California Public Utilities Commission

Eldorado-Lugo-Mohave (ELM) Series Capacitor Project

Mitigation Monitoring, Compliance, and Reporting Plan

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1 INTRODUCTION

The Final Mitigated Negative Declaration (MND) for the Eldorado-Lugo-Mohave Series Capacitor Project (ELM Project), as adopted by the California Public Utilities Commission (CPUC) on August 27, 2020, (D.20-08-032) includes procedures for preparing and implementing a Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) to ensure compliance with mitigation measures approved in the Final MND. The CPUC is the Lead Agency under the California Environmental Quality Act (CEQA). The Lead Agency for the National Environmental Policy Act (NEPA) is the Bureau of Land Management (BLM), who prepared an Environmental Assessment (EA) and issued a Finding of No Significant Impact (FONSI) and Decision Record (DR) approving the project on July 31, 2020. Separate approvals were granted by the National Park Service (NPS) and Bureau of Reclamation (USBR) where project elements are on lands administered by those agencies.

1.1 AUTHORITY, PURPOSE, AND RESPONSIBILITIES

1.1.1 Authority

The CPUC has broad regulatory authority under Article XII of the California Constitution and Section 702 of the Public Utilities Code (PU Code) mandates that every public utility obey and comply with every order, decision, direction or rule made by the Commission. MMCRPs are adopted as part of PTCs and CPCNs and are enforced as such. Public utilities are subject to enforcement action and fines pursuant to PU Code Sections 2102-1015, 2017, 2108, and 2114. In 2013, the CPUC established a CEQA Citation Program authorizing Staff to fine public utilities for non-compliance with Permits to Construct (PTCs) and Certificates of Public Convenience and Necessity (CPCNs).

Monitoring of mitigation measures to be implemented by a project is required by California Environmental Quality Act (CEQA). Section 21081.6 of the California Public Resources Code (PRC) requires a public agency to adopt a mitigation monitoring and reporting program when it approves a project that is subject to CEQA and where significant adverse environmental effects have been identified. CEQA Guidelines Section 15097 clarifies requirements for mitigation monitoring or reporting.

Mitigation measures to be implemented as part of the Project were identified in the Final MND prepared by the CPUC. The Final MND was adopted by the CPUC on August 27, 2020 in Decision D.20-08-032 and includes procedures for preparing and implementing a MMCRP to ensure compliance with mitigation measures approved in the MND. In addition, certain Applicant Proposed Measures (APMs) were adopted as part of the MND. The mitigation measures and APMs identified in the MND provide the framework for this MMCRP.

1.1.1 Purpose of the MMCRP

The purpose of this MMCRP is to establish between the CPUC and SCE agreed upon procedures and protocols for monitoring construction of the ELM Project to ensure that conditions of project approval, including mitigation measures, are properly implemented. The MMCRP was developed by CPUC in coordination with SCE and CPUC's Environmental Monitors (EMs) and defines the reporting relationships, provides information regarding the roles and responsibilities of the Project's environmental compliance

personnel, sets out compliance reporting procedures, and establishes a communication protocol. The communication information as listed in the MMCRP will be updated throughout construction.

The MMCRP describes the logistics of the monitoring process and establishes protocols to be followed by CPUC's third-party EMs, SCE project staff, Siemens-Beta, and its subcontractors. This MMCRP includes:

- Procedures for approving minor project changes;
- Procedures for dispute resolution;
- APMs and mitigation measures that SCE must implement as part of the Proposed Project;
- Actions required to implement these measures;
- Monitoring requirements; and
- Timing of implementation for each measure.

A draft version of the MMCRP was distributed to SCE and CPUC EMs for review and comment. Final language of the MMCRP was prepared in consultation with SCE.

Section 6 of the Final MND provides the recommended framework for the implementation of the MMCRP by the CPUC as CEQA Lead Agency and describes the roles and responsibilities for implementing and enforcing adopted mitigation measures. This MMCRP includes the information provided in MND Section 6, as well as specific protocols to be followed prior to and during construction by CPUC third-party Environmental Monitors (CPUC EMs) and SCE project staff. Long-term monitoring during operations and maintenance will be addressed through consultation and a plan with the appropriate resource agencies.

The project's MMCRP includes direct participation and commitment from SCE, the Engineer/Procure/Construct (EPC) Contractor, Siemens/Beta Engineering LP Joint Venture (Siemens-Beta), SCE Self-performance Contractor(s), and CPUC EMs. The success of the program depends on the project management staff, monitors, and construction contractor personnel. Therefore, the goal of the MMCRP is to provide a clear understanding of the project's organization, establish lines of communication, and effectively document and report compliance with all of the mitigation measures.

