved by the BLM and CPUC. A Native American monitor may be required at culturally sensitive locations specified by the BLM following government-to-government consultation with Native American tribes. The monitoring plan in the HPTP shall indicate the locations where Native American monitors will be required and shall specify the tribal affiliation of the required Native American monitor for each location. The Applicant shall retain and schedule any required Native American monitors.</p> <p>Compliance with and effectiveness of the cultural resources monitoring plan shall be documented by the Applicant in a monthly report to be submitted to the BLM and CPUC, and, on San Bernardino National Forest, to the USFS, and on Agua Caliente land, to the THPO, or the duration of project construction. In the event that cultural resources are not properly protected by ESAs, all project work in the immediate vicinity shall be diverted by the archaeological monitor until authorization to resume work has been granted by the BLM and CPUC. The Applicant shall notify the BLM of any damage to cultural resource ESAs. The Applicant shall consult with the BLM to mitigate damages and to increase effectiveness of ESAs. At the discretion of the BLM and CPUC, such mitigation may include, but not be limited to modification of protective measures, refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection.</p>	Pre-construction and during construction	No	No cultural resources are located with the Devers Substation Expansion. In the event of unanticipated cultural resources, the HPMP will be implemented (Ekhardt et al. 2011).

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Cultural and Paleontological	MM C-1f	<p>Train construction personnel. All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground disturbing activities. The Applicant shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that Environmentally Sensitive Areas (ESAs) must be avoided and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the right-of-way by the Applicant, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order (BLM B-9.11). The following issues shall be addressed in training or in preparation for construction:</p> <ul style="list-style-type: none"> <li>• All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources.</li> <li>• The Applicant shall provide a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA, and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources.</li> <li>• Upon discovery of potential buried cultural materials by archaeologists or construction personnel, or damage to an ESA, work in the immediate area of the find shall be diverted and the Applicant's archaeologist notified. Once the find has been inspected and a preliminary assessment made, the Applicant's archaeologist will consult with the BLM to make the necessary plans for evaluation and treatment of the find(s) or mitigation of adverse effects to ESAs.</li> </ul>	Pre-construction and during construction	Yes	A cultural/paleontological WEAP has been submitted and accepted by the CPUC. This WEAP training will be required for all construction personal prior to cosntruction.
Cultural and Paleontological	MM C-2a	Consult agencies and Native Americans. If human remains are discovered during construction, all work will be diverted from the area of the discovery and the BLM authorized officer will be informed immediatly. The Applicant shall follow all State and federal laws, statutes, and regulations that govern the treatment of human remains. The Applicant shall assist and support the BLM in all required government-to-government consultations with Native Americans and appropriate agencies and commissions, as requested by the BLM. The Applicant shall comply with and implement all required actions and studies that result from such consultations, as directed by the BLM.	During construction	Yes	If human remains and/or cultural items (funerary objects) defined by the NAGPRA are inadvertently discovered during construction activities, all work in the vicinity of the find will cease within a 500-foot radius of the remains, the area will be protected by posting a monitor or construction worker to ensure that no additional disturbance occurs, the monitor will contact SCE archaeologist Audry Williams who will notify the Riverside County Coroner, BLM Field Manager, and BLM archaeologist George Kline pursuant to Section (3)(d)(1) of the NAGPRA. If the discovery occurs at the end of the work day, the area must be secured by posting a guard and covering the area with heavy metal plates (if remains are found below surface in a trench) until the BLM Field Manager provides specific protection and treatment guidance.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Cultural and Paleontological	MM C-3a	Complete consultation with Native American and other Traditional Groups. The Applicant shall provide assistance to the BLM, as requested by the BLM, to complete required government-to-government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994 and Section 106 of the National Historic Preservation Act) and other Traditional Groups to assess the impact of the Proposed Project on Traditional Cultural Properties or other resources of Native American concern. As directed by the BLM, the Applicant shall undertake required treatments, studies, or other actions that result from such consultation. Written documentation of the completion of all pre-construction actions shall be submitted by the Applicant and approved by the BLM at least 30 days before commencement of construction activities. Actions that are required during or after construction shall be defined, detailed, and scheduled in the Historic Properties Treatment Plan and implemented by the Applicant, consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan).	Pre-construction and during construction	Yes	Consultation with Native Americans is on going between the BLM and tribes who have expressed interest in the DPV2 project.
Cultural and Paleontological	MM C-4a	Inventory paleontological resources in Final APE. Prior to construction and all other surface-disturbing activities, the Applicant shall have conducted and submitted for approval an inventory of potentially significant paleontological resources, based on field inspection of areas of high or undetermined paleontological sensitivity, that will be affected by the project as determined by the BLM and CPUC. As part of the inventory report, the Applicant shall evaluate and refine the paleontological sensitivity modeling of sediments that will be affected.	Pre-construction	Yes	These project elements are located within the previously paleontological inventory area for the DPV2 Project (CH2M Hill 2010) and have been submitted to the agencies under separate cover from this NTP. The inventory concluded that the Devers Substation expansion is located in low sensitivity for paleontological resources to occur.
Cultural and Paleontological	MM C-4b	Develop Paleontological Monitoring and Treatment Plan. The Applicant shall, upon approval of the paleontological inventory report by the BLM and CPUC, prepare and submit for approval a plan to mitigate identified impacts. The Paleontological Monitoring and Treatment Plan shall identify construction impact areas of high sensitivity for encountering significant resources and the depths at which those resources are likely to be discovered. The Plan shall outline a coordination strategy to ensure that all construction disturbance in high sensitivity sediments will be monitored full-time by qualified professionals. Sediments of undetermined sensitivity will be spot-checked. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, post-excavation preparation and analysis of specimens, final curation of specimens at a federally recognized, accredited facility, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the Applicant on public land shall be carried out by qualified professionals on a currently valid Paleontological Collecting Permit for the appropriate State. Notices to proceed will be issued by the BLM CPUC following approval of the Paleontological Monitoring and Treatment Plan.	Pre-construction	No	The Devers Substation expansion is located within the previously paleontological inventory area for the DPV2 Project (CH2M Hill 2010) and have been submitted to the agencies under separate cover from this NTP. The inventory concluded that the Devers Substation expansion is located in low sensitivity for paleontological resources to occur.
Cultural and Paleontological	MM C-4c	Monitor construction for paleontology. Based on the paleontological sensitivity assessment and Monitoring and Treatment Plan consistent with Mitigation Measure C-4b (Develop Paleontological Monitoring and Treatment Plan), the Applicant shall conduct full-time construction monitoring in areas where and when sediments of high paleontological sensitivity will be disturbed. Construction activities shall be diverted when data recovery of significant fossils is warranted.	During construction	No	The inventory concluded that the Devers Substation expansion is located in low sensitivity for paleontological resources to occur. Areas of low paleontological sensitivity do not require monitoring. Furthermore, the preparation of the Devers Substation expansion will not reach excavation depths that are likely to encounter paleontological resources. If resources are uncovered treatment outlined in the PMTP will be followed
Cultural and Paleontological	MM C-4d	Conduct paleontological data recovery. If avoidance of significant paleontological resources is not feasible or appropriate, treatment (including recovery, specimen preparation, data analysis, curation, and reporting) shall be carried out by the Applicant, in accordance with the BLM-approved Treatment Plan per Mitigation Measure C-4b (Develop Paleontological Monitoring and Treatment Plan).	During construction	No	The inventory concluded that the Devers Substation expansion is located in low sensitivity for paleontological resources to occur. The preparation of the Devers Substation expansion will not reach excavation depths that are likely to encounter paleontological resources and therefore, do not require data recovery. If resources are uncovered treatment outlined in the PMTP will be followed

