

Attachment G

DPV2 Mitigation Measures – Sorted by Time of Implementation

Devers-Palo Verde No. 2 Transmission Project Mitigation Monitoring, Compliance, and Reporting Program



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

December 22, 2011

Attachment G

Mitigation Measures Sorted by Time of Implementation

Pre-Construction

- MM B-1a: Prepare and implement a Habitat Restoration/Compensation Plan.
- MM B-2a: Conduct invasive and noxious weed inventory.
- MM B-5a: Conduct pre-construction surveys and monitoring for breeding birds.
- MM B-6a: Develop a transplanting plan.
- MM B-7b: Conduct pre-construction tortoise surveys.
- MM B-7e: Conduct focused surveys for California gnatcatchers.
- MM B-7f: Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat.
- MM B-8a: Conduct surveys for listed plant species.
- MM B-9a: Conduct pre-construction surveys.
- MM B-9c: Implement a Worker Environmental Awareness Program.
- MM B-9d: Conduct pre-construction reptile surveys.
- MM B-9e: Conduct pre-construction surveys and owl relocation.
- MM B-9f: Perform construction outside of breeding and lambing period.
- MM B-9g: Conduct pre-construction surveys and relocation for American badger.
- MM B-9h: Conduct pre-construction surveys for roosting bats.
- MM B-9i: Schedule construction when the Coachella Valley round-tailed squirrel is dormant.
- MM B-13a: Demonstrate compliance with the Western Riverside County MSHCP.
- MM B-15a: Utilize collision-reducing techniques in installation of transmission lines.
- MM B-16a: Prepare and implement a raven control plan.
- MM B-18a: No Activities in Riparian Conservation Areas.
- APM B-1: Vegetation. Avoid direct disturbance of highly sensitive features (as identified in E. Linwood Smith's (1985) Impact Assessment/Mitigation Planning Chart; see Appendix E) with spanning and careful local adjustment in tower footing placement. (BLM B 5.1 Vegetation) [Note: The reference to Appendix E is unknown. There is no Appendix E as part of the BLM right-of-way grant (provided from PEA Appendix A). However, the Smith report itself is found in FSEIS (1988) as Appendix B, Study of Desert Bighorn Sheep.]
- APM B-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.
- APM B-9: Vegetation. Initiate transplant efforts for Ferocactus and Coryphantha as soon as probable losses can be determined.

- APM B-11: Vegetation. The Authorized Officer may require vegetation in certain areas to be cleared by hand tools.
- APM B-12: Vegetation. Where possible, towers or access roads will be located so as to avoid sensitive plants or plant communities.
- APM B-13: Vegetation. Tower sites will be selected to allow maximum spacing of sensitive features.
- APM B-14: Vegetation. Minimize the area needed for equipment operation and material storage and assembly.
- APM B-18: Wildlife. Disturbed areas – To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites should be sited in a manner that avoids desert tortoise burrows.
- APM B-19: Wildlife. Restoration – Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored.
- APM B-20: Wildlife. Ravens – All transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens.
- APM B-21: Wildlife. No clearing of or other disturbance to riparian habitats.
- APM B-22: Wildlife. Avoid impact to mesquite-dominated habitats to protect crissal thrasher.
- APM B-23: Wildlife. Minimize impact to or removal of creosote bush to benefit LeConte's thrasher.
- APM B-24: Wildlife. Avoid any alterations to the vegetation structure of Washington fan palm oases to benefit southern yellow bat.
- APM B-25: Wildlife. Avoid any alterations of mesquite hummock habitat to benefit Coachella Valley round-tailed ground squirrel.
- APM B-26: Wildlife. Wash communities along the entire route and sand dune communities in the Coachella Valley (see Map 10-AZ in the Draft SEIS and Figure 4.5-1 in the CPUC Draft EIR, 1987) will be spanned to the extent possible.
- APM B-27: Wildlife. Prior to construction activities, the Holder shall have a qualified tortoise biologist present a class or briefing to construction workers.
- APM B-30: Wildlife. Within tortoise habitat in California, spur roads shall not be bladed except where necessary to allow access for construction vehicles.
- 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.
- APM B-33: Wildlife. If possible, no new roads, tower sitings, or spur roads will be built in blow sand areas.
- 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.
- APM B-37: Wildlife. Mitigation for the coastal California gnatcatcher should include protocol-driven pre-construction surveys.
- APM B-39: Wildlife. Stephens' kangaroo rat habitat would be avoided, where possible.
- MM V-2a: Reduce in-line views of land scars.