1.1.2 Monitoring Responsibilities

The ELM Project includes activities on both private and public lands. The CPUC is responsible for monitoring project activities on private and state lands in California and has the authority to ensure that mitigation measures and other requirements are implemented. Federal agencies (BLM, NPS, and USBR, respectively) have responsibility for and authority over activities on lands they administer and will conduct monitoring on those lands.

The MMCRP describes specific actions required to implement each measure, including information on timing of implementation and monitoring requirements. Mitigation measures identified in the MND apply to lands under CPUC jurisdiction. All mitigation measures in the MND have been agreed to by SCE. CPUC will monitor implementation of the mitigation measures pertaining to actions on non-federal lands within

California. The CPUC requires that for actions on federal lands within California, SCE must implement the mitigation measures the Final MND or equivalent or more effective measures, recognizing that the federal approval bodies may impose the same mitigation measures as identified in that document, or may instead formulate their own mitigation requirements. Drawing upon CEQA Guidelines section 15074.1 (d) concerning substitute mitigation measures, "equivalent or more effective" means that the substitute or revised measure will avoid or reduce the significant effect to at least the same degree as, or to a greater degree than, the original measure and will create no more adverse effect of its own than would have the original measure. SCE is responsible for implementing all applicable mitigation measures. The CPUC will ensure the implementation of mitigation measures on federal land within California by securing appropriate verification from SCE that the mitigation measures imposed by the CPUC are implemented or that the mitigation measures imposed by the federal agencies are (i) equivalent or more effective and (ii) implemented.

Prior to initiating project-related construction activities, SCE will be required to obtain notices to proceed (NTPs). NTPs will be issued by the agency having authority over the land where the activities are to occur. Implementation of the MMCRP will end when CPUC determines there is no further need for CPUC monitoring of the Project. SCE is required to perform post-construction monitoring for the project to satisfy APM and mitigation measure requirements that are listed in the implementation tables found in Attachments B, C, and D.

1.2 PROJECT OVERVIEW

The ELM Project is located in San Bernardino County, CA and Clark County, NV and includes activities on private, state, and federal lands. The primary Proposed Project components are summarized below and are shown in more detail on maps in Attachment A, Proposed Project Overview Map Series, which consists of 12 map sheets.

- Construct 2 new 500 kV mid-line series capacitors (i.e., the proposed Newberry Springs Series Capacitor and Ludlow Series Capacitor) and associated equipment.
- Provide 2 communication paths between the series capacitor sites.
  - Install approximately 2 miles of overhead and 700 feet of underground telecommunications facilities as one path to connect the proposed series capacitors to SCE's existing communication system.
  - Install approximately 2 miles of underground telecommunications facilities as a second communication path to connect the series capacitors to SCE's existing communication system.
- Provide station light and power to the proposed series capacitors by extending and/or rerouting existing lines to create approximately 2 miles of overhead and 700 feet of underground 12 kV distribution circuits. (The new distribution poles would support overhead telecommunication facilities as well as the electric distribution lines.)
- Construct 3 new fiber optic repeater facilities (Barstow, Kelbaker, and Lanfair) within the Lugo-Mohave right-of-way (ROW).

- Install distribution lines for light and power at the 3 proposed fiber optic repeater sites.
- Install underground telecommunications facilities from existing transmission structures to the Barstow, Kelbaker, and Lanfair fiber optic repeater sites.
- Address 16 potential overhead clearance discrepancies at 14 locations by:
  - Relocating, replacing, or modifying existing transmission, subtransmission, and distribution facilities at approximately 12 locations along the Eldorado-Lugo, Eldorado-Mohave, and Lugo-Mohave 500 kV Transmission Lines to address 14 of the overhead clearance discrepancies. Tower modifications would include raising 9 towers up to approximately 18.5 feet by inserting new lattice-steel sections in tower bodies.
  - Performing minor grading at 2 locations along the Lugo-Mohave 500 kV Transmission Line to address 2 of the overhead clearance discrepancies.
- Install approximately 232 miles of optical ground wire (OPGW) (approximately 59 miles on the Eldorado-Mohave Transmission Line and approximately 173 miles on the Lugo-Mohave Transmission Line, and approximately 3 miles of underground telecommunications facilities in the vicinity of the Mohave Substation).
- Modify and strengthen the ground wire peak of existing suspension towers where OPGW splices would occur (some of these towers would also require minor modifications to the steel in the tower body).
- Install approximately 2,000 feet of underground telecommunications facilities within the existing Lugo, Mohave, and Eldorado Substations.
- Within Lugo Substation, perform modifications on the existing series capacitors and install new terminating equipment and remove 2 existing tubular steel poles (TSPs) and install 2 new TSPs on the Eldorado-Lugo and Lugo-Mohave 500 kV Transmission Lines.
- Within the Eldorado Substation, perform modifications on the existing series capacitors and upgrade the terminal equipment on the Eldorado-Lugo 500 kV Transmission Line.
- Within the Mohave Substation, replace existing series capacitors on the Lugo-Mohave 500 kV Transmission Line and install new terminal equipment on the Eldorado-Mohave and Lugo-Mohave 500 kV Transmission Lines.
- Install (if necessary) cathodic protection on approximately 60 miles of SoCalGas's natural gas pipelines parallel to SCE's Lugo-Mohave 500 kV Transmission Line.

