Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	Aesthetics		
Existing Visual Character	V-1 Downs Substation expansion area Landscaping Plan. SCE shall provide landscaping that is effective in screening the proposed substation expansion area and existing facilities from surrounding views. Trees and/or shrubs must be strategically placed and of sufficient density and height to effectively screen the majority of structural forms within five years of Project construction. SCE shall submit a Landscaping Plan to the city of Ridgecrest for review and approval and shall include a detailed list of plants to be used and times to maturity given their size and age at planting. The Landscaping Plan shall also be submitted to the CPUC for review. The Landscaping Plan shall be submitted at least 90 days prior to installing the landscaping. SCE shall not implement the plan until approval of the submittal from the CPUC and the city of Ridgecrest is received. If the CPUC notifies SCE that revisions of the plan are needed, within 30 days of receiving that notification, SCE shall prepare and submit to the CPUC a revised plan. SCE shall notify the CPUC within seven days after completing installation of the landscaping that the landscaping is ready for inspection.	Review Landscaping Plan and perform on-site inspection following installation of initial landscaping and during operations to ensure screening criteria met.	Submit Landscaping Plan at least 90 days prior to installing landscaping; Implement during construction and during operation
Light and Glare	V-2 Surface Treatment Plan. SCE shall submit to the CPUC a Surface Treatment Plan describing the application of dulling treatments (galvanizing and/or painting) to substation components and steel poles necessary to reduce the potential for daytime structural glare. The Surface Treatment Plan shall be submitted to 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 substation components before the plan can be approved. SCE shall not implement the plan until the plan has been approved by the CPUC. If the CPUC notifies SCE that revisions of the plan are needed, 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: • A list of each major Project structure specifying the treatment and finish proposed for each; • Two sets of brochures and/or color chips for each proposed treatment/color; • A detailed schedule for completion of the treatment; and • A procedure to ensure proper treatment maintenance for the life of the Project. SCE shall not specify to the vendors the treatment of any structures or components treated during manufacture, or perform the final treatment on any structures or components treated on site, until SCE receives notification of approval of the Surface Treatment Plan by the CPUC. Within 30 days following the start of commercial operation, SCE shall notify the CPUC that all structures and components are ready for inspection.	Review plan for surface treatment of substation components and steel poles; Inspect all structures and components following start of commercial operation.	Submit Surface Treatment Plan at least 90 days prior to (a) ordering first structures that are to be color treated during manufacture or (b) construction of any of the substation components before the Surface Treatment Plan is approved. Implement during construction and inspect following commercial operation.

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	V-3 Downs Substation expansion area Nighttime Lighting Mitigation Plan. SCE shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the Project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Lighting Mitigation Plan to the city of Ridgecrest for review and comment prior to submitting the plan to the CPUC for review and approval. The plan shall be submitted to the CPUC 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 CPUC. The plan shall include, but is not necessarily limited to, the following: • Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary. • All lighting shall be of minimum necessary brightness consistent with operational safety and security. • High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied. • Appropriate brochures and other descriptive materials describing the lighting components to be employed at the substation are to be included in the plan. • Lighting shall meet the requirements of the City of Ridgecrest General Plan Goal OSC-2.6, Control of Lighting and Glare.	Review plan for permanent lighting and descriptions of fixtures, hoods, and shields and implementation of lighting	Submit Nighttime Lighting Mitigation Plan at least 90 days prior to ordering any permanent exterior lighting fixtures or components. Implement during construction and inspect following commercial operation.
	Air Quality		
Construction-Phase Air Quality	AQ-1 Implement Fugitive Dust Control Plan. The Applicant shall develop a Fugitive Dust Control Plan to reduce PM10 and PM2.5 emissions during substation construction. The Fugitive Dust Control Plan shall include: a. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan; b. Description and location of operation(s); and c. Listing of all fugitive dust emissions sources included in the operation. d. The following dust control measures shall be implemented: i. All on-site unpaved roads shall be effectively stabilized in a manner that can be determined to be as efficient as or more efficient for fugitive dust control than Air Resources Board-certified soil stabilizers, and shall not increase any other environmental impacts including loss of vegetation. ii. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. Excavated soil	Perform on-site inspections during construction to ensure control measures are properly implemented.	Submit Fugitive Dust Control Plan at least 90 days prior to construction to CPUC for review and approval; Implement during construction.

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	piles shall be watered as needed and in compliance with Eastern Kern Air Pollution Control District (EKAPCD) Rule 402 and Mojave Desert Air Quality Management District (MDAQMD) Rule 403.2 (as applicable) for the duration of construction or covered with temporary coverings. iii. Construction activities that occur on unpaved surfaces will be discontinued during windy conditions when those activities cause visible dust plumes that extend beyond the substation fence line, or extend more than 100 yards from the activity causing the dust for construction activities occurring outside of the substation. iv. Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday. v. Shaker plates and gravel beds will be used and maintained throughout the construction period to remove bulk material from tires and vehicle undercarriages before vehicles exit the Downs Substation property. vi. All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions), and shall have adequate freeboard to avoid spillage around the edges of the cover. vii. Traffic speeds on unpaved roads shall be limited to 15 mph. viii. Other fugitive dust control measures as necessary to comply with EKAPCD Rules and Regulations.		
	Biological Resources		
APM BR-1	In areas where the six subtransmission pole replacements would occur and where the telecommunication cable would be strung, the speed limits on all unpaved areas of the Proposed Project would be a maximum of 15 mph.	Vehicles obey speed limit	During construction
APM BR-2	A Worker Environmental Awareness Program (WEAP) would be prepared, and all construction crews and contractors would be required to participate in WEAP training prior to starting work on the project. The WEAP training would include a review of the special status species and other sensitive resources that could exist in the Project site and vicinity, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all personnel trained would be maintained.	Proof of completion of environmental awareness training for all laborers	Prior to construction and for all laborers prior to work
APM BR 3	Pre-construction biological clearance surveys including surveys and monitoring would be performed to avoid or minimize impacts on special status plants, breeding birds, or wildlife species.	Review clearance survey results and ensure recommendations implemented; Perform on-site inspection	Prior to construction
APM BR-4	All replaced poles would be designed to be avian-safe in accordance with the Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (APLIC, 2006).	Inspect design plans; Perform on-site inspection of replaced poles	Prior to construction, during construction, and operations