- MM V-2b: Reduce visual contrast from unnatural vegetation lines.
- MM V-2c: Reduce color contrast of land scars.
- MM V-6a: Reduce Visual Contrast Associated with Ancillary Facilities.
- MM V-6c: Reduce night lighting impacts.
- MM V-40a: Reduce visual contrast of towers and conductors.
- APM V-1: Non-specular conductors will be used [to reduce glare and visual contrast].
- 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.
- APM V-3: At all highway and recreation routes-of-travel crossings, towers will be placed at the maximum feasible distance, and when feasible, [except in locations where matching existing tower spacing is deemed appropriate].
- APM V-4: Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils.
- 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.
- 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).
- APM V-7: The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction.
- APM V-8: Non-specular conductors would be used to reduce glare and resulting visual contrast.
- 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.
- 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.
- MM L-1a: Prepare Construction Notification Plan.
- MM L-1c: Provide proof of resolution of land acquisition issues for crossing of Agua Caliente Band of Cahuilla Indians tribal lands.
- MM L-1e: Coordinate construction schedule with public and community facilities.
- APM L-2: Although the Holder (ROW grant holder, SCE) may restore and maintain existing access roads, they cannot be either widened or upgraded without approval of the Authorized Officer.

- 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.
- MM WR-1a: Coordinate construction schedule and activities with the authorized officer for the recreation area.
- MM WR-1b: Provide a temporary detour for Pacific Crest National Scenic Trail users.
- MM WR-3a: Coordinate tower and road locations with the authorized officer for the recreation area.
- MM AG-1a: Establish agreement and coordinate construction activities with agricultural landowners.
- MM AG-4a: Locate transmission towers and pulling/splicing stations to avoid agricultural operations.
- MM C-1a: Inventory and evaluate cultural resources in Final APE.
- MM C-1b: Avoid and protect potentially significant resources.
- MM C-1c: Develop and implement Historic Properties Treatment Plan.
- MM C-1d: Conduct data recovery to reduce adverse effects.
- MM C-1f: Train construction personnel.
- MM C-3a: Complete consultation with Native American and other Traditional Groups.
- MM C-4a: Inventory paleontological resources in Final APE.
- MM C-4b: Develop Paleontological Monitoring and Treatment Plan. T
- MM C-4e: Train construction personnel.
- 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.
- 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.
- APM C-9: Notices to proceed will be issued following completion, and approval by the Authorized Officer, of any fieldwork determined necessary through the inventory, evaluation, and consultation process described above.
- APM C-10: Vehicles and equipment shall be confined and operated only within areas specified by the Authorized Officer.
- 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.
- MM P-1a: Develop Hazardous Substance Control and Emergency Response Plan.
- MM P-1b: Conduct environmental training and monitoring program.
- MM P-2a: Identify pesticide/herbicide contamination.