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Cultural and Paleontological	MM C-4e	<p>Train construction personnel. All construction personnel shall be trained regarding the recognition of possible buried paleontological resources and protection of all paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. The Applicant shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Training shall inform all construction personnel that Environmentally Sensitive Areas (ESAs) must be avoided and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of federally protected fossils on or off the right-of-way by the Applicant, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order (BLM B-9.11). The following issues shall be addressed in training or in preparation for construction:</p> <ul style="list-style-type: none"> <li>• All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried paleontological deposits, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources.</li> <li>• The Applicant shall provide a background briefing for supervisory construction personnel describing the potential for exposing paleontological resources, the location of any potential ESA, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils.</li> <li>• Upon discovery of potential buried paleontological materials by paleontologists or construction personnel, work in the immediate area of the find shall be diverted and the Applicant's paleontologist notified. Once the find has been inspected and a preliminary assessment made, the Applicant's paleontologist will notify the BLM and CPUC and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure C-5b (Develop Paleontological Monitoring and Treatment Plan).</li> </ul>	Pre-construction and during construction	Yes	A cultural/paleontological WEAP has been submitted and accepted by the CPUC. This WEAP training will be required for all construction personal prior to construction.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Cultural and Paleontological	MM C-5a (Rev) (SEIR)	<p>Protect and monitor NRHP-eligible properties. Protect and monitor NRHP-eligible properties. The Applicant shall design and implement a long-term plan to protect National Register of Historic Places (NRHP)-eligible sites from direct impacts of project operation and maintenance and from indirect impacts, such as erosion that result from the presence of the project. The plan shall be developed in consultation with the BLM to design measures that will be effective against project maintenance impacts and project -related vehicular impacts. The plan shall also include protective measures for NRHP-eligible properties within the DPV corridor that will experience operational and access impacts as a result of the Proposed Project. The proposed measures may include restrictive fencing or gates, permanent access road closures, signage, stabilization of erosion, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting NRHP-eligible properties. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for <u>evaluating potential addressing-inadequacies that present the possibility of allowing or failures that result in damage to NRHP-eligible properties.</u> The plan shall be submitted to the BLM and CPUC for review and approval at least 30 days prior to project operation.</p> <p>Monitoring of selected sites shall be conducted annually by a professional archaeologist for a period of five years. Monitoring shall include inspection of all site loci and defined surface features, documented by photographs from fixed photo monitoring stations and written observations. A monitoring report shall be submitted to the BLM and CPUC within one month following the annual resource monitoring. The report shall indicate any properties that have <u>any potential to be been</u> impacted by erosion or vehicle or maintenance impacts, <u>and measures to prevent such effects shall be implemented.</u> <u>Protective measures shall include erosion controls such as those defined in Mitigation Measure H-1a and APM W-3 (which require preand post-construction erosion controls).</u> For properties that have been impacted, the Applicant shall provide recommendations for mitigating impacts and for improving protective measures. After the fifth year of resource monitoring, the BLM or CPUC, as appropriate, will evaluate the effectiveness of the protective measures and the monitoring program. Based on that evaluation, the BLM or CPUC may require that the Applicant revise or refine the protective measures, or alter the monitoring protocol or schedule. If the BLM does not authorize alteration of the monitoring protocol or schedule, those shall remain in effect for the duration of project operation.</p> <p>If the annual monitoring program identifies adverse effects to National Register of Historic Places (NRHP)-eligible properties from operation or long-term presence of the project <u>that could not be prevented based on annual inspection,</u> or if, at any time, the Applicant, BLM or CPUC become aware of such adverse effects, the Applicant shall notify the BLM and CPUC immediately and implement mitigation for adverse changes, as directed by the BLM and CPUC. At the discretion of the BLM and CPUC, such mitigation may include, but not be limited to modification of protective measures, refinement of monitoring protocols, data recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection.</p>	Pre-construction and post construction	No	No NRHP eligible properties are located with the APE. In the event of unanticipated cultural resources, the HPMP will be implemented (Eckhardt et al. 2011).
Cultural and Paleontological	APM C-7	When necessary to relocate the proposed line, ancillary facilities, temporary facilities, or work areas as a result of inventory, onsite avoidance decisions, or the Holder's approved request for relocation, the Holder shall inventory the proposed new locations for cultural resources and provide inventory results to the Authorized Officer prior to construction. Any mitigation deemed necessary by the Authorized Officer shall be completed prior to undertaking any surface disturbing activities. (BLM B-9.7)	Pre-construction and during construction	Yes	Where fessible, project components have been moved to avoid cultral resources. No construction activities will take place unilt all mitigation measures are implemented per the HPMP.
Cultural and Paleontological	APM C-8	All cultural resource work undertaken by the Holder on public lands shall be carried out by qualified professionals designated on a currently valid Cultural Resource Use Permit for the appropriate State. (BLM B-9.8)	Pre-construction and during construction	No	All cultural inventory has been completed under BLM ARPA permits and Field Work Authorization. The Devers Substation expansion is located on private property.
Cultural and Paleontological	APM C-9	Notices to proceed (NTP) will be issued following completion, and approval by the Authorized Officer, of any fieldwork determined necessary through the inventory, evaluation, and consultation process described above. (BLM B-9.9)	Pre-construction	Yes	All NTPs will be submitted to both the CPUC and the BLM.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Cultural and Paleontological	APM C-10	Vehicles and equipment shall be confined and operated only within areas specified by the Authorized Officer. (BLM B-9.10)	Pre-construction and during construction	Yes	Vehicles and equipment will remain outside of all ESA. ESA will be monitored to ensure compliance.
Geology, Mineral Resources and Soils	MM G-1a	Protect desert pavement. Grading for new access roads or work areas in areas covered by desert pavement shall be avoided if possible. If avoidance of these areas is not possible, the desert pavement surface shall be protected from damage or disturbance from construction vehicles by use of temporary mats on the surface. A plan for identification and avoidance or protection of sensitive desert pavement shall be prepared and submitted to the CPUC, BLM, and USFWS for review and approval at least 60 days prior to start of construction.	Pre-construction and during construction	No	Not applicable. Desert pavement was not found at the Devers expansion location.
Geology, Mineral Resources and Soils	MM G-2a	Design-level geotechnical studies shall be performed by the Applicant to identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Study results and proposed solutions shall be provided to the CPUC and BLM, as appropriate, for review and approval at least 60 days before construction.	Pre-construction and during construction	Yes	The Geotechnical Summary Report will be submitted to the CPUC prior to construction.
Geology, Mineral Resources and Soils	MM G-3a	Conduct geotechnical surveys for landslides. The Applicant shall perform design level geotechnical surveys in areas crossing and adjacent to hills and mountains. These surveys will acquire data that will allow identification of specific areas with the potential for unstable slopes, landslides, earth flows, and debris flows along the approved transmission line route and in other areas of ground disturbance, such as grading for access and spur roads. The investigations shall include an evaluation of subsurface conditions, identification of potential landslide hazards, and provide information for development of excavation plans and procedures. Where landslide hazard areas cannot be avoided, appropriate engineering design and construction measures shall be incorporated into the project designs to minimize potential for damage to project facilities. A report documenting these surveys and design measures to protect structures shall be submitted to the CPUC and BLM for review and approval at least 60 days before construction	Pre-construction and during construction	No	Not applicable. This measure only applies to the Devers-Valley Transmission Line.
Geology, Mineral Resources and Soils	MM G-5a	Design project facilities to avoid impact from ground failure. Since seismically induced ground failure has the potential to damage or destroy project components, the Applicant shall complete design-level geotechnical investigations at tower locations in areas with potential liquefaction-related impacts. These studies shall specifically assess the potential for liquefaction and lateral spreading hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs. A report documenting results of the geotechnical surveys shall be submitted to the CPUC and BLM for review and approval at least 60 days before construction.	Pre-construction and during construction	No	Not applicable. This measure only applies to the Devers-Valley Transmission Line.
Geology, Mineral Resources and Soils	MM G-6a	Coordinate with quarry operations. Operations and management personnel for the Indio Pit quarry shall be consulted regarding locations of active mining and for coordination of construction activities in and through those areas. A plan to avoid or minimize interference with mining operations shall be prepared in conjunction with mine/quarry operators prior to construction. SCE shall document compliance with this measure prior to the start of construction by submitting the plan to the CPUC and BLM for review at least 60 prior to the start of construction.	Pre-construction and during construction	No	Not applicable. There are no quarry operations at substations.
Geology, Mineral Resources and Soils	MM G-7a	Minimize project structures within active fault zones. SCE shall perform a geologic/geotechnical study to confirm the location of mapped traces of active and potentially faults crossed by the project route. For crossings of active faults, the towers shall be placed as far as feasible outside the area of mapped fault traces. Compliance with this measure shall be documented to the CPUC and BLM in a report submitted for review and approval at least 60 days prior to the start of construction.	Pre-construction and during construction	Yes	The Geotechnical Summary Report will be submitted to the CPUC prior to construction.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Geology, Mineral Resources and Soils	APM G-1	The line will be located to minimize the disruption of any active mining operations. (BLM B-2.1)	Pre-construction	No	Not applicable. No mining operations are located near the substation elements.
Geology, Mineral Resources and Soils	APM G-2	Individual 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 Holder's Geologist and the BLM Authorized Officer. The Holder's Geologist and the BLM Authorized Officer will determine if it is a fault trace and if so, will ascertain if it is active, potentially active, or inactive. (BLM B-2.2)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-3	Towers will be located so that the line will span the surface traces of active and potentially active faults such that a relative lateral surface displacement would shorten the span between towers, and thus avoid potential line breaks. Where this is not feasible, the Holder will incorporate slack spans to bridge the fault(s) such that the projected lateral surface displacement, as forecast by the Holder's Geologist and accepted by the BLM Authorized Officer, will not structurally affect the associated towers. (BLM B-2.3)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-4	In general, an appropriate tower design which accounts for lateral wind loads and conductor loads exceeds any credible seismic loading (groundshaking). (BLM B-2.4)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-5	Towers will be located to avoid areas of highly sensitive dune sand areas. Where these areas cannot be avoided, towers will be located to minimize disturbance to the deposits at a site approved by the BLM Authorized Officer. (BLM B 2.5. Note: Text here omits references to specific figures and maps in the original [1987 88] DEIR and DEIS.)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-6	Wherever feasible to minimize the potential for slope instability, towers will be located to avoid gullies or active drainages, and over-steepened slopes. (BLM B-2.6)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-7	SCE will provide a list of sites where helicopter construction is recommended. The Authorized Officer may require, on a site-specific basis, helicopter assisted construction in sensitive areas. Sensitive areas are those that exhibit both (1) high erosion potential and/or slope instability; and (2) a lack of existing stub roads within a reasonable distance of the tower site or existing access that is not suitable for upgrading to accommodate conventional tower construction or line stringing equipment, and where it is determined that, after field review, the issues of erosion and/or slope instability cannot be successfully mitigated through implementation of accepted engineering practices. (BLM B-2.7)	Pre-construction	No	Not applicable. The substation does not require helicopter assisted construction.
Geology, Mineral Resources and Soils	APM G-8	Mitigation of potentially significant impacts to the western end of the proposed transmission line due to (1) potential surface fault rupture along the Banning, Mission Creek, and Mecca Hills faults, and (2) potential for severe seismic shaking can be achieved by standard design methods listed below: a. Towers will be sited so as not to straddle active fault traces. b. The alignment will be designed to cross an active fault such that future rupture on the fault would not cause excessive stress on the line or the towers. c. Standard foundation and structural design measures will be utilized to minimize the impact from severe seismic shaking. (BLM B-2.8)	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.



Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Geology, Mineral Resources and Soils	APM G-9	Appropriate design of tower foundations will be used to reduce the potential for settlement and compaction. (BLM B-2.9)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-10	New access roads and soil disturbance will be avoided or minimized in all areas designated as having high erosion hazards or potential slope instability. If the Authorized Officer, after consultation and review of alternatives (including helicopter or helicopter assisted construction), deems the proposed new access road feasible, design plans must be submitted for approval, in writing, prior to construction. (BLM B-3.1. Note: Text here omits references to specific figures and maps in the original (1987-88) DEIR and DEIS.)	Pre-construction	No	Not applicable. This measure only applies to transmission lines.
Geology, Mineral Resources and Soils	APM G-11	New access roads, which are required, will be designed to minimize ground disturbance from grading. They will follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage ditches, side ditches, slope drains, and velocity reducers. Where temporary crossings are constructed, the crossings will be restored and repaired as soon as possible after completion of the discrete action associated with construction of the line in the area. (BLM B-3.2)	Pre-construction, during and post construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-12	Side casting of soil during grading will be minimized. Excess soil and excavated soil will be properly stabilized or, dispersed around tower construction sites or on stub or access roads. (BLM B-3.3)	During construction	Yes	Side casting of soil during grading will be minimized.
Geology, Mineral Resources and Soils	APM G-13	During grading operations, care would be exercised to minimize side casting. No earth would be removed below final elevations, and no cuts would be made deeper than necessary for clearing and road construction. (SCE)	During construction	Yes	Side casting of soil during grading will be minimized.
Geology, Mineral Resources and Soils	APM G-14	Upon completion of construction, any drainage deficiencies would be corrected to prevent future erosion. Trees and brush would be cleared only when necessary to provide electrical clearance, line reliability, or suitable access for maintenance and construction. (SCE)	Post construction	Yes	Upon completion of construction, this measure will be implemented as required.
Geology, Mineral Resources and Soils	APM G-15	Counterpoise may need to be installed if the local soil conditions indicate that the soil has a resistance above 30 ohms. This is accomplished by attaching a 0.375-inch cable to the tower steel. The cable is installed 1 foot underground and extends approximately 100 feet within the ROW from two or more footings.	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-16	The line would be located to minimize the disruption of any active mining operations. (SCE)	Pre-construction	No	Not applicable. No mining operations are located near the substation elements.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Geology, Mineral Resources and Soils	APM G-17	Appropriate tower design would be used to mitigate the potential for impacts from very strong seismic groundshaking. In general, an appropriate tower design which accounts for lateral wind loads and conductor loads during line stringing exceeds any credible seismic loading (groundshaking). (SCE)	Pre-construction	No	Not applicable. This measure only applies to the Devers-Valley Transmission Line between MP 195 and Devers Substation.
Geology, Mineral Resources and Soils	APM G-18	Whenever possible to minimize the potential for slope instability, towers would be located to avoid gullies or active drainages, and over-steepened slopes. (SCE)	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.
Geology, Mineral Resources and Soils	APM G-19	New access roads, where required, would be designed to minimize ground disturbance from grading. They would follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage dips, side ditches, slope drains, and velocity reducers. Where temporary crossings are constructed, the crossings would be restored and repaired as soon as possible after completion of the discrete action associated with construction of the line. Side casting of soil during grading would be minimized. Excess soil would be properly stabilized, or if necessary, hauled to an approved disposal site. (SCE)	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.
Hydrology and Water Resources	MM H-1a	Restore disturbed soil with re-vegetation or construction of permanent erosion-control structures. Soil disturbance at towers and access roads shall be the minimum necessary and designed to prevent long-term erosion through revegetation or construction of permanent erosion control structures according to plans to be reviewed and approved by the U.S. Forest Service. Copies of the final approved plans shall be submitted to the CPUC/BLM for their files.	Pre-construction, during and post-construction	No	Not applicable. This measure only applies to Forest Service lands.
Hydrology and Water Resources	MM H-5a (SEIR)	Construction site dewatering management. If groundwater is unexpectedly encountered during project construction, dewatering activities shall be performed in accordance with the California Stormwater Quality Association (CASQA) Handbook for Construction or other similar guidelines, as approved by the County of Riverside. Examples of construction site dewatering Best Management Practices include but are not limited to the following: fiber rolls, gravel bag berms, straw bale barriers, sediment basins and sediment traps, weir tanks, dewatering tanks, and various filters (gravity bag filter, sand media particulate filter, pressurized bag filter, cartridge filter). The project Applicant shall notify the Colorado River Basin Regional Water Quality Control Board (RWQCB) and County at the onset of dewatering and submit written description of all executed dewatering activities, including steps taken to return encountered groundwater to the subsurface, upon the completion of dewatering activities at the affected site(s).	During construction	No	This measure is applicable to CRS.
Hydrology and Water Resources	MM H-6a	Design diversion dikes or other site remediation's to avoid damage to adjacent property. Where diversion dikes are required to protect towers or other project structures from flooding or erosion, these dikes shall be so designed as to avoid increasing the risk of erosion or flooding onto adjacent property where life, existing improvements or land values could be threatened. Diversion dike designs shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to construction.	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Hydrology and Water Resources	MM H-7a (SEIR)	<p>Groundwater Well Contingency Plan. Prior to issuance of construction permits, the Applicant shall prepare a Groundwater Well Contingency Plan (Plan) to drill and construct a secondary supply well that would supplement groundwater production rates from the primary supply well, should the pumping capacity (daily yields) of the primary well become inadequate to meet the project requirements. The Plan shall identify the following features of the secondary supply well, should it be needed:</p> <ul style="list-style-type: none"> <li>☐ location within the Colorado River Substation (CRS) site;</li> <li>☐ proximity to existing wells (private and/or municipal);</li> <li>☐ estimated total depth, well screen depth, diameter, and estimated yield; and</li> <li>☐ time required to have the well drilled, constructed, developed and fully operational.</li> </ul> <p>The Plan shall also specify what conditions would trigger use of the second supply well, as well as the person responsible for determining when to utilize the second supply well. The County of Riverside shall be notified prior to installation of the secondary supply well, should it be necessary. The Applicant shall submit the Groundwater Well Contingency Plan to the CPUC and the County of Riverside for review and approval thirty (30) days before the start of extraction of groundwater for construction or operation.</p>	Prior to start of construction	No	This measure applies to the Colorado River Substation.
Hydrology and Water Resources	MM H-7b (SEIR)	<p>Groundwater Monitoring and Reporting. Prior to issuance of construction permits and prior to any groundwater pumping activities, a Groundwater Monitoring and Reporting Plan (Plan) shall be prepared by a Certified Hydrogeologist (CHG) and submitted by the Applicant (SCE) to the California Public Utilities Commission (CPUC) for review and approval. The Plan shall provide detailed methodology for monitoring background and site groundwater levels, water quality, and flow.</p> <p>Monitoring shall be performed during pre-construction, construction, and project operation with the intent to establish pre-construction and project-related groundwater level and water quality trends that can be quantitatively compared against observed and simulated trends near the project pumping well(s). During pre-construction monitoring, it shall be determined whether groundwater can be pumped from above the Colorado River accounting surface of 234 feet above mean sea level (amsl). If it is not possible to verify that groundwater for the Proposed Project would be exclusively pumped from above the Colorado River accounting surface, then Mitigation Measure H-7c (Water Supply Plan for Use of Colorado River Water) would be required.</p> <p>The monitoring wells shall include locations up-gradient, lateral, and down-gradient of all project supply wells and a minimum of three offsite down-gradient wells. Water quality monitoring shall include annual sampling and testing for Total Dissolved Solids (TDS), which include minerals, salts, and metals dissolved in water. Water quality samples shall be drawn from project supply wells, one up-gradient well, and a minimum of two down-gradient offsite wells.</p> <p>The Plan shall include a schedule for submittal of both quarterly (construction only) and annual (operations) monitoring data reports by the Applicant to the CPUC.</p> <p>During the project construction period, quarterly water level monitoring data reports shall be submitted to CPUC for review and approval. In addition, for at least the first 5 years of the project from the initiation of project construction, annual summary reports shall also be submitted to CPUC for review and approval. At a minimum, these annual summary reports shall include:</p> <ul style="list-style-type: none"> <li>☐ Daily usage, monthly range, and monthly average of daily water usage in gallons per day;</li> <li>☐ Total water used on a monthly and annual basis in acre-feet;</li> <li>☐ Summary of all water level and water quality data; and</li> </ul>	Pre-construction	No	This measure applies to the Colorado River Substation.