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
APM BR-5	During the installation of fiber optic telecommunication cable and subtransmission poles, potential habitat for the desert tortoise and Mohave ground squirrel will be avoided to the extent feasible. This will be accomplished through restricting vehicles to previously established access roads, with the oversight of biological monitors, and accessing the poles via bucket truck or climbing of the poles. In addition, the biological monitors will be responsible for avoiding impacts to nesting migratory birds (including burrowing owls) and drainages during construction through the use of appropriate mitigation measures, as determined by the monitoring biologist.	Perform on-site inspections of impact areas, construction techniques, and ensure specified areas avoided	During construction
Special-Status Plants	B-1 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, where concurrence has been provided by the CPUC 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, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act; the consequences of non-compliance with these acts; identification and values of plant and wildlife species and their habitats; fire protection measures; sensitivities of working on BLM lands; a contact person in the event of the discovery of dead or injured wildlife; and review of mitigation requirements. Training materials and a course outline shall be provided to the CPUC for review and approval at least 30 days prior to the start of construction. Maps showing the location of special-status wildlife, fish, or populations of rare plants, exclusion areas, or other construction limitations (i.e., limited operating periods) will be provided to the environmental monitors and construction crews prior to ground disturbance. SCE shall provide to the CPUC a list of construction personnel who have completed training prior to the start of construction, 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 participating in the WEAP.	Proof of completion of environmental awareness training for all laborers	Prior to construction and for all laborers prior to work
	B-2 Implement best management practices (BMPs). BMPs will be implemented as standard operating procedures during all ground disturbance and construction related activities to avoid or minimize Project impacts on biological resources. Compliance with BMPs will be documented and provided to the CPUC in a written report on a monthly basis during construction. The report shall include a summary of the construction activities completed, a review of the sensitive plants and wildlife detected, a list of compliance actions and any remedial actions taken to correct the actions, and the status of ongoing mitigation efforts. These BMPs will include but are not limited to the following: a. Prior to ground disturbance of any kind, the Project work areas shall be clearly delineated by stakes, flags, or other clearly identifiable system. At the substation site, the area will be enclosed by tortoise proof fencing. b. Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas when located in areas with habitat for desert tortoise, Mohave ground squirrel, and burrowing owl. c. Speed limit signs, imposing a speed limit of 15 miles per hour, will be installed along the access roads of the Project alignment prior to initiation of site disturbance and/or construction. To minimize disturbance of areas outside of the construction zone, all Project-	Monthly status reports to CPUC documenting BMPs implemented, effectiveness, issues, and Project status	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	related vehicle traffic shall be restricted to established roads, construction areas, and other designated areas. These areas will be included in preconstruction surveys and to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts. Off-road traffic outside of designated Project areas will be prohibited. d. No vehicles or equipment shall be refueled within 100 feet of an ephemeral drainage. Spill kits shall be maintained on site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages shall be checked and maintained daily to prevent leaks of materials. e. All general trash, food-related trash items (e.g., wrappers, cans, bottles, food scraps, cigarettes, etc.) and other human-generated debris will be stored in animal proof containers and/or removed from the site each day. No deliberate feeding of wildlife will be allowed. f. No firearms will be allowed on the Project site, unless otherwise approved for security personnel. g. To prevent harassment or mortality of listed, special-status species and common wildlife, or destruction of their habitats, no domesticated animals of any kind shall be permitted in any Project area. h. Use of chemicals, fuels, lubricants will be in compliance with all local, State and federal regulations. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation. i. Any contractor or employee that inadvertently kills or injures a special-status animal, or finds one either dead, injured, or entrapped, will immediately report the incident to the on-site representative identified in the WEAP. The representative will contact the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), U.S. Department of the Interior Bureau of Land Management (BLM) (on BLM lands) and the CPUC by telephone by the end of the day, or at the beginning of the next working day if the agency office is closed. In addition, formal notification shall be provided in writing within three working days of the incident or finding. Notification will include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured will be turned over immediately to CDFG for care, analysis, or disposition. j. SCE shall avoid construction activities resulting in impacts to streambeds and the banks of any ephemeral drainage unless otherwise authorized through the context of a streambed alteration agreement. k. All excavation, steep-walled holes or trenches in excess of six inches in depth that occur in desert tortoise or Mohave ground squirrel habitat shall be covered at the close of each working day with plywood or similar materials, or provided with one or more escape ramps constructed of earth dirt fill or wooden planks. Trenches will also be inspected for entrapped wildlife each morning prior to onset of construction activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped wildlife. Any wildlife discovered will be allowed to escape before construction activities are allowed to resume, or removed from the trench or		

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	hole by a qualified biologist holding the appropriate permits (if required). l. New light sources at the substation will be minimized, and lighting will be designed (e.g., using downcast lights) to limit the lighted area to the minimum necessary. See also Mitigation Measure V-3.		
Special-Status Plants (Continued)	**B-3 Conduct pre-construction surveys for special-status plants and implement avoidance measures.** If construction activities are scheduled to begin within 24 months of the most recent focused botanical surveys (June 2011), then SCE shall conduct reconnaissance level surveys to identify potential rare plants that occur in the Project area. In the event that construction activities are initiated after 24 months following the most recent focused botanical surveys, SCE shall conduct pre-construction focused surveys to locate rare plants that may occur in the Project area. If, during activities associated with installation of the fiber optic telecommunication cable, it is determined that ground disturbance in any areas outside of existing access roads is required, SCE shall conduct focused botanical surveys within the area of disturbance and a 100 foot buffer prior to any ground disturbance. The surveys shall be conducted during the appropriate blooming period(s) by a CPUC-approved plant ecologist/according to protocols established by the USFWS, CDFG, and California Native Plant Society (CNPS). If during the course of surveys, any State or federally listed plants or plants identified as CNPS or California Rare Plant Rank (CRPR) List 1 or 2 are identified in or adjacent to the Project area, these locations shall be clearly marked and avoided through the implementation of appropriate buffer zones. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of the buffer depends upon the proposed use of the immediately adjacent lands, and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, physical and chemical characteristics of soils) that are identified by a CPUC-approved plant ecologist and/or botanist. The buffer for herbaceous and shrub species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the USFWS, CDFG, and CPUC. Highly visible flagging shall be placed along the buffer area and remain in good working order during the duration of any construction activities in the area. Where impacts to listed plants are determined to be unavoidable, the USFWS and/or CDFG shall be consulted for authorization. Additional mitigation measures to protect or restore listed plant species or their habitat, including but not limited to a salvage plan including seed collection and replanting, may be required by the USFWS or CDFG before impacts are authorized, whichever is appropriate.	Review surveys and ensure implementation of avoidance measures; Coordinate with USFWS and/or CDFG, as required	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Special-Status Plants (Continued)	**B-4 Compensate for impacts to special-status plant species.** If Project-related impacts result in the loss of more than 10 percent of the on-site population of any non-listed special-status plant species, compensatory mitigation will be required. Prior to the disturbance of habitat for or take of special-status plants/populations SCE must receive CPUC approval of preserved and/or mitigation lands as well as present documentation of recorded open space easement(s). Compensation will be required for all impacts that exceed the 10 percent threshold (e.g. impacts to 15 percent of a population will only require compensation for 5 percent or the amount of impacts that exceed the 10 percent threshold). To compensate for permanent impacts to special-status plant species, habitat that is not already public land under resource protection shall be preserved and managed in perpetuity at a 1:1 mitigation ratio (one acre preserved for each acre impacted). Compensation for temporary impacts shall include land acquisition and/or preservation at a 0.5:1 ratio. The preserved habitat for a significantly impacted plant species shall be of equal or greater habitat quality to the impacted areas in terms of soil features, extent of disturbance, vegetation structure, and will contain verified extant populations, of the same size or greater, of the special-status plants that are impacted. Impacts could include direct impacts resulting from loss of habitat or indirect impacts if a significant population or portion thereof is unable to be avoided. Habitat shall be preserved through the use of permanent open space easements or other open space mechanism acceptable to the CPUC. Mitigation lands cannot be located on land that is currently publicly held for resource protection.	SCE to submit documentation of impact areas identifying special-status plants to CPUC to determine percent impacted. If more than 10 percent, SCE to submit for CPUC review and approval mitigation lands proposal.	Prior to construction, during construction, and during operation
	B-5 Develop a Habitat Restoration and Revegetation Plan. The intent of this mitigation measure is to require SCE to restore all temporarily disturbed areas to pre-construction conditions or better and to prevent the colonization of noxious or invasive weeds. Should areas subject to temporary disturbance be dominated by invasive plants such as brome or Mediterranean grasses the area will be restored to similar conditions. If temporary disturbance occurs to barren areas such as vacant lots or dirt roads that do not support vegetation seeding, restoration shall not be required; however, weed monitoring for a minimum of one season would be required to ensure the construction activities did not result in the introduction of noxious or invasive weeds. Prior to the removal of any vegetation, the Applicant shall retain a CPUC approved qualified restoration biologist, knowledgeable in the area of restoration in the arid southwest, to prepare a Habitat Restoration and Revegetation Plan (HRRP). This biologist would also be responsible for monitoring the implementation of the plan as well as the progress on achieving the established success criteria. The HRRP will detail a process by which all temporarily disturbed areas are restored to pre-construction conditions or better. The plan shall include, at a minimum, the following items: a. Locations and details for top soil salvage and storage – The HRRP shall identify areas within the construction footprint where topsoil: 1) is present; 2) supports native vegetation or acceptable non-native plants; and 3) can be salvaged and stockpiled for replacement onto the site during revegetation activities. Where topsoil is present, but is wholly dominated by invasive non-native species such	Review Habitat Restoration and Revegetation Plan; Review quarterly and annual progress reports	Prior to construction, during construction, and during operation