- MM PS-1a: Limit the conductor surface electric gradient.
- MM PS-2a: Implement Grounding Measures.
- MM AQ-1a: Develop and Implement a Fugitive Dust Emission Control Plan.
- MM AQ-1i: Obtain NO_x emission offsets.
- APM A-7: Site construction workers would be staged offsite at or near paved intersections and workers would be shuttled in crew vehicles to construction sites. As part of the construction contract, SCE would require bidders to submit a construction transportation plan describing how workers would travel to the job site.
- MM H-1a: Restore disturbed soil with re-vegetation or construction of permanent erosion-control structures.
- APM W-2: Construction equipment will be kept out of flowing stream channels except when absolutely necessary to construct crossings.
- APM W-3: Erosion control and hazardous material plans will be incorporated into the construction bidding specifications to ensure compliance.
- APM W-4: Appropriate design of tower footing foundations, such as raised foundations and/or enclosing flood control dikes, will be used to prevent scour and/or inundation by a 100-year flood.
- APM W-5: Towers will be located to the extent feasible to avoid active drainage channels, especially downstream of steep hillslope areas, to minimize the potential for damage by flash flooding and mud and debris flows.
- APM W-6: Diversion dikes or other structural enhancements will be required to divert runoff around a tower structure if (a) the location in an active channel cannot be avoided; and (b) where there is a very significant flood scour/deposition threat, unless specifically exempted by the BLM Authorized Officer.
- 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.
- APM W-9: Cut and fill slopes will be minimized by a combination of benching and following natural topography where possible.
- MM G-1a: Protect desert pavement.
- MM G-2a: Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.
- MM G-3a: Conduct geotechnical surveys for landslides.
- MM G-5a: Design project facilities to avoid impact from ground failure.
- MM G-6a: Coordinate with quarry operations.
- MM G-7a: Minimize project structures within active fault zones.
- APM G-1: The line will be located to minimize the disruption of any active mining operations.
- 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.
- 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.

- APM G-4: In general, an appropriate tower design which accounts for lateral wind loads and conductor loads exceeds any credible seismic loading (groundshaking).
- 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.
- 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.
- APM G-7: SCE will provide a list of sites where helicopter construction is recommended.
- APM G-8: Mitigation of potentially significant impacts to the western end of the proposed transmission line due to (1) potential surface fault rupture along the Banning, Mission Creek, and Mecca Hills faults, and (2) potential for severe seismic shaking can be achieved by standard design methods listed below:
 - a. Individual 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.
- APM G-9: Appropriate design of tower foundations will be used to reduce the potential for settlement and compaction.
- APM G-10: New access roads and soil disturbance will be avoided or minimized in all areas designated as having high erosion hazards or potential slope instability.
- APM G-11: 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.
- APM G-15: Counterpoise may need to be installed if the local soil conditions indicate that the soil has a resistance above 30 ohms. This is accomplished by attaching a 0.375-inch cable to the tower steel. The cable is installed 1 foot underground and extends approximately 100 feet within the ROW from two or more footings.
- APM G-16: The line would be located to minimize the disruption of any active mining operations.
- 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).
- 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.
- 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.

During Construction

- MM B-1a: Prepare and implement a Habitat Restoration/Compensation Plan.
- MM B-2b: Implement control measures for invasive and noxious weeds.
- MM B-5a: Conduct pre-construction surveys and monitoring for breeding birds.
- MM B-6a: Develop a transplanting plan.
- MM B-7b: Conduct pre-construction tortoise surveys.
- MM B-7e: Conduct focused surveys for California gnatcatchers.
- MM B-9b: Conduct biological monitoring.
- MM B-9c: Implement a Worker Environmental Awareness Program.
- MM B-9e: Conduct pre-construction surveys and owl relocation.
- MM B-9f: Perform construction outside of breeding and lambing period.
- MM B-9g: Conduct pre-construction surveys and relocation for American badger.
- MM B-13a: Demonstrate compliance with the Western Riverside County MSHCP.
- MM B-13b: Implement the Best Management Practices required by the Western Riverside County MSHCP.
- MM B-15a: Utilize collision-reducing techniques in installation of transmission lines.
- MM B-16a: Prepare and implement a raven control plan.
- MM B-18a: No Activities in Riparian Conservation Areas.
- APM B-2: Vegetation. Avoid the introduction of noxious weeds and/or other invasive species through standard noxious weed measures.
- APM B-4: Vegetation/Wildlife. Avoid sand compaction at all sites in the Coachella Valley.
- APM B-6: Vegetation. Avoid vehicular travel in washes to protect triple-ridged milkvetch.
- APM B-7: Vegetation/Wildlife. No activities whatever should occur in wetland areas.
- APM B-9: Vegetation. Initiate transplant efforts for Ferocactus and Coryphantha as soon as probable losses can be determined.
- APM B-11: Vegetation. The Authorized Officer may require vegetation in certain areas to be cleared by hand tools.
- APM B-12: Vegetation. Where possible, towers or access roads will be located so as to avoid sensitive plants or plant communities.
- APM B-18: Wildlife. Disturbed areas – To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites should be sited in a manner that avoids desert tortoise burrows.
- APM B-19: Wildlife. Restoration – Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored.
- APM B-20: Wildlife. Ravens – All transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens.