Hydrology and Water Resources	APM W-1	<p>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). (BLM B-4.1)</p>	Post-Construction	Yes	This measure will be implemented post construction.
Hydrology and Water Resources	APM W-2	<p>Construction equipment will be kept out of flowing stream channels except when absolutely necessary to construct crossings. (BLM B-4.2)</p>	Pre-construction and during construction	No	Not applicable. No stream channels are present.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Hydrology and Water Resources	APM W-3	Erosion control and hazardous material plans will be incorporated into the construction bidding specifications to ensure compliance. (BLM B-4.3)	Pre-construction and during construction	Yes	Erosion control and hazardous material plans will be incorporated into the construction bidding specifications.
Hydrology and Water Resources	APM W-4	Appropriate design of tower footing foundations, such as raised foundations and/or enclosing flood dikes, will be used to prevent scour and/or inundation by a 100-year flood.	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.
Hydrology and Water Resources	APM W-5	Towers will be located to the extent feasible, to avoid active drainage channels, especially downstream of steep hill slope areas, to minimize the potential for damage by flash flooding and mud and debris flows.	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.
Hydrology and Water Resources	APM W-6	Diversion dikes or other structural enhancements will be required to divert runoff around a tower structure if a) the location in an active channel cannot be avoided; and b) where there is a very significant flood scour/deposition threat, unless specifically exempted by BLM Authorized Officer.	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.
Hydrology and Water Resources	APM W-7	Runoff from roadways will be collected and diverted from steep, disturbed or otherwise unstable slopes. (BLM B-4.7)	During construction	Yes	Proper runoff controls have been incorporated into access road designs and will be implemented during construction.
Hydrology and Water Resources	APM W-8	Ditches and drainage concourses will be designed to handle the concentrated runoff, will be located to avoid disturbed areas, and will have energy dissipations at discharge points. (BLM B-4.8)	Pre-construction and during construction	Yes	Measure will be implemented.
Hydrology and Water Resources	APM W-9	Cut and fill slopes will be minimized by a combination of benching and following natural topography where possible. (BLM B-4.9) *Please note SBNF Easement Conditions, Stipulation 13 may override the use of benching: 13.Tower structures and sites will be designed to conform with the terrain. Leveling and benching of the site will not be allowed.	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Land Use	MM L-1a	<p>Prepare Construction Notification Plan. Forty-five days prior to construction, SCE shall prepare and submit a Construction Notification Plan to the CPUC and the BLM for approval. The Plan shall identify the procedures to ensure that SCE will inform property and business owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include template copies of public notices and advertisements (i.e., formatted text). To ensure effective notification of construction activities, the plan shall address at a minimum the following components:</p> <p>Public notice mailer. Fifteen days prior to construction, a public notice mailer shall be prepared. The notice shall identify construction activities that would restrict, block, or require a detour to access existing residential properties, retail and commercial businesses, wilderness and Recreation facilities, and public facilities (e.g., schools and memorial parks). The notice shall state the type of construction activities that will be conducted, and the location and duration of construction. SCE shall mail the notice to all residents or property owners within 300 feet of the right-of-way and to specific public agencies with facilities that could be impacted by construction. If construction delays of more than seven days occur, an additional notice shall be prepared and distributed. Newspaper advertisements. Fifteen days prior to construction, newspaper advertisements shall be placed in local newspapers and bulletins. The advertisement shall state when and where construction will occur and provide information on the public liaison person and hotline identified below.</p> <p>Public venue notices. Thirty days prior to construction, notice of construction shall be posted at public venues such as trail crossings, rest stops, desert centers, resource management offices (e.g., Bureau of Land Management field offices, San Bernardino National Forest Ranger Station), and other public venues to inform residents and visitors to the purpose and schedule of construction activities. For public trail closures, SCE shall post information on the trail detour at applicable resource management offices and post the notice within two miles north and south of the detour. For Recreation facilities, the notice shall be posted along the access routes to known Recreational destinations that would be restricted, blocked, or detoured and shall provide information on alternative Recreation areas that may be used during the closure of these facilities.</p> <p>Public liaison person and toll-free information hotline. SCE shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. SCE shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.</p>	Pre-construction and during construction	Yes	Measure will be implemented.
Land Use	MM L-1c	<p>Provide proof of resolution of land acquisition issues for crossing of Agua Caliente Band of Cahuilla Indians tribal lands. SCE shall negotiate in good faith to reach a mutually acceptable agreement with the allottee. If an agreement is reached, SCE shall consult and coordinate with the Planning Department of the Agua Caliente to provide the information and/or fees requested by the Planning Department regarding land use matters. If SCE and the allottee reach an agreement then SCE shall notify the Planning Department of the Agua Caliente, and if SCE and the Planning Department agree on the legal requirements, including appropriate waivers, SCE shall notify the BLM and the CPUC of the agreement; however if SCE and the Planning department are unable to reach an agreement, SCE shall notify the CPUC of the inability to reach agreement and the CPUC may hold a hearing within thirty days of notification. SCE reserves the right to institute eminent domain proceedings. SCE believes that a conditional use permit is not required.</p>	Pre-construction	No	The substation is not located on Agua Caliente land, and therefore this measure does not apply.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Land Use	MM L-1e	<p>Coordinate construction schedule with public and community facilities. SCE shall coordinate with the public and community facilities and services listed below regarding the construction schedule and duration in order to minimize impacts to these land uses. The purpose of this measure is to work with sensitive land uses that would be impacted by construction and to identify construction times/periods that would have the least impact to peak use of these public and community facilities. This coordination could result in limiting or avoiding construction during school sessions, identifying hauling routes that do not conflict with school commute routes, or working with the memorial parks to address funeral procession routes and noise sensitivities. Thirty days prior to construction, SCE shall document its coordination efforts including contact persons, information provided, and comments received, and submit this documentation to the California Public Utilities Commission and the Bureau of Land Management.</p> <ul style="list-style-type: none"> <li>• Schools near the project route: Beaumont Middle School and High School, Calvary Christian School, Chavez Elementary School, Terrace View Elementary School, public elementary school on East Canyon Vista Drive.</li> <li>• San Geronio Memorial Park</li> <li>• Desert Lawn Memorial Park</li> <li>• Banning Municipal Airport</li> <li>• Grandview Baptist Church</li> </ul>	Pre-construction	No	Not applicable. None of the facilities listed in the mitigation measure are near the substation.