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	as Russian thistle, Sahara mustard, or other noxious plant species it will not be used in revegetation because the non-native seed bank would outweigh any benefit for revegetation the soil may have. Areas characterized as annual grassland or dominated by annual grasses will require topsoil salvage. b. Figures depicting areas proposed for temporary disturbance – The HRRP shall include detailed figures indicating the locations of areas proposed for temporary disturbance such as the area near the proposed pole replacement, underground trenching areas, and any lands adjacent to the substation site. These figures shall be updated, as necessary, to reflect current site conditions should they change. c. Proposed species for restoration/revegetation – The species palate proposed for restoration/revegetation shall include a combination of native (based on current species composition in the restoration/revegetation areas) grasses, annual herbaceous species known to occur in the area, and native shrubs. The seed palate will be provided to the CPUC for approval prior to the implementation of the restoration. d. Seed source and collection guidelines – If possible, seeds from stock within the Region, or from within a 25 mile radius will be collected to maintain local genetic integrity. If seed collection from these areas is not possible then a seed source must be obtained from a local seed supplier familiar with native species. Seed will be limited to the species and quantity specified in the seed mix palette prepared for the project. All seed will originate from the project region, within +/- 1,000 feet elevation of the Project site. The seed supplier chosen will provide a list of three references with the bid proposal. The references will include year, contact names, and telephone numbers. Seeds will be tested for percent purity, percent germination, number of pure live seeds per pound, and weed seed content. Seed testing will be the responsibility of the seed supplier. e. Planting methodology – A description of the preferred methods proposed for seeding shall be provided (e.g., hydroseeding, drill seeding, broadcast seeding, etc.). Additionally, a discussion on timing of seeding, type of irrigation system proposed if any, potential need of irrigation, type and duration of irrigation, and erosion controls proposed for revegetation activities shall be included. f. Invasive, non-native vegetation Control – A comprehensive Weed Control Plan will be developed in the HRRP. The Weed Control Plan will serve to prevent the type conversion of natural habitats to those dominated by invasive species known to occur in the area such as Russian thistle and Sahara mustard. g. Monitoring program – Areas subject to restoration/revegetation shall be monitored to assess conditions and to make recommendations for successful habitat establishment. Monitoring will be performed by a CPUC qualified biologist(s), knowledgeable in the area of desert habitat restoration.		

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	i. Qualitative Monitoring – Qualitative monitoring surveys will be performed monthly in all restored/revegetated areas for the first year following planting in any phase of the Project. Qualitative monitoring will be on a quarterly schedule thereafter, until final completion approval of each restoration/revegetation area. Qualitative surveys will assess native plant species performance, including growth and survival, germination success, reproduction, plant fitness and health as well as pest or invasive plant problems. A CPUC qualified wildlife biologist will assist in monitoring surveys and will actively search for mammal, tortoise, and other wildlife use. Monitoring at this stage will indicate need for remediation or maintenance work well in advance of final success/failure determination. The monitoring reports will describe site progress and conditions and list all observations pertinent to eventual success, and make recommendations as appropriate regarding remedial work, maintenance, etc.		
	ii. Quantitative Monitoring – Quantitative monitoring will occur annually for years one to five or until the success criteria are met. Within each revegetation area, as shown in the figures referenced above, the biologist will collect data in a series of 1 m^2 quadrants to estimate cover and density of each plant species within the revegetated areas. Data will be used to measure native species growth performance, to estimate native and non-native species coverage, seed mix germination, native species recruitment and reproduction, and species diversity. Based on these results, the biologist will make recommendations for maintenance or remedial work on the site and for adjustments to the approved seed mix.		
	h. Success criteria – Criteria for successful restoration/revegetation of temporarily disturbed areas shall be 75 percent of pre-disturbance vegetative cover. This percentage shall include no more than a 10 percent non-native component, except where disturbance occurs in areas dominated by exotics, where the tolerance for exotics will be the same composition and percentage of pre-disturbance conditions with the exception of invasives such as Sahara mustard or Russian thistle.		
	i. Reporting – Reporting will include progress reports summarizing site status and recommended remedial measures that will be submitted by the biologist to the CPUC quarterly, with the exception of the site visits immediately preceding the development of each annual status report (see below). Each progress report will list estimated species coverage and diversity, species health and overall vigor, the establishment of volunteer native species, topographical/ soils conditions, problem weed species, the use of the site by wildlife species, significant drought stress, and any recommended remedial measures deemed necessary to ensure compliance with specified performance criteria. One annual site status report that summarizes site conditions will be forwarded by the		