- APM B-21: Wildlife. No clearing of or other disturbance to riparian habitats.
- APM B-22: Wildlife. Avoid impact to mesquite-dominated habitats to protect crissal thrasher.
- APM B-23: Wildlife. Minimize impact to or removal of creosote bush to benefit LeConte's thrasher.
- APM B-24: Wildlife. Avoid any alterations to the vegetation structure of Washington fan palm oases to benefit southern yellow bat.
- APM B-25: Wildlife. Avoid any alterations of mesquite hummock habitat to benefit Coachella Valley round-tailed ground squirrel.
- APM B-26: Wildlife. Wash communities along the entire route and sand dune communities in the Coachella Valley (see Map 10-AZ in the Draft SEIS and Figure 4.5-1 in the CPUC Draft EIR, 1987) will be spanned to the extent possible.
- APM B-27: Wildlife. Prior to construction activities, the Holder shall have a qualified tortoise biologist present a class or briefing to construction workers.
- 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).
- APM B-29: Wildlife. The Holder shall restrict the speed on all roads within tortoise habitat to a maximum of 25 miles per hour.
- APM B-30: Wildlife. Within tortoise habitat in California, spur roads shall not be bladed except where necessary to allow access for construction vehicles.
- 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.
- 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.
- APM B-33: Wildlife. If possible, no new roads, tower sitings, or spur roads will be built in blow sand areas.
- 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.
- APM B-35: Wildlife. Avoid upland areas where desert tortoises might occur and/or have a biologist present during construction activities that involve earth moving in order to move any tortoises (in burrows or cover-sites, or on the surface) that would likely be impacted.
- APM B-36: Wildlife. Avoid construction activities that would tend to create wind barriers that might result in sand stabilization in order to minimize impacts to populations of the Coachella Valley fringe-toed lizard.
- APM B-37: Wildlife. Mitigation for the coastal California gnatcatcher should include protocol-driven pre-construction surveys.
- APM B-39: Wildlife. Stephens' kangaroo rat habitat would be avoided, where possible.
- MM V-1a: Reduce visibility of construction activities and equipment.
- MM V-1b: Reduce construction night lighting impacts.

- MM V-2a: Reduce in-line views of land scars.
- MM V-2b: Reduce visual contrast from unnatural vegetation lines.
- MM V-2c: Reduce color contrast of land scars.
- MM V-6c: Reduce night lighting impacts.
- MM V-40a: Reduce visual contrast of towers and conductors.
- APM V-1: Non-specular conductors will be used [to reduce glare and visual contrast]. (BLM B-6.1) [bracketed text added by SCE].
- APM V-2: For the proposed alignment, tower spacing will correspond to the spacing of the existing transmission line structures. Additionally, new tower heights will be adjusted such that the top elevations of each set of towers (new and existing) are horizontal with each other.
- APM V-4: Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils. (BLM B-6.4).
- APM V-5: Standard tower spacing would be modified to correspond with spacing of existing transmission line towers where feasible and within limits of standard tower design to reduce visual contrast. (BLM B-6.8a).
- APM V-6: Towers would be placed so as to avoid features and/or to allow conductors to clearly span the feature (within limits of standard tower design) to minimize the amount of sensitive feature disturbed and/or reduce visual contrast (e.g., avoiding skyline situations through placement of tower to one side of a ridge or adjusting tower location to avoid highly visible locations and utilize screening of nearby landforms).
- APM V-7: The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction..
- APM V-8: Non-specular conductors would be used to reduce glare and resulting visual contrast..
- 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.
- 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.
- APM L-2: Although the Holder (ROW grant holder, SCE) may restore and maintain existing access roads, they cannot be either widened or upgraded without approval of the Authorized Officer.
- 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.
- MM C-1d: Conduct data recovery to reduce adverse effects.
- MM C-1e: Monitor construction.
- MM C-2a: Consult agencies and Native Americans.
- MM C-4c: Monitor construction for paleontology.
- MM C-4d: Conduct paleontological data recovery.