Refinements to the project description above could occur as exact details are determined following completion of final engineering; identification of field conditions; availability of labor, material, and equipment; and compliance with applicable environmental and permitting requirements.

1.3 MONITORING PROGRAM

1.3 CONSTRUCTION SCHEDULE

The estimated overall construction schedule for the project and duration of work for key construction activities are presented in Table 1.3-1. The estimated start date for construction is November 2020 with project completion by June 2022. The actual construction schedule may vary based upon many factors, including the timeline for additional agency approvals, availability of equipment, environmental conditions, and any necessary changes to the project design due to unexpected physical conditions. Construction in the various project segments and project components will occur intermittently throughout the overall project duration, based on approved power outages, material availability, and required construction sequencing.

Table 1.3-1. Construction Schedule

Proposed Project Activity	Approximate Duration (months)	Approximate Start Date
ROW Grant / Special Use Permit	N/A	October 2020
Property Acquisition	N/A	September 2020
Acquisition of Required Permits	N/A	June 2020
Mid-Line Series Capacitor Construction	17	December 2020
Substation Modifications	17	November 2020
OPGW Construction	10	December 2020
500 kV Transmission (Discrepancy) Construction	6	December 2020
Telecommunications Construction	12	January 2021
Distribution Construction	5	December 2020
Proposed Project In-Service	N/A	July 2022
Cleanup	6	August 2022

Project-related construction activities (beyond such pre-construction activities as engineering, design, studies, and permitting) will not begin until the CPUC's Project Manager has issued one or more Notices to Proceed (NTPs) covering the planned activities. SCE's anticipated NTP requests for construction, including estimated start date, are provided in Table 1.3-2.

Table 1.3-2. Construction NTPRs

Notice to Proceed Request	Description	Estimated Submittal Date
CPUC-1	Substation Modifications, Mid-Line Series Capacitors, and Distribution & Telecom Construction	September 18, 2020
CPUC-2	Tower Raising Modifications	March 23, 2021
CPUC-3	OPGW Construction and Transmission Discrepancy Construction	April 30, 2021

1 INTRODUCTION

IMPORTANT: Before work can proceed on a work package, a request for an NTP (NTPR) must be made by SCE and approved by the CPUC Project Manager (see Section 4.3). The mitigation measures and APMs listed in Section 6 include the locations where these requirements apply, and which must be implemented prior to the commencement of construction. SCE will work closely with Siemens-Beta to ensure that site-specific mitigation measures and APMs are clearly identified and implemented. CPUC EMs will verify the implementation of mitigation measures and APMs prior to and during construction.

2 SCOPE OF THE PROGRAM

2.1 MITIGATION, APMs & CONSERVATION MEASURES

The Project is subject to APMs and mitigation measures identified in the Final MND and are collectively referred to as mitigation. Attachments B, C, and D list all Final MND APMs and mitigation measures that are applicable to the approved Project. These attachments are modified versions of the mitigation measures included in the Final MND and are the core components of the MMCRP. In addition, conservation measures specified by the U.S. Fish and Wildlife Service (USFWS) Biological Opinion are included as well. Attachments B, C, and D represent different implementation phases (pre-construction, construction, post-construction/operation and maintenance). For example, Attachment B requirements will be used to track and verify SCE compliance with pre-construction mitigation requirements for each NTP request. Whereas, Attachment C will be used by the CPUC and SCE monitors to track mitigation compliance during construction.

2.2 PERMITS AND AUTHORIZATIONS

The CPUC and the BLM are the Lead Agencies for the Project. However, the Project route crosses lands, affects resources, or requires activities that are under the jurisdiction of other agencies. These agencies that may require separate permits or approvals are listed in Table 2.2-1. Contact information for individual agencies is provided in Table 2.2-2.