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	biologist to the CPUC at the end of each year following implementation of this plan. Each annual report will list species coverage and diversity measured during yearly quantitative surveys, compliance/non-compliance with required performance standards, species health and overall vigor, the establishment of volunteer native species, hydrological and topographical conditions, use of the site by wildlife species, and the presence of invasive weed species. In the event of substantial non-compliance with the required performance criteria, the reports will include remedial measures deemed necessary to ensure future compliance with specified performance criteria. Each annual report will include, at the minimum: 1) The name, title, and company of all persons involved in restoration monitoring and report preparation 2) Maps or aerials showing restoration areas, transect locations, and photo documentation locations 3) An explanation of the methods used to perform the work, including the number of acres treated for removal of non-native plants 4) An assessment of the treatment success.		
Invasive, Non-Native, and Noxious Weeds	B-6 Prepare and implement a Weed Control Plan. The intent of this mitigation measure is to require SCE to develop a Weed Control Plan to respond to the colonization of noxious or invasive weeds that occur as a result on the Project. SCE shall prepare and implement a comprehensive, adaptive Weed Control Plan. The Weed Control Plan shall be submitted to the CPUC for final authorization of weed control methods, practices, and timing prior to implementation of the Weed Control Plan. On public lands, SCE shall submit the Weed Control Plan to the BLM for approval. The Weed Control Plan shall include the following: a. A pre-construction weed inventory shall be conducted by surveying all areas subject to ground-disturbing activity, including, but not limited to the Downs Substation expansion site, access roads along the 115-kV subtransmission line routes, and in any area where vehicles will be parked or equipment used. Populations of noxious weeds shall be flagged for avoidance along all access roads where ground disturbance is not expected to occur. SCE shall not be responsible for removing or treating existing populations of noxious or invasive weeds in any areas that are not subject to ground disturbance. Weed populations that: (1) are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006), (2) aid and promote the spread of wildfires (such as cheatgrass and Saharan mustard), and (3) are considered by the BLM as species of priority (for BLM lands only) shall be mapped and described according to density and area covered. In areas subject to ground disturbance, weed infestations shall be treated prior to construction according to control methods and practices for invasive weed populations designed in consultation with the BLM (for BLM lands only). The Weed Control Plan shall be updated and utilized for eradication and monitoring post construction.	Review and approve Weed Control Plan; Review daily log on a monthly basis (for BLM lands), or upon request of the CPUC	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	b. Weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods. The application of herbicides shall be in compliance with all State and federal laws and regulations under the prescription of a Pest Control Advisor (PCA), where concurrence has been provided by the CPUC/BLM, and implemented by a Licensed Qualified Applicator. Herbicides shall not be applied in areas containing occupied Threatened, Endangered, Proposed, Candidate, and BLM Sensitive species without further analysis. Herbicides shall not be applied during or within 72 hours of a scheduled rain event. The timing of the weed control treatment shall be determined for each plant species in consultation with the CPUC, the CPUC-approved SCE Restoration Biologist, the BLM (on public lands), the county Agriculture Commissioners, and the California Invasive Plant Council (Cal-IPC) with the goal of controlling populations before they start producing seeds. For the preconstruction and construction of the Project, measures to control the introduction and spread of noxious weeds in the Project work areas shall be taken as follows. c. During Project preconstruction and construction, all seeds and straw materials shall be weed-free rice straw, and all gravel and fill material shall be certified weed free by the county Agriculture Commissioners' Offices. Any deviation from this will be approved by the CPUC/BLM. All plant materials used during restoration shall be native, certified weed-free, and approved by the CPUC and BLM. d. During Project preconstruction and construction, vehicles and all equipment shall be washed (including wheels, undercarriages, and bumpers) before and after entering the work area. Vehicles staged in the work areas would only require re-treatment if they are exposed to high priority noxious weed populations or have left the work area. Vehicles shall be cleaned at existing construction yards or legally operating car washes. SCE shall document that all vehicles have been washed prior to commencing project work. In addition, tools such as chainsaws, hand clippers, pruners, etc. shall be washed before and after entering all Project work areas. All washing shall take place where rinse water is collected and disposed of in either a sanitary sewer or landfill, unless otherwise approved by the CPUC/BLM. A written daily log shall be kept for all vehicle/equipment/tool washing that states the date, time, location, type of equipment washed, methods used, and staff present. The log shall include the signature of a responsible staff member. Logs shall be available to the CPUC and BLM for inspection at any time and shall be submitted to the CPUC and BLM (on public lands only) on a monthly basis.		
Desert Tortoise	B-7 Conduct presence or absence surveys for desert tortoise and implement avoidance measures. SCE shall limit all activities within occupied or potentially occupied habitat for desert tortoise to existing access roads or cleared areas. Prior to ground disturbance at the Downs Substation expansion site, SCE shall implement the following actions. a. The entire plant site shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence	Monitor to ensure installation and maintenance of desert tortoise-exclusion fence at Downs Substation expan-sion site; Review focused	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. b. A USFWS, CDFG, and CPUC-approved qualified biologist shall conduct focused clearance surveys for desert tortoise prior to construction activities where any ground disturbance would occur within the substation expansion area. These surveys shall provide 100 percent coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. Clearance surveys shall follow the USFWS's desert tortoise survey protocol, as modified within the BLM's West Mojave Plan (WEMO) (BLM, 2005). This fence line transect shall cover an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 30 feet apart. The biologist shall then complete two clearance surveys to ensure tortoise are not present in the construction footprint. c. A minimum of two clearance surveys, with negative results, must be completed, and these must coincide with heightened desert tortoise activity from late March through May and during October. To facilitate seeing the ground from different angles, the second clearance survey shall be walked at 90 degrees to the orientation of the first clearance survey. d. If tortoises or intact active burrows are found in the impact area or if the authorized biologist determines that a tortoise may enter the construction site, SCE shall halt work within 500 feet of the tortoise or burrow. No tortoise shall be handled or allowed to be disturbed by Project activities. If tortoises are detected at the substation expansion site, consultation with the USFWS and CDFG may be required and compensatory mitigation at no less than 1:1 will be required for the loss of native habitats. e. A full time qualified biological monitor shall be present during initial ground disturbance at the substation expansion site to ensure desert tortoises are not encountered during excavation activities. For the subtransmission line, pole replacement areas, and underground electrical installation SCE shall implement the following measures. f. A USFWS, CDFG, and CPUC-approved qualified biologist shall conduct focused clearance surveys for desert tortoise prior to ground disturbance or any Project activity would occur within the subtransmission line right of way (i.e., fiber optic installation), pole replacement locations, and underground trenching. g. A full time qualified biological monitor shall be required for each crew if multiple crews are working more than one mile apart. h. If the biological monitor observes a desert tortoise on or within 500 feet of areas subject to trenching or at the pole replacement sites, work at the location where the animal was detected shall cease until approved by the CPUC, USFWS, BLM (BLM lands only) and CDFG in writing. i. If the biological monitor observes a desert tortoise in any other area, determines that	clearance surveys; Full-time monitoring during initial ground disturbance at Downs Substation expansion site and full-time monitoring for subtransmission line, pole replacement areas, and underground installations; Review report(s) of desert tortoise activity	

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Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	a desert tortoise was killed by Project-related activities during construction, or observes a dead desert tortoise, a written report shall be sent to CDFG, USFWS, and BLM (BLM lands only) within five calendar days. SCE shall notify the CPUC within 24 hours. The report will include the date, time of the finding or incident (if known), and location of the carcass and circumstances of its death (if known). Desert tortoise remains shall be collected and frozen as soon as possible, and CDFG/USFWS shall be contacted regarding ultimate disposal of the remains. In addition the following protective measures shall be implemented by SCE. j. Prior to the onset of construction activities, SCE shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information: i. A detailed description of the desert tortoise including color photographs; ii. The protection the desert tortoise receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act; iii. The protective measures being implemented to conserve the desert tortoise and other species during construction activities associated with the Project; and iv. A point of contact if desert tortoises are observed. k. All trash that may attract predators of desert tortoises will be removed from work sites or completely secured at the end of each work day. l. The biologist will have the authority to stop all activities until appropriate corrective measures have been completed. m. SCE shall restrict work to daylight hours during activities associated with the installation of new fiber optic telecommunication cable, except during an emergency, in order to avoid nighttime activities when desert tortoise may be present on the access road. Traffic speed shall be maintained at 15 mph or less in all work areas. The resumes of the proposed biologists will be provided to the CDFG and CPUC for concurrence prior to conducting the surveys. The name and phone number of the biological monitor shall be provided to a CDFG/USFWS/BLM regional representative at least 14 days before the initiation of ground-disturbing activities.		
Desert Tortoise and Mohave Ground Squirrel	**B-8 Provide off-site compensation for impacts to desert tortoise and Mohave ground squirrel habitat.** To mitigate potential long-term impacts to desert tortoise and Mohave ground squirrel (MGS) habitat from Project activities, SCE will acquire and protect, in perpetuity, habitat occupied by desert tortoise and MGS. The acquisition of mitigation lands shall be required for any disturbance occurring in areas supporting desert scrub or other native habitats that can support desert tortoise or MGS. For the purposes of this mitigation measure, temporary impacts to native vegetation shall be treated as permanent due to the challenges of restoring natural lands in arid environments. SCE shall acquire lands at a ratio of 1:1 (acres of habitat acquired:acres of land disturbed) for natural lands subject to vehicle crushing or vegetation mowing only, and at a ratio of 3:1 for clearing and grubbing between the InyoKern Substation and the Searles Substation. Compensatory mitigation is not required for lands immediately	SCE shall submit final engineering plans to the CPUC identifying the sizes and locations of all areas of native vegetation that would be subject to vehicle crushing or vegetation mowing only, and the sizes and locations of all areas of native vegetation that would be subject to clearing	Prior to construction, during construction, and during operation