- MM C-4e: Train construction personnel.
- MM C-5a: Protect and monitor NRHP-eligible properties.
- 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.
- APM C-10: Vehicles and equipment shall be confined and operated only within areas specified by the Authorized Officer.
- MM N-1a: Implement best management practices for construction 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.
- MM T-7a: Repair roadways damaged by construction activities.
- MM P-1a: Develop Hazardous Substance Control and Emergency Response Plan.
- MM P-1b: Conduct environmental training and monitoring program.
- MM P-1c: Ensure proper disposal of construction waste.
- MM P-1d: Maintain emergency spill supplies and equipment.
- MM P-3a: Observe exposed soil for evidence of contamination.
- MM P-4a: Prepare Spill Prevention, Countermeasure, and Control Plans.
- MM AQ-1b: Use ultra low-sulfur diesel fuel.
- MM AQ-1c: Restrict engine idling.
- MM AQ-1d: Use lower emitting off-road diesel-fueled equipment.
- MM AQ-1e: Use on-road vehicles that meet California on-road standards.
- MM AQ-1f: Use lower emitting off-road gasoline-fueled equipment.
- MM AQ-1g: Reduce helicopter use during construction.
- MM AQ-1h: Schedule deliveries outside of peak hours.
- APM A-1: Heavy duty off-road diesel engines would be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.
- APM A-2: Water or chemical dust suppressants would be applied to unstabilized disturbed areas and/or unpaved roadways in sufficient quantity and frequency to maintain a stabilized surface.
- APM A-3: Water or water-based chemical additives would be used in such quantities to control dust on areas with extensive traffic including unpaved access roads; water, organic polymers, lignin compounds, or conifer resin compounds would be used depending on availability, cost, and soil type.
- 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.
- APM A-5: Vehicle speeds on unpaved roadways would be restricted to 15 miles per hour.
- APM A-6: Vehicles hauling dirt would be covered with tarps or by other means.