Land Use	APM L-2	Although the Holder (SCE) may restore and maintain existing access roads, they cannot be either widened or upgraded without approval of the Authorized Officer. (BLM B 1.1)	Pre-construction and during construction	No	Only approved access roads improvements are planned for the substation.
Land Use	APM L-8	Link 14 crosses an open pit gravel operation. Potential impacts would be mitigated during construction by coordinating with the owner/operator to avoid critical mining periods and high volume earth-moving days. Operational mitigation would include spanning the mine. (SCE)	Pre-construction and during construction	No	Not applicable. The substation is not within an open pit gravel operation.
Noise	MM N-1a	<p>Implement best management practices for construction noise. SCE shall employ the following noise-suppression techniques to minimize the impact of temporary construction noise and avoid possible violations of local rules, standards, and ordinances:</p> <ul style="list-style-type: none"> <li>• Construction noise shall be confined to daytime, weekday hours (e.g., 7:00 a.m. to 6:00 p.m.) or an alternative schedule established by the local jurisdiction;</li> <li>• Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer;</li> <li>• Construction traffic shall be routed away from residences and schools, where feasible;</li> <li>• Unnecessary construction vehicle use and idling time shall be minimized to the extent feasible.</li> </ul> <p>The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. A "common sense" approach to vehicle use shall be applied; if a vehicle is not required for use immediately or continuously for construction activities, its engine should be shut off. (Note: certain equipment, such as large diesel-powered vehicles, require extended idling for warm-up and repetitive construction tasks.)</p>	During construction	Yes	Measure will be implemented.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Noise	APM N-1	The proposed construction would comply with local noise ordinances. There may be a need to work outside of the aforementioned local ordinances in order to take advantage of low electrical draw periods during the nighttime hours. SCE would comply with variance procedures requested by local authorities if required. (SCE)	Pre-construction and during construction	Yes	Measure will be implemented.
Public Health & Safety	MM P-1b	<p>Conduct environmental training and monitoring program. An environmental training program shall be established to communicate environmental concerns and appropriate work practices, including spill prevention, emergency response measures, and proper Best Management Practice (BMP) implementation, to all field personnel prior to the start of construction. The training program shall emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of potentially hazardous substances) and shall include a review of all site-specific plans, including but not limited to, the project's Storm Water Pollution Prevention Plan and the Hazardous Substances Control and Emergency Response Plan. SCE shall document compliance by (a) submitting to the CPUC or BLM or USFWS, as appropriate, for review and approval an outline of the proposed Environmental Training and Monitoring Program, and (b) maintaining for monitor review a list of names of all construction personnel who have completed the training program.</p> <p>Best Management Practices, as identified in the project Storm Water Pollution Prevention Plan and the Hazardous Substances Control and Emergency Response Plan, shall be implemented during the construction of the project to minimize the risk of an accidental release and provide the necessary information for emergency response.</p>	Pre-construction and during construction	Yes	A WEAP was prepared to address this measure and will be presented to construction personnel prior to construction.
Public Health & Safety	MM P-1d	Maintain emergency spill supplies and equipment. Hazardous material spill kits shall be maintained at all construction sites for small spills. This shall include oil-absorbent material, tarps, and storage drums to be used to contain and control any minor releases. Emergency spill supplies and equipment shall be kept adjacent to all work areas and staging areas, and shall be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials shall be provided in the project's Hazardous Substances Control and Emergency Response Plan.	During construction	Yes	This measure will be implemented during construction.
Public Health & Safety	MM P-2a	Identify pesticide/herbicide contamination. Soil samples shall be collected in construction areas where the land has historically or is currently being farmed to identify the possibility of and to delineate the extent of pesticide and/or herbicide contamination. Excavated materials containing elevated levels of pesticide or herbicide will require special handling and disposal procedures. Standard dust suppression procedures (as defined in Mitigation Measure AQ-1a) shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the states of Arizona or California (as appropriate) and the appropriate county shall be contacted to provide oversight regarding the handling, treatment, and/or disposal options.	Pre-construction and during construction	No	Not applicable. The substation elements are not located on historically or currently farmed land.
Public Health & Safety	MM P-3a	Observe exposed soil for evidence of contamination. During grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall stop work until the material is properly characterized and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials. Additionally, in the event that evidence of contamination is observed, the contractor shall document the exact location of the contamination and shall immediately notify the CPUC or BLM, describing proposed actions. A weekly report listing encounters with contaminated soils and describing actions taken shall be submitted to the CPUC or BLM.	During construction	Yes	Measure will be implemented.
Public Health & Safety	MM PS-1a	Limit the conductor surface electric gradient. As part of the design and construction process for the Proposed Project, the Applicant shall limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide.	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Public Health & Safety	MM PS-1b	Document and Resolve Electronic Interference Complaints. After energizing the transmission line, SCE shall respond to and document all radio/television/equipment interference complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be referred by SCE to the CPUC for resolution.	Post-construction	No	Not applicable. Measure is applicable to the transmission lines.
Public Health & Safety	MM PS-2a	Implement Grounding Measures. As part of the siting and construction process for the Proposed Project, SCE shall identify objects (such as fences, metal buildings, and pipelines) within and near the right-of-way that have the potential for induced voltages and shall implement electrical grounding of metallic objects in accordance with SCE's standards. The identification of objects shall document the threshold electric field strength and metallic object size at which grounding becomes necessary.	Post-Construction	No	Not applicable. Measure is applicable to the transmission lines.
Transportation & Traffic	MM T-7a	Repair roadways damaged by construction activities. If roadways, sidewalks, medians, curbs, shoulders, or other such features are damaged by the project's construction activities, as determined by the CPUC Environmental Monitor or the affected public agency, SCE shall coordinate repairs with the affected public agencies and ensure that any such damage is repaired to the pre-construction condition within 60 days from the end of all construction within each affected county.	During and post-construction	Yes	This measure will be implemented during or post construction as required.
Visual	MM V-1a	Reduce visibility of construction activities and equipment. Substation construction sites and all staging and material and equipment storage areas, including storage sites for excavated materials shall be appropriately located away from areas of high public visibility. If visible from nearby roads, residences, public gathering areas, or recreational areas, facilities, or trails, construction sites and staging and storage areas shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location.  Additionally, avoid construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use. This measure encompasses BLM permit requirements BLM B-7.1 and B-7.2. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.	Pre-construction and during construction	Yes	Measure will be implemented.
Visual	MM V-1b	Reduce construction night lighting impacts. SCE shall design and install all lighting at construction and storage yards and staging areas such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Construction Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following:  <ul style="list-style-type: none"> <li>• Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary</li> <li>• All lighting shall be of minimum necessary brightness consistent with worker safety</li> <li>• High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied</li> </ul>	Pre-construction and during construction	Yes	This measure is addressed through the Project-wide Construction Lighting Plan.
Visual	MM V-2a	Reduce in-line views of land scars. Construct access or spur roads at appropriate angles from the originating, primary travel facilities to minimize extended, in-line views of newly graded terrain. Contour grading should be used where possible to better blend graded surfaces with existing terrain. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.	Pre-construction and during construction	No	Not applicable. Land scars will not be visible from I-10.



Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Visual	MM V-2b	Reduce visual contrast from unnatural vegetation lines. In those areas where views of land scars are unavoidable, the boundaries of disturbed areas should be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for on-going operation, maintenance, or access shall be returned to pre-construction conditions. This measure partially encompasses BLM permit requirement BLM B-7.9. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.	Pre-construction and during construction	No	Not applicable. Land scars will not be visible.
Visual	MM V-2c	Reduce color contrast of land scars. In those areas where views of land scars from sensitive public viewing locations are unavoidable, disturbed soils shall be treated with Eonite or similar treatments to reduce the visual contrast created by the lighter-colored disturbed soils with the darker vegetated surroundings. SCE will consult with the Authorized Officer on a site-by-site basis for the use of Eonite. This measure partially encompasses BLM permit requirement BLM B-6.4	Pre-construction and during construction	No	Not applicable. Land scars will not be visible.
Visual	MM V-3a	Reduce visual contrast of towers and conductors. The following design measures are to be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities: <ul style="list-style-type: none"> <li>• all new and replacement structures are to as closely as possible match the design of the existing structures with which they will be seen</li> <li>• all new and replacement structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements</li> <li>• all new and replacement structures are to match the heights of the existing DPV1 structures to the extent possible as dictated by variation in terrain</li> <li>• all new and reconducted spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as Salome Highway, I-10, U.S. 95, Colorado River, SR 78, Dillon Road, SR 62, Whitewater Canyon Road, and San Timoteo Canyon Road</li> <li>• all new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast</li> <li>• no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for skylining. SCE shall provide to the CPUC and BLM a Project Design Plan demonstrating implementation of this measure at least 90 days prior to the start of construction, and shall not commence construction until the Project Design Plan has been approved CPUC and BLM.</li> </ul>	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Visual	MM V-6a	<p>Reduce Visual Contrast Associated with Ancillary Facilities. SCE shall submit to BLM and CPUC a Surface Treatment Plan describing the application of colors and textures to all facility structures, buildings, walls, fences, and components comprising all ancillary facilities including substations/switchyards, series capacitor banks, and optical repeater stations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to BLM and CPUC for approval at least 90 days prior to (a) ordering the first structures that are to be color treated during manufacture, or (b) construction of any of the ancillary facility component, whichever comes first. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include:</p> <p>specification, and 11"x17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture</p> <p>a list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation)</p> <p>a detailed schedule for completion of the treatment</p> <p>a procedure to ensure proper treatment maintenance for the life of the project.</p> <p>SCE shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated on site, until SCE receives notification of approval of the Treatment Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SCE shall notify the BLM and CPUC that all buildings and structures are ready for inspection.</p>	Pre-construction	No	Not applicable to these activities. The Surface Treatment Plan was approved by the CPUC for CRS, which is a new substation. The Devers expansion will occur at an existing facility, therefore surface treatments will match the existing facility.
Visual	MM V-6c	<p>Reduce night lighting impacts. SCE shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized.</p> <p>SCE shall submit a Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to ordering any permanent exterior lighting fixtures or components. SCE shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following:</p> <ul style="list-style-type: none"> <li>lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary</li> <li>all lighting shall be of minimum necessary brightness consistent with worker safety • high illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.</li> </ul>	Pre-construction and during construction	Yes	The Permanent Lighting Plan will be submitted and approved by the CPUC prior ordering permanent exterior lighting fixtures and components.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Visual	MM V-40a	<p>Reduce visual contrast of towers and conductors. The following design measures are to be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities: (a) all new structures are to as closely as possible match the design of the existing structures with which they will be seen; (b) all new structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements; (c) all new structures are to match the heights of the existing D-V1 structures to the extent possible as dictated by variation in terrain; (d) all new spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as SR 62, I-10, SR 111, SR 243, SR 79, Gilman Springs Road, Ramona Expressway, Menifee Road, and SR 74; (e) all new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast, and (f) no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for skylining.</p> <p>SCE shall provide to the CPUC, BLM, and Forest Service a Project Design Plan demonstrating implementation of this measure at least 90 days prior to the start of construction, and shall not commence construction until the Project Design Plan has been approved by the CPUC, BLM, and Forest Service.</p>	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	MM V-40b	<p>Reduce visual contrast of towers and conductors on San Bernardino National Forest land. The following design measures are to be applied to all new structures and conductors on SBNF land based on SCE's consultation with SBNF staff prior to completion of final design. The details of these measures shall be developed:</p> <p>In all areas:</p> <ul style="list-style-type: none"> <li>• Transmission lines should have a permanent coloring of dark gray.</li> <li>• All towers not back-dropped on mid-slope should have permanent coloring of cool mid-gray (battleship gray).</li> </ul> <p>In mid-slope areas (as defined by SBNF):</p> <ul style="list-style-type: none"> <li>• All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab.</li> <li>• Tower pads should be left uneven without leveling.</li> <li>• No construction roads shall be built.</li> <li>• Towers shall be constructed by air support.</li> </ul> <p>At ridge crossing and mid-slope (as defined by SBNF):</p> <ul style="list-style-type: none"> <li>• Towers should be constructed of lower profile to closer "hug" the top of the ridge to avoid tower silhouetting.</li> <li>• Graphic studies from dominant view sites should be used to best place towers where they would be best back-dropped from expected viewing points.</li> <li>• All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab.</li> <li>• Tower pads should be left uneven without leveling.</li> <li>• No construction roads shall be built.</li> <li>• Towers should be constructed by air support.</li> </ul>	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	MM V-40c	<p>Reduce visual contrast of towers and conductors near the Pacific Crest Trail.</p> <p>For towers located south of I-10 and outside of the SBNF, the following provisions apply:</p> <ul style="list-style-type: none"> <li>• Where towers could be practicably back-dropped, utilize mitigation suggested for mid-slope and Ridge Crossing on SBNF lands (as defined in Mitigation Measure V-40b).</li> <li>• The PCT shall not be crossed with construction roads.</li> <li>• Locate towers so that the PCT is in the middle of the span (if this does not involve placement of extra or taller span towers to accomplish such action).</li> </ul>	Pre-construction and during construction	No	Not applicable. Measure is applicable to the transmission line in vicinity of the Pacific Crest Trail or SBNF.
Visual	APM V-1	Non-specular conductors will be used [to reduce glare and visual contrast]. (BLM B-6.1)4 [bracketed text added by SCE]	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Visual	APM V-2	For the proposed alignment, tower spacing will correspond to the spacing of the existing transmission line structures. Additionally, new tower heights will be adjusted such that the top elevations of each set of towers (new and existing) are horizontal with each other. This will coordinate perceptions of towers and conductors as one element. Site-specific conditions will determine when such mitigation is feasible. Other exceptions to these two measures are where towers will be sited to avoid sensitive features and/or to allow conductors to clearly span features. (BLM B-6.2) [PEA adds: "SCE will comply with the above mitigation measure to the extent possible. However, the ISO has specified that the capacity of the line be 2700 amps under normal conditions and 3600 amps under emergency conditions. This capacity rating is an increase from the 1988DPV2 capacity rating. This capacity rating necessitates that the heights of some of the proposed Devers-Harquahala towers be slightly taller than [adjacent towers], and in some locations tower spacing may not correspond to the adjacent DPV1 structures, to provide adequate ground clearance." (PEA, p. 6-31)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	APM V-3	At all highway and recreation routes-of-travel crossings, including the Colorado River, towers will be placed at the maximum feasible distance, and when feasible,[except in locations where matching existing tower spacing is deemed appropriate].(BLM B-6.3) [From "and where feasible," the BLM text reads "...at right angles, from the crossing." SCE has replaced this phrase in the bracketed text.]	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	APM V-4	Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils. (BLM B-6.4)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	APM V-5	Standard tower spacing would be modified to correspond with spacing of existing transmission line towers where feasible and within limits of standard tower design to reduce visual contrast. (BLM B-6.8a)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	APM V-6	Towers would be placed so as to avoid features and/or to allow conductors to clearly span the feature (within limits of standard tower design) to minimize the amount of sensitive feature disturbed and/or reduce visual contrast (e.g., avoiding skyline situations through placement of tower to one side of a ridge or adjusting tower location to avoid highly visible locations and utilize screening of nearby landforms). (BLM B-6.8b)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual —	APM V-7	The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction. (SCE)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual —	APM V-8	Non-specular conductors would be used to reduce glare and resulting visual contrast.	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	APM V-9	Towers would be located adjacent to existing structures where feasible. Exceptions are at locations where the tower heights and/or spans would be modified based on terrain features allowing for adequate conductor clearance to ground and other facilities within the right-of-way. (SCE)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
Visual	APM V-10	At all highway and recreation routes-of-travel crossings, including the I-10 crossing, towers would be placed at the maximum feasible distance, except in locations where matching existing tower spacing is deemed appropriate, and when feasible, at 90 degree angles from the crossing. (SCE)	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.