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	adjacent to Highway 178 or developed areas. Temporary impacts in these areas shall be restored in accordance with Mitigation Measure B-5. The mitigation areas must provide occupied habitat that is of equal or greater habitat quality compared to the impacted habitat, and must be located within the Western Mojave Recovery Unit for the desert tortoise, as defined in the U.S. Fish and Wildlife Service's Revised Recovery Plan for the Mojave Population of the Desert Tortoise (2011), and within the Mohave Ground Squirrel Conservation Area on private inholdings, as defined in the Bureau of Land Management West Mojave Plan – A Habitat Conservation Plan and California Desert Plan Amendment (2005), or other area approved by the CDFG, USFWS (for desert tortoise) and the CPUC. An open space easement shall be recorded on all property associated with the mitigation lands to protect existing resources in perpetuity. An open space easement could be held by CDFG or an approved land management entity and shall be recorded immediately upon the dedication or acquisition of the land. Habitat shall be preserved through the use of permanent open space easements. Mitigation lands cannot be located on land that is currently publicly held for resource protection, or were previously acquired for use as mitigation lands for another project. Mitigation lands must: a. Provide habitat for desert tortoise and MGS with capacity to regenerate naturally when disturbances are removed; b. Be located near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation; c. Have the potential to contribute to habitat connectivity and build linkages between known populations of desert tortoise, MGS, and/or other preserve lands; d. Not have a history of intensive recreational use or other disturbance that might cause future erosion or other habitat damage, and make habitat recovery and restoration infeasible; e. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration; f. Not contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat; g. Must provide wildlife movement value equal to that on the project site; and h. Shall be contiguous and biologically connected to lands currently occupied by desert tortoise and MGS. SCE shall either provide open space easements or provide funds for the acquisition of easements to a "qualified easement holder" (defined below). The CDFG is a qualified easement holder. To qualify as a "qualified easement holder" a private land trust must have: a. Substantial experience managing open space easements that are created to meet mitigation requirements for impacts to special-status species;	and grubbing (between the InyoKern and the Searles Substations only), for final determination of the acreage of compensation lands required. CPUC shall review and approve the proposed location(s) of compensation lands, as well as, review and approve documentation of recorded easement(s) prior to the issuance of the Notice to Proceed. CPUC shall review and approve verification of having met habitat mitigation requirements prior to final inspection.	

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Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	b. Adopted the Land Trust Alliance's Standards and Practices; and c. A stewardship endowment fund to pay for its perpetual stewardship obligations. The CPUC shall determine whether a proposed easement holder meets these requirements. SCE shall also be responsible for donating to the easement holder fees sufficient to cover: (1) Administrative costs incurred in the creation of the easement (appraisal, documenting baseline conditions, etc.) and (2) Funds in the form of a non-wasting endowment to cover the cost of monitoring and enforcing the terms of the easement in perpetuity. The amount of these administrative and stewardship fees shall be determined by the easement holder in consultation with the CPUC. Open space easement(s) shall also be subject to the following: a. The locations of acceptable easement(s) shall be developed with approval of CDFG and CPUC. b. Be held in perpetuity by a qualified easement holder (defined above). c. Be subject to a legally binding agreement that shall: (1) Be recorded with the County Recorder(s); and (2) Contain a succession clause for a qualified easement holder if the original holder is dissolved. Documentation of recorded easement(s) shall be submitted to the CPUC, for review and approval, prior to the issuance of the Notice to Proceed. Verification of having met habitat mitigation requirements shall be reviewed and approved prior to final inspection.		
Mohave Ground Squirrel	**B-9 Avoid habitat and conduct construction monitoring for Mohave ground squirrel.** SCE shall limit all activities within occupied or potentially occupied habitat to existing access roads or cleared areas. Prior to ground disturbance at the Downs Substation expansion site, SCE shall implement the following actions. a. SCE shall not disturb lands potentially occupied by the Mohave ground squirrel (MGS) unless the site has been cleared by trapping or approved by the CDFG and CPUC in writing. b. A qualified biological monitor shall be on the site to survey for MGS during initial ground-disturbing activities at the substation expansion site and full time during all activities in any areas that support habitat for this species. c. If the biological monitor observes a MGS on or within 500 feet of the substation site, work at the location where the animal was detected shall cease until approved by the CPUC and CDFG in writing. d. If the biological monitor observes a MGS in any other area, determines that a MGS was killed by Project-related activities during construction, or observes a dead MGS, a written report shall be sent to CDFG within five calendar days. SCE shall notify the CPUC within 24 hours. The report will include the date, time of the finding or incident	Review biologist resumes; Monitor at Downs Sub-station expansion site; Full-time monitoring of sub-transmission line, pole replacement areas, and underground installations	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	(if known), and location of the carcass and circumstances of its death (if known). MGS remains shall be collected and frozen as soon as possible, and CDFG shall be contacted regarding ultimate disposal of the remains. e. If MGS are detected at the substation site consultation with the CDFG may be required and compensatory mitigation at no less than 1:1 will be required for the loss of native habitats. For the subtransmission line, pole replacement areas, and underground electrical installation SCE shall implement the following measures. f. a. SCE shall limit all activities within occupied or potentially occupied habitat to existing access roads or cleared areas. g. A CDFG, and CPUC-approved qualified biologist shall conduct focused clearance surveys for MGS prior to ground disturbance or any Project activity would occur within the subtransmission line right of way (i.e., fiber optic installation), pole replacement locations, and underground trenching. h. A full time qualified biological monitor shall be required for each crew if multiple crews are working more than one mile apart. i. If the biological monitor observes a MGS on or within 500 feet of areas subject to trenching or at the pole replacement sites, work at the location where the animal was detected shall cease until approved by the CPUC, USFWS, BLM (BLM lands only) and CDFG in writing. j. If the biological monitor observes MGS in any other area, determines that a MGS was killed by Project-related activities during construction, or observes a dead MGS, a written report shall be sent to CDFG, and BLM (BLM lands only) within five calendar days. SCE shall notify the CPUC within 24 hours. The report will include the date, time of the finding or incident (if known), and location of the carcass and circumstances of its death (if known). MGS remains shall be collected and frozen as soon as possible, and CDFG shall be contacted regarding ultimate disposal of the remains. In addition the following protective measures shall be implemented by SCE. k. Prior to the onset of construction activities, SCE shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information: i. A detailed description of the MGS including color photographs; ii. The protection the MGS receives under the California Endangered Species Act and possible legal action that may be incurred for violation of the Act; iii. The protective measures being implemented to conserve the MGS and other species during construction activities associated with the Project; and iv. A point of contact if MGS are observed. l. All trash that may attract predators of MGS will be removed from work sites or		