All required permits are to be secured and their terms and conditions implemented prior to undertaking any work that requires such permits. All permits acquired for the Project shall be provided to the CPUC prior to undertaking work authorized by any permits. SCE will provide notice to the CPUC of agency contacts, direction, and resolutions. Under their own authority and discretion, permitting agencies may implement their own monitoring and reporting schemes and undertake whatever enforcement actions they are authorized to pursue.

IMPORTANT: The status of required permits will be included in any request for an NTP. Copies of permits, including any permit requirements and stipulations, shall be provided to CPUC.

Table 2.2-1. Permits and Approvals that May Be Required for the Project

Permit/Approval	Agency	Purpose/Jurisdiction
Federal		
Right-of-Way (ROW) Grants	BLM	500 kV Transmission Lines and access roads. Construction on BLM-administered lands.
Special Use Permit	NPS	500 kV Transmission Lines and access roads
Special Use Permit	NPS	Construction on NPS-administered lands
Decision Record	BLM	Considers Federal actions on the project approval.
Notice to Proceed	BLM	Final BLM approval to proceed with construction
Section 7 Consultation	United States Fish and Wildlife Service (USFWS)	Federal listed, threatened, and endangered species

Table 2.2-1. Permits and Approvals that May Be Required for the Project

Permit/Approval	Agency	Purpose/Jurisdiction
Section 106 Consultation, National Historic Preservation Act	BLM	Cultural resources listed or eligible for listing on the National Register of Historic Places
Clean Water Act Section 404 Permit (CA and NV) – Nationwide 18 and 33	United States Army Corps of Engineers (USACE)	Construction impacting waters of the United States including wetlands
Special Use Permit	United States Bureau of Reclamation (BOR)	500 kV Transmission Lines and access roads
7460(1) Permit and Notice Proposed Construction or Alteration	Federal Aviation Administration (FAA)	Erection of tall structures or the use of tall construction equipment in the vicinity of an airport
Field Work Authorization (Arch)	BLM	Ability to conduct surveys/monitoring
Field Work Authorization (Paleo)	BLM	Ability to conduct surveys/monitoring
Archaeological Resources Protection Act (ARPA) Permit	NPS	Permit for Archaeological Investigations within the Mojave National Preserve
Permit/Agreement/ Consent Type (TBD)	Western Area Power Administration (WAPA)	SCE 500 kV transmission line crossing WAPA 230 kV transmission line in Nevada
State		
CPCN	CPUC	State lead agency to project approval
Notice to Proceed	CPUC	Final CPUC approval to proceed with construction
Declaratory Order or Advisory Opinion	Nevada Public Utilities Commission (PUCN)	Nevada UEPA Permit to Construct not required
2081 Incidental Take Permit	California Department of Fish and Wildlife (CDFW)	State listed threatened or endangered species
401 Certification – CA	State Water Resources Control Board	Certifies that activities subject to a federal permit meet state water quality standards
401 Certification – NV	Nevada Division of Environmental Protection (NDEP)	Certifies that activities subject to a federal permit meet state water quality standards
Temporary work in waterways permit – NV	NDEP	Regulates work in waterways
1602 Streambed Alteration Agreement	CDFW	Activity that may modify a river, stream, or lake
NPDES Construction General Permit for Discharges of Storm Water	State Water Resources Control Board	Construction activities that disturb more than one acre of soil
NPDES Construction General Permit for Discharges of Storm Water	NDEP	Construction activities that disturb more than one acre of soil
Oversize Load/Special Load Permit	Caltrans	Movement of vehicle/loads exceeding statutory limitations on the size, weight, and loading of vehicles
Permit Type (TBD)	California State Lands Commission	Activities related to the placement of encroachments and landing zones within, under, or over the State of California School Lands