Resource Area	MM/APM	Measure	Timing	Applicable to NTP Activities?	Comments
Wilderness and Recreation	MM WR-1a	<p>Coordinate construction schedule and activities with the authorized officer for the recreation area. No less than 40 days prior to construction, SCE shall coordinate construction activities and the project construction schedule with the authorized officer of the recreation areas listed below. SCE shall schedule construction activities to avoid heavy recreational use periods, including major holidays, in coordination with, and at the discretion of the authorized officer. SCE shall locate construction equipment to avoid temporary preclusion of recreation areas per the recommendations of the authorized officer. SCE shall also prepare a public notice of construction activities consistent with Mitigation Measure L-1a (Prepare Construction Notification Plan). SCE shall document its coordination efforts with the authorized officer, and provide this documentation to the California Public Utilities Commission and the Bureau of Land Management 30 days prior to construction.</p> <p>San Jacinto Wilderness Area  Santa Rosa and San Jacinto Mountains National Monument  San Bernardino National Forest  Pacific Crest National Scenic Trail  Chuckwalla Valley Dune Thicket Area of Critical Environmental Concern  Alligator Rock Area of Critical Environmental Concern  Coachella Valley Preserve and Coachella Valley Fringe-Toed Lizard Area of Critical Environmental Concern  Potrero Area of Critical Environmental Concern  BLM off-highway vehicle trails in Shavers Valley  Indio Hills Palms State Park</p>	Pre-construction and during construction	No	Not applicable. The substation is not near nor does it impact recreational areas addressed in the measure.
Wilderness and Recreation	MM WR-1b	<p>Provide a temporary detour for Pacific Crest National Scenic Trail users. No less than 40 days prior to construction, SCE shall coordinate with the USDA Forest Service to establish a temporary detour of the trail to avoid hazardous construction areas. SCE shall prepare a public notice of the temporary trail closure and information on the trail detour consistent with Mitigation Measure L-1a (Prepare Construction Notification). SCE shall document its coordination efforts with the USDA Forest Service and submit this documentation to the CPUC/BLM 30 days prior to construction.</p>	Pre-construction	No	The substation is not located in proximity to the PCT.
Wilderness and Recreation	MM WR-3a	<p>Coordinate tower and road locations with the authorized officer for the recreation area. Where the proposed route crosses the recreation areas listed below, SCE shall coordinate with the authorized officer to determine specific tower site and spur road locations in order to minimize impacts to recreational resources. This coordination shall occur no less than 30 days prior to the start of construction. SCE shall document its coordination with the authorized officer and shall submit this documentation to the CPUC and BLM prior to initiating project construction.</p> <p>Santa Rosa and San Jacinto Mountains National Monument  San Bernardino National Forest  Pacific Crest National Scenic Trail  San Jacinto Wilderness Area  Chuckwalla Valley Dune Thicket ACEC  Alligator Rock ACEC  Coachella Valley Preserve and Coachella Valley Fringe-Toed Lizard ACEC</p>	Pre-construction	No	Not applicable. Measure is applicable to the transmission lines.
		References:			
		CH2M HILL. 2011a. Final Habitat Restoration and Compensation Plan.			
		CH2M HILL. 2011b. Final Noxious Weed Control Plan.			
		CH2M HILL. 2011c. Transplanting Plan			
		CH2M HILL. 2011d. Special-Status Plant Impact Avoidance and Minimization Plan. September 2011.			
		Dudek. 2011. Agency Draft Jurisdictional Determination Report for the Devers-Palo Verde No. 2 500 kV Transmission Line Project, Riverside County, California. April 2011.			
		United States Fish and Wildlife Service (USFWS). 2011. Section 7 Biological and Conference Opinion on the Devers to Palo Verde No. 2 Transmission Line Project, Riverside County, California.			