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	completely secured at the end of each work day. m. The biologist will have the authority to stop all activities until appropriate corrective measures have been completed. n. SCE shall restrict work to daylight hours during activities associated with the installation of new fiber optic cable, except during an emergency, in order to avoid nighttime activities when MGS may be present on the access road. Traffic speed shall be maintained at 15 mph or less in all work areas. The resumes of the proposed biologists will be provided to the CDFG and CPUC for concurrence prior to conducting the surveys. The name and phone number of the biological monitor shall be provided to a CDFG/USFWS/BLM regional representative at least 14 days before the initiation of ground-disturbing activities.		
Nesting and Breeding Birds	B-10 Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures. Prior to any on-site disturbance (i.e., mobilization, staging, grading or construction), SCE shall retain a CPUC qualified biologist to conduct pre-construction surveys for nesting birds. Surveys for nesting birds shall be conducted within the recognized breeding season in all areas within 500 feet of the substation, staging areas, subtransmission lines, pole replacement areas, underground trenching sites, and access road locations. Surveys for raptors shall be conducted for all areas from February 1 to August 15. The required survey dates may be modified based on local conditions, as determined with the approval of the CPUC, USFWS, and CDFG. If breeding birds with active nests are found prior to or during construction, a biological monitor shall establish a 300 foot buffer around the nest for ground-based construction activities and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. If nesting golden eagles are identified, a 0.5 mile no activity buffer will be implemented. The prescribed buffers may be adjusted to reflect existing conditions including ambient noise, topography, construction activity, and disturbance with the approval of the CPUC, CDFG and USFWS as appropriate. SCE shall also implement the following actions. a. The biological monitor(s) shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. The biological monitor(s) shall be responsible for documenting the results of the surveys and ongoing monitoring and will provide a copy of the monitoring reports for impact areas to the respective agencies. b. If for any reason a bird nest must be removed during the nesting season, SCE shall provide written documentation providing concurrence from the USFWS and CDFG authorizing the nest relocation. Additionally the Applicant shall provide a written report documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are	Review pre-construction survey results; Monitor and establish buffers, as required; Review documentation for any bird nest removals	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	relocated, and whether the birds were accepted by the adopted parent. c. If birds are found to be nesting in construction equipment, that equipment shall not be used, unless permission is obtained from the CDFG, USFWS, and CPUC, until the young have fledged the nest or, if no young are present, until after the breeding season has passed. d. If any vegetation, trees or existing poles are to be removed as part of project related construction activities they will be done so outside of the nesting season to avoid additional impacts to nesting raptors. If removal during the nesting season can't be avoided then the biological monitor must confirm that the features do not contain nests or that the nest is vacant prior to its removal. If nests are found within these structures and contain eggs or young the biological monitor shall allow no activities within a 300 foot buffer for nesting birds and/or a 500 foot buffer for raptors (excluding golden eagle and condors, see above) until the young have fledged the nest.		
Burrowing Owl	B-11 Conduct focused pre-construction burrowing owl surveys and Implement avoidance measures. Concurrent with desert tortoise clearance surveys, SCE shall conduct pre-construction surveys for burrowing owls within the Downs Substation expansion site and along all linear facilities in accordance with CDFG guidelines (CBOC, 1993). No more than 15 days prior to the commencement of initial ground disturbing activities in any location that supports potential habitat, SCE shall implement focused pre-construction reconnaissance level surveys for burrowing owls. Surveys shall be conducted prior to the initiation of ground disturbance, the stringing of fiber optic line, or pole replacement. Surveys shall be conducted by a CPUC approved-qualified biologist(s), knowledgeable with the species. In conformance with federal and State regulations regarding the protection of raptors, surveys for burrowing owls shall be conducted in conformance with the California Burrowing Owl Consortium's 1995 protocols, which are recommended by the CDFG and consist of a minimum of three site visits. Surveys shall be completed within all areas proposed for ground disturbance and shall include the following avoidance measures: a. Occupied burrows shall not be disturbed during the nesting season (1 February through 31 August) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Owls present on site after 1 February will be assumed to be nesting unless evidence indicates otherwise. This protected buffer area will remain in effect until 31 August, or based upon monitoring evidence, until the young owls are foraging independently or the nest is no longer active b. Unless otherwise authorized by CDFG and the CPUC, a 250-foot buffer, within which no activity will be permissible, will be maintained between Project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until 31 August or based upon monitoring evidence, until the young owls are foraging independently. For burrowing owls present during the non-breeding season	Review pre-construction survey results; Monitor to ensure implementation of avoidance measures	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	(generally 1 September to 31 January), a 150-foot buffer zone will be maintained around the occupied burrow(s). c. If there is any danger that owls will be injured or killed as a result of construction activity, during the non-breeding season, the birds may be passively relocated. Relocation of owls during the non-breeding season will be performed by a qualified biologist using one-way doors, which should be installed in all burrows within the impact area and left in place for at least two nights. These one-way doors will then be removed and the burrows backfilled immediately prior to the initiation of grading. To avoid the potential for owls evicted from a burrow to occupy other burrows within the impact area, one-way doors will be placed in all potentially suitable burrows within the impact area when eviction occurs. However, these doors may only be placed with the written permission of the CPUC, CDFG and USFWS to ensure that owls are not trapped or buried in the burrow. d. Any damaged or collapsed burrows will be replaced with artificial burrows in adjacent habitat at a 2:1 ratio. Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG, 1995). SCE shall survey the site selected for artificial burrow construction to verify that such construction will not affect desert tortoise or Mohave ground squirrel. The design of the burrows shall be approved by the CPUC, CDFG and USFWS. If artificial burrows are required, the project owner shall obtain by purchase the land required to support the burrows or ensure the burrows are located in an area such as the sub subtransmission line easement where construction/development would not occur.		
	B-12 Compensation for impacts to burrowing owl. Compensatory mitigation for permanent impacts to burrowing owls or their habitat will be provided in the form of habitat preservation and management. The following measures for compensatory mitigation shall apply only if burrowing owls are detected within the Project Disturbance Area (i.e., areas subject to permanent disturbance). The Project owner shall acquire, in fee or in easement, 19.5 acres of land for each burrowing owl that is displaced by construction of the Project. This compensation acreage of 19.5 acres per single bird or pair of nesting owls assumes that there is no evidence that the compensation lands are occupied by burrowing owls. If burrowing owls are observed to occupy the compensation lands, then only 9.75 acres per single bird or pair is required, per CDFG (1995) guidelines. If the compensation lands are contiguous to currently occupied habitat, then the replacement ratio will be 13.0 acres per pair or single bird. The Project owner shall provide funding for the enhancement and long-term management of these compensation lands. The acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPUC, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. The criteria for the mitigation lands are described below.	If burrowing owls are detected in the Project Disturbance Area, review mitigation lands proposal to ensure adequacy of lands and that mitigation ratio is appropriately met	Prior to construction , during construction, and operation