Table 2.2-1. Permits and Approvals that May Be Required for the Project

Permit/Approval	Agency	Purpose/Jurisdiction
Encroachment Permit	CA and NV Cities or Counties, Caltrans, and NDOT	OH/UG crossings over or under travel ways during OPGW stringing and work areas
NDOW Special Purpose Permit/Wildlife Authorization	NV Department of Wildlife	State listed threatened or endangered species
Operational Permit (CA and NV Fire Codes)	CA and NV	Operation of 500-gallon or greater propane tanks
Local		
Fugitive Dust Control Permit	Clark County DAQ, NV	Dust control permits approved by Clark County Department of Air Quality and MDAQMD
Dust Control Plan	MDAQMD	A dust control plan approved by MDAQMD, Clark County DAQ, CPUC, BLM and NPS
Generator Permit	MDAQMD	Use of temporary and permanent generators exceeding 50 horsepower
San Bernardino County Fire Protection District, Hazardous Materials Division Permit	San Bernardino County	Facility inspections and management of a facility's Hazardous Materials Business Plan program
Fire Permit – CA	Cities or Counties	Fire permit may be needed
Hazardous Materials Permits	CA and NV Counties	Hazardous materials inventory for materials used for construction (e.g. batteries, SF6 gas)
Grading Permit	San Bernardino and Clark Counties	Project work that includes earthwork. A permit will be obtained if applicable
Building Permit (e.g., Fence)	San Bernardino and Clark Counties	Construction activity subject to the county building code requirements. Desert Tortoise fencing design also needs to be approved by the BLM, CDFW, and USFWS
Building Permit (e.g., MEER)	San Bernardino and Clark Counties	Construction activity subject to the city or county building code requirements. A permit will be obtained if applicable
Temporary Entry Permit or Temporary Construction Easement (e.g., Material and Storage Yards, Landing Zones, Access Roads)	Counties or Private Property Owners	Approval to use project work areas
Demolition Permit	CA and NV Cities or Counties	Demolition of existing platforms and equipment at substations
Section 10	Clark County, NV	MSHCP coverage for Desert Tortoise on privately owned land
Encroachment Permit (e.g., Traffic Control Plan, lane closure)	NV Cities or Counties	Activities related to the placement of encroachments within, under, or over the State highway ROWs
Other		
License, Easement, or Agreement (RR Permits)	BNSF and UPRR	Overhead crossings over railways during OPGW stringing

3 ROLES AND RESPONSIBILITIES

SCE is responsible for implementing and maintaining all mitigation measures and APMs, and for obtaining and complying with all required permits. The utility is responsible for ensuring that its agents and contractors comply with the MMCRP. The descriptions of the roles and responsibilities of these organizations, depending on the timing and complexity of construction, may be fulfilled by a single individual, shared by multiple individuals, or allow for single individuals to fulfill multiple roles. SCE also is responsible for satisfying requests from jurisdictional agencies and will notify the CPUC of all correspondences related to final approvals and verifications for the project if not otherwise copied on the correspondence.

Standards for successful mitigation are implicit in some mitigation measures, such as obtaining non-discretionary permits or avoiding a specific impact entirely. Additional resource avoidance or impact minimization conditions may be imposed by applicable agencies with jurisdiction through their discretionary permit processes.

IMPORTANT: SCE will inform the CPUC Project Manager in writing of any mitigation measures that are not or cannot be successfully implemented. While the CPUC recognizes the need for flexibility post-decision in response to changed circumstances, it believes changes should be the exception, and it intends to ensure that any proposed change is subject to rigorous standards. Consequently, some requested changes may qualify for the process set forth in the MMCRP for minor project changes (see Section 4.6); others may require the submittal of a Petition for Modification (PFM) pursuant to CPUC Rules of Practice & Procedure, Rule 16.4(a).

The CPUC, as the CEQA Lead Agency, is responsible for ensuring that all mitigation measures and APMs are implemented in a timely fashion as specified, and that the CPUC EM verifies SCE's compliance with mitigation measures, APMs, and conditions of permits issued by other agencies. Other jurisdictional agency representatives may visit construction areas at any reasonable and safe time and may require information regarding the status of compliance with particular mitigation measures or permits. All visitors, including regulatory agency personnel, must sign-in with the job site safety representative and receive the site safety briefing before entering work sites. Site visits to active substations will be coordinated with the SCE Environmental Project Manager (EPM) and/or substation site representative ahead of time. Additional information on communication protocols is presented in Section 4.

3.1 SCE COMPLIANCE PERSONNEL

SCE project personnel and SCE's contractors are responsible for implementing all project mitigation measures, APMs, permit conditions, and the MMCRP. It is SCE's responsibility to comply with project requirements, plan construction activities in a manner that meets these requirements, document compliance activities and the results of mitigation and implement the MMCRP. The compliance personnel titles, and roles and responsibilities are presented below. The titles for project personnel and their associated roles and responsibilities are subject to change. The project organization charts included in Attachment E, present personnel assigned to the roles, and relationships between the roles. If/when the organization structure changes, the organization charts will be updated as needed. In the descriptions

that follow, the prefix "SCE" may refer to SCE employees or SCE contractors, including third-party consultants.

3.1.1 SCE Environmental Project Manager

The SCE Environmental Project Manager (EPM) shall be the lead SCE representative responsible for implementing environmental requirements and the MMCRP as a representative of the owner (SCE). The SCE EPM's responsibilities include:

- Directing the development and implementation of preconstruction environmental mitigation