**Appendix D**  
**Permits Table**

**TABLE 2  
Permits  
Devers Substation, DPV2**

Agency	Permit	Applicable to Construction ?	Comment
<b>Local and Regional Permits</b>			
Riverside County	Water Quality Management Plan	No	No affected water crossings
Riverside County	Rule 403.1 Fugitive Dust Control Plan	Yes	Site specific plan required
SCE	SPCC	No	Required for Operation
Riverside County CUPA	Hazardous Materials Business Plan	No	Required for Operation
South Coast Air Quality Management District	Generator Air Permit	Maybe	If generators over 49 hp are used
<b>State Level Permits</b>			
CDFG	Consistency Determination	Yes	Received
Colorado River Region Water Quality Control Board	SWPPP (or waiver)	Yes	WDID No. 733C363168
Caltrans District 8	Overload Permits	No	Handled by equipment haulers
<b>Federal Level Permits</b>			
USFWS	Incidental Take Permit	Yes	Received
FAA	7460(1) Permit and Notice to Airmen	Yes	Air Ops is coordinating with the FAA on the relocation of the helipad.
Bureau of Land Management	Right of Way Grant	Yes	BLM issued for entire DPV2 Project
Bureau of Land Management	Notice to Proceed	Yes	BLM issued for entire DPV2 Project
Bureau of Land Management	HPMP	Yes	BLM issued for entire DPV2 Project

## **Appendix E**

### **Biological Resource Impacts Summary Tables**



TABLE E-1  
 Summary of Impacts to Vegetation Communities  
*Draft Notice to Proceed Request for Devers Expansion*

Vegetation Community	Total		Grand Total
	Perm	Temp	
Creosote Bush Scrub	0.22	0.29	0.51
Disturbed Land	0.01	0.01	0.02
<b>Total</b>	<b>0.22</b>	<b>0.30</b>	<b>0.52</b>

Notes:  
 Units are in acres. Total acreage may vary due to rounding.  
 Calculation of 0.00 impacts have less than 0.01 acre of disturbance

TABLE E-2  
 Summary of Special-status Plants  
*Draft Notice to Proceed Request for Devers Expansion*

Taxon	Status <sup>a</sup>		Habitat
	Fed/State/CNPS	Flowering Period	
<i>Ferocactus cylindraceus</i> var. <i>cylindraceus</i>	--/--/CDNPA	Apr-Jun	Mojavean desert scrub, Sonoran desert scrub
California barrel cactus			

Sources:  
 California Native Plant Society, 2011; California Natural Diversity Database, 2011; CH2MHILL, 2011b; Consortium of California Herbaria, 2011; GANDA, 2011a

Notes:  
<sup>a</sup> Conservation status abbreviations:  
 California Desert Native Plants Act :  
 CDNPA Protected under the California Desert Native Plants Act.

TABLE E-3  
 Summary of Impacts to Special-status Wildlife  
*Draft Notice to Proceed Request for Devers Expansion*

Habitat Type	Total		Grand Total
	Perm	Temp	
DETO Modeled Habitat	0.22	0.30	0.52

Notes:  
 Units are in acres. Total acreage may vary due to rounding.  
 DETO = desert tortoise

TABLE E-4  
 Summary of Impacts to Jurisdictional Waters  
*Draft Notice to Proceed Request for Devers Expansion*

	Devers Expansion	Devers Expansion	Grand Total
	Perm	Temp	
USACE, RWQCB, CDFG Jurisdiction  (Non-Wetland Waters)	0.01	0.01	0.01

Notes:  
 Units are in acres. Total acreage may vary due to rounding.