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	The mitigation land must provide suitable habitat for burrowing owls, and the acquisition lands must either currently support burrowing owls or be within dispersal distance from an active burrowing owl nesting territory (generally approximately 5 miles).		
American Badger and Desert Kit Fox	**B-13 Conduct focused pre-construction surveys for American badger and desert kit fox and implement avoidance measures.** No more than 30 days prior to the commencement of construction activities, the SCE shall retain a CPUC biologist to conduct pre-construction surveys for American badger and desert kit fox within suitable habitat in the Project area. Biological Monitors shall perform pre-construction surveys for badger and kit fox dens in the Project area, including areas within 200 feet of all Project facilities, utility corridors, and access roads. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active. No disturbance to any dens shall be allowed in areas that may support desert tortoise or Mohave ground squirrel as tortoise are known to use a variety of mammal dens for shelter. An inactive den may be excavated by hand and backfilled to prevent reuse by badgers or kit fox will only be allowed at the Substation site after the site has been cleared of desert tortoise. Inactive dens that would be directly impacted by construction activities shall be monitored for future use. Potentially active dens that would be directly impacted by construction activities in any area that supports habitat for the desert tortoise or Mohave ground squirrel shall be monitored by the Biological Monitor for three consecutive nights using a tracking medium, such as diatomaceous earth or fire clay, and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, work may occur adjacent to the den. If present, occupied dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens for badgers and kit foxes shall be avoided during the pup-rearing season (15 February through 1 July) and a minimum 200-foot buffer established. Buffers may be modified with the concurrence of CDFG and CPUC. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction. If avoidance of a non-maternity den is not feasible, SCE shall be required to coordinate with the USFWS and CDFG to gain written approval for potential take of desert tortoise.	Review pre-construction survey results; Monitor to ensure implementation of avoidance measures	Prior to construction and during construction
Nelson's Big Horn Sheep	**B-14 Conduct focused pre-construction surveys for Nelson's bighorn sheep and implement avoidance measures.** All construction activities within 500 feet of Nelson's bighorn sheep shall cease until the animals have moved farther than 500 feet away from construction activities. This buffer may be modified with the approval of the CPUC, BLM (on BLM lands), and CDFG. SCE shall notify the CPUC, BLM, and CDFG in writing within 48 hours if any bighorn sheep are noted in the Project area.	Review pre-construction survey results; Monitor to ensure implementation of avoidance measures	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	Cultural Resources		
APM CR-1	An archaeologist would monitor the grubbing, pad preparation, and construction earthwork in the event that a significant buried deposit is inadvertently encountered during construction activity at the location of the Downs Substation expansion. In such case, SCE would develop an archaeological monitoring plan describing archaeological monitoring activities and treatment of any unanticipated discoveries, as warranted.	On-site archaeologist monitors during construction at Downs Substation expansion area	During construction
Previously-Unidentified Archaeological Resources	C-1 Archaeological construction monitoring. Archaeological monitoring shall be conducted by a qualified archaeologist during any ground disturbing activities related to the expansion of the Downs Substation to address any unanticipated subsurface deposits that may be associated with the site. Unless features or artifacts substantially different than those already documented within the CA-KER-6328H are found, no further management of this resource is required.	Monitoring by a qualified archaeologist during ground disturbing activities at the Downs Substation expansion area.	During construction
Cultural Resources	C-2 Treatment of previously unidentified cultural resources. If previously unidentified cultural resources are unearthed during construction activities, construction work in the immediate area of the find shall be halted and directed away from the discovery until a qualified archaeologist assesses the significance of the resource. If the discovery is located on BLM land, the Ridgecrest field office shall be contacted to evaluate the resource and make necessary plans for treatment. If the resource is located on private land, SCE, in consultation with the CPUC, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be historically significant according to CEQA (CEQA Guidelines Section 15064.5 (a)).	Construction personnel sign an environmental training attendance sheet to ensure ability to identify potential cultural resources. On-site monitoring during construction.	During construction
Paleontological Resources	C-3 Protect paleontologic resources. Prior to construction, a Paleontologic Resource Specialist consisting of a certified paleontologist shall be retained by the Applicant to supervise monitoring of construction excavations and to produce a Paleontological Resource Management Plan (PRMP) for those portions of the Project in the Searles Valley area where ground disturbing activities will occur. The Paleontologic Resource Specialist would obtain a qualified paleontological construction monitor to monitor ground disturbance activities for the portions of the Project located in the Searles Valley area. Paleontological monitoring would include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. The monitor would have authority to temporarily divert grading away from exposed fossils in order to recover the fossil specimens. The PRMP shall address and implement the following measures: • Environmental Training. Training shall be provided to construction supervisors and crew with environmental awareness training regarding the protection of paleontological resources and procedures to be implemented in the event fossil remains are encountered by ground-disturbing activities. • Construction Monitoring. Ground-disturbing activities, including all construction-related grading, excavation, and trenching in areas where potential fossil-bearing materials may be	Monitoring by Paleontologic Resource Specialist during construction excavations in the Searles Valley where ground disturbing activities will occur.	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	encountered, shall be monitored on a full-time basis by the paleontological construction monitor only in those parts of the Project area where these activities will disturb previously undisturbed strata in rock units of paleontologic sensitivity. Areas of grading and excavation in Recent alluvium in the Searles Valley shall be checked on a full-time basis to verify if older high sensitivity lake sediments are penetrated. • Recovery and Testing. If fossils are encountered during construction, construction activities shall be temporarily diverted from the discovery and the paleontological construction monitor would notify all concerned parties and collect matrix for testing and processing as directed by the Project Paleontologic Resource Specialist. Construction would resume at the discovery location once all the necessary matrix was stockpiled, as determined by the paleontological construction monitor. • Prepare Monthly Progress Reports. The Project Paleontologic Resource Specialist shall document interim results of the construction monitoring program with monthly progress reports. In addition, at each fossil locality field data forms shall be completed recording the locality, stratigraphic columns shall be measured, and appropriate scientific samples submitted for analysis. • Analysis and Prepare Final Paleontological Resource Recovery Report. The Project Paleontologic Resource Specialist shall direct identification, laboratory processing, cataloguing, analysis, and documentation of the fossil collections. When appropriate, and in consultation with the Applicant, splits of rock or sediment samples shall be submitted to commercial laboratories for microfossil, pollen, or radiometric dating analysis. After analysis, the collections would be prepared for curation (see below). A final technical report would be prepared to summarize construction monitoring and present the results of the fossil recovery program. The report would be prepared in accordance with Applicant, Society of Vertebrate Paleontology guidelines, and CPUC requirements. The final report would be submitted to the Applicant, the CPUC, and the curation repository (see below). • Curation. Prior to construction, the Applicant shall enter into a formal agreement with a recognized museum repository. The Applicant would submit for curation to the approved repository any fossil collections obtained due to Project construction, all appropriate field and laboratory documentation, and the final Paleontological Resource Recovery Report in a timely manner following construction.		