- APM A-7: Site construction workers would be staged offsite at or near paved intersections and workers would be shuttled in crew vehicles to construction sites. As part of the construction contract, SCE would require bidders to submit a construction transportation plan describing how workers would travel to the job site.
- MM H-1a: Restore disturbed soil with re-vegetation or construction of permanent erosion-control structures.
- APM W-1: During the first year following construction, potential soil erosion sites will be inspected by the Holder after each major rainstorm as access permits. For the purpose of this measure, a major rainstorm is defined as any singular storm where the total precipitation exceeds the arithmetic mean for similar events in the area and results in flooding. Examples include cloudbursts (high quantity – short duration) or storms where saturated soils produce runoff (high quantity – long duration).
- APM W-2: Construction equipment will be kept out of flowing stream channels except when absolutely necessary to construct crossings.
- APM W-3: Erosion control and hazardous material plans will be incorporated into the construction bidding specifications to ensure compliance.
- APM W-4: Appropriate design of tower footing foundations, such as raised foundations and/or enclosing flood control dikes, will be used to prevent scour and/or inundation by a 100-year flood.
- APM W-5: Towers will be located to the extent feasible to avoid active drainage channels, especially downstream of steep hillslope areas, to minimize the potential for damage by flash flooding and mud and debris flows.
- APM W-6: Diversion dikes or other structural enhancements will be required to divert runoff around a tower structure if (a) the location in an active channel cannot be avoided; and (b) where there is a very significant flood scour/deposition threat, unless specifically exempted by the BLM Authorized Officer.
- APM W-7: Runoff from roadways will be collected and diverted from steep, disturbed, or otherwise unstable slopes.
- 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.
- APM W-9: Cut and fill slopes will be minimized by a combination of benching and following natural topography where possible.
- MM G-1a: Protect desert pavement.
- MM G-2a: Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.
- MM G-3a: Conduct geotechnical surveys for landslides.
- MM G-5a: Design project facilities to avoid impact from ground failure.
- MM G-6a: Coordinate with quarry operations.
- MM G-7a: Minimize project structures within active fault zones.
- APM G-8: Mitigation of potentially significant impacts to the western end of the proposed transmission line due to (1) potential surface fault rupture along the Banning, Mission Creek, and Mecca Hills faults, and (2) potential for severe seismic shaking can be achieved by standard design methods listed below:

- a. Individual 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.

— APM G-11: New access roads, which are required, will be designed to minimize ground disturbance from grading. They will follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage dips, side ditches, slope drains, and velocity reducers.

— 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.

— 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.

— APM G-15: Counterpoise may need to be installed if the local soil conditions indicate that the soil has a resistance above 30 ohms. This is accomplished by attaching a 0.375-inch cable to the tower steel. The cable is installed 1 foot underground and extends approximately 100 feet within the ROW from two or more footings.

— APM G-18: Whenever possible to minimize the potential for slope instability, towers would be located to avoid gullies or active drainages, and over-steepened slopes.

Post-Construction

— MM B-7c: Purchase mitigation lands for impacts to tortoise habitat.

— MM B-7d: Purchase mitigation lands for impacts to fringe-toed lizard habitat.

— MM B-9f: Perform construction outside of breeding and lambing period.

— MM B-16a: Prepare and implement a raven control plan.

— APM B-19: Wildlife. Restoration – Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored.

— APM B-20: Wildlife. Ravens – All transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens.

— APM B-37: Wildlife. Mitigation for the coastal California gnatcatcher should include protocol-driven pre-construction surveys.

— APM V-1: Non-specular conductors will be used [to reduce glare and visual contrast].

— 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.

— APM V-3: At all highway and recreation routes-of-travel crossings, towers will be placed at the maximum feasible distance, and when feasible, [except in locations where matching existing tower spacing is deemed appropriate].

- APM V-4: Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils.
- 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.
- 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).
- APM V-7: The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction..
- APM V-8: Non-specular conductors would be used to reduce glare and resulting visual contrast..
- 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.
- 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.
- MM C-1d: Conduct data recovery to reduce adverse effects.
- MM C-5a: Protect and monitor NRHP-eligible properties.
- MM P-4a: Prepare Spill Prevention, Countermeasure, and Control Plans.
- MM PS-1b: Document and Resolve Electronic Interference Complaints.
- 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.
- MM H-1a: Restore disturbed soil with re-vegetation or construction of permanent erosion-control structures.
- APM W-1: During the first year following construction, potential soil erosion sites will be inspected by the Holder after each major rainstorm as access permits. For the purpose of this measure, a major rainstorm is defined as any singular storm where the total precipitation exceeds the arithmetic mean for similar events in the area and results in flooding. Examples include cloudbursts (high quantity – short duration) or storms where saturated soils produce runoff (high quantity – long duration).
- APM G-11: New access roads, which are required, will be designed to minimize ground disturbance from grading. They will follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage dips, side ditches, slope drains, and velocity reducers.
- APM G-14: Upon completion of construction, any drainage deficiencies would be corrected to prevent future erosion.