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
Human Remains	C-4 **Treatment of human remains.** If human remains are unearthed during construction activities, construction work in the immediate area of the discovery shall be halted and directed away from the discovery until the county coroner can determine whether the remains are those of a Native American. If they are those of a Native American, the following would apply: a. The coroner shall contact the Native American Heritage Commission. b. If discovered human remains are determined to be Native American remains, and are released by the coroner, these remains shall be left in situ and covered by fabric or other temporary barriers. c. The human remains shall be protected until SCE, the landowner, and the Native American Heritage Commission come to a decision on the final disposition of the remains. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).	Any discovered human remains are treated according to agency-approved mitigation and in compliance with State and federal regulations.	During construction
	Geology and Soils		
Seismic-related Ground Failure and Liquefaction	G-1 **Conduct geotechnical investigations for liquefaction.** Because seismically-induced liquefaction related ground failure has the potential to damage or destroy Project components, the design-level geotechnical investigations to be performed by the SCE shall include investigations designed to assess the potential for liquefaction to affect the new Project structures within Searles Valley in areas with potential liquefaction-related impacts. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the Project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables to allow ground deformations without damage to structures. Study results and proposed solutions to mitigate liquefaction shall be provided to the CPUC and BLM, as appropriate, for review and approval at least 60 days before final Project design.	Review design-level geotechnical investigation study results and monitor implementation with on-site inspection.	Prior to construction and during construction
	G-2 **Conduct geotechnical studies for expansive soils.** Because expansive soils have the potential to cause damage or destroy new Project components at and near the Searles Substation, the design-level geotechnical studies to be performed by SCE shall identify the presence, if any, of areas with potentially expansive soils and include appropriate design features, including excavation of potentially expansive soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive soils. Studies shall conform to industry standards of care and American Society for Testing and Materials (ASTM) standards for field and laboratory testing. Study results and proposed solutions shall be provided to the CPUC for review and approval at least 60 days before final project design.	Review design-level geotechnical investigation study results and monitor implementation with on-site inspection.	Prior to construction and during construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	Hazards and Hazardous Materials		
Wildland Fires	HZ-1 Prepare and implement Fire Management Plan. SCE shall prepare and implement a project specific Fire Management Plan which outlines guidance for prevention, control, and extinguishment of fires during construction and maintenance activities for the Project. The Fire Management Plan shall include provisions applicable to construction crews and activities and maintenance crews and activities. The Fire Management Plan shall include protocols to address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. Additionally the Plan shall include the following measures: • Cease work during Red Flag Warning events. During Red Flag Warning events, as issued daily by the National Weather Service in State Responsibility Areas (SRA) and Local Responsibility Areas (LRA), all non-emergency construction and maintenance activities shall cease in affected areas. • Ensure open communication pathways. All construction crews and inspectors shall be provided with radio and cellular telephone access that is operational along the entire Project alignment to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the Project area immediately upon ignition. • Remove hazards from work areas. SCE shall clear dead and decaying vegetation from the work area prior to starting construction and/or maintenance work. The work areas would include only those areas where personnel are active or where equipment is in use or stored, and may include: the Downs Substation expansion area and associated new fiber optic and transmission equipment; the new fiber optic telecommunications route; portions of the 115 kV subtransmission ROW in Searles Valley with new poles; construction laydown areas; pull, tension, and splicing sites; access roads; parking pads; and any other sites adjacent to Project components where personnel are active or where equipment is in use or stored. Cleared dead and decaying vegetation shall either be removed or chipped and spread on site in piles no higher than six (6) inches.	Review plan and monitor implementation during construction.	Submit Fire Management Plan at least 60 days prior construction. Implement during construction and operations.

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	Hydrology and Water Quality		
Water Quality	WR-1 **Construction site dewatering management.** If groundwater is unexpectedly encountered during construction, dewatering activities shall be performed in compliance with the California Stormwater Quality Association (CASQA) Handbook for Construction or other similar guidelines, as approved by Kern County. The project proponent(s) shall notify Kern County and the Lahontan Regional Water Quality Control Board at the onset of dewatering activities, 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). The Environmental Monitor shall periodically check grading activities for groundwater exposure.	Monitor during construction and ensure proper notification of parties if dewatering occurs.	During construction
	Land Use and Planning		
Compliance with Applicable Regulations	L-1 **File a Notice to Proceed.** SCE must file a Notice to Proceed with the BLM's Ridgecrest office at least 30 days prior to the start of construction. The Notice to Proceed shall also include a clearance document from California Fish and Game for the Mohave Ground Squirrel and an Encroachment permit from CalTrans, as appropriate.	Review Notice to Proceed and documentation from California Fish and Game and CalTrans.	Prior to construction
	Noise		
Construction Noise Standards	N-1 **Obtain necessary variance for construction noise.** SCE shall obtain a temporary variance (when necessary) for construction activities that would exceed allowable hours of construction equivalent to those of the Kern County Municipal Code Section 8.36.020 - Prohibited Sounds and San Bernardino County Code of Ordinances Title 8, Section 83.01.080(g)	Review variances	Prior to and/or during construction
Construction Noise	N-2 **Avoid unnecessary construction noise.** During construction SCE shall implement the following appropriate noise controls during construction: • Limit noise generating activities to the hours of 7:00 a.m. and 7:00 p.m. when occurring within 500 feet of a residence or other noise-sensitive land use. • Use only internal combustion engine-driven equipment equipped with intake and exhaust mufflers in good condition and appropriate for the equipment. • Limit unnecessary idling of construction equipment. • Where feasible, construction traffic shall be routed to avoid noise-sensitive areas, such as residences, schools, religious facilities, hospitals, and parks. • Inform property owners within 300 feet of the project area of anticipated noise disturbances at least two to four weeks prior to construction, including a contact number to register noise complaints. • Provide a project hotline where residents can call with questions or issues. All calls shall be returned by SCE and/or its contractor within 24 hours to answer noise questions and handle complaints. Documentation of the complaint and resolution shall be submitted to the CPUC monthly.	On-site monitoring, including check of equipment; review traffic routes (see MM T-1); review noticing; and review documentation of complaints and resolution.	During construction

Table C-1. Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure	Monitoring Requirement	Timing of Action
	Traffic/Transportation		
Construction Traffic and Emergency Response	T-1 **Prepare Construction Traffic Control Plan and Implementation Program.** SCE shall consult with Kern County, San Bernardino County, Caltrans, the city of Ridgecrest, as well as Searles Valley Minerals and Union Pacific Railroad companies (for active rail line crossings) and prepare and submit for approval by all permitting jurisdictions a Construction Traffic Control Plan and Implementation Program. The Plan must be prepared in accordance with Caltrans Manual on Uniform Traffic Control Devices, WATCH Manual (the WATCH Manual is the Work Area Traffic Control Handbook published by BNI Publications, Inc.), and California Joint Utility Traffic Control Committee Work Area Protection and Traffic Control Manual; and must include but not be limited to the following: • Specification of temporary closure of travel lanes or disruptions to street segments, intersections, bike lanes, pedestrian facilities, public transportation bus stops, or rail line operations during subtransmission and telecommunication line stringing activities, pole replacement, or any other utility tie ins or construction-related activity. • Timing of heavy equipment and building materials deliveries. • Specification of construction-related haul routes, avoiding residential neighborhoods to the maximum extent feasible, and including the estimated number and frequency of trips, and the proposed schedule of hauling. • Redirecting construction traffic with a flag person or temporary restriping, if required. • Signing, lighting, and traffic control device placement, if required. • Ensurance of access for emergency vehicles into the project site and through any construction-related temporary travel lane closures or disruptions. • Ensurance of pedestrian and bicycle safety from construction vehicle travel routes and any construction-related temporary travel lane closures or disruptions. • Procedures for exiting and entering all work sites. • Ensurance of access to residential and/or commercial property located near subtransmission and telecommunication line routes or any other utility tie-ins or construction-related temporary travel lane closures or disruptions.	Review Traffic Control Plan and Implementation Program; monitor requirements of the plan and program	During construction

Note: Applicant Proposed Measures (APMs) appear in the Proponent's Environmental Assessment (A.10-12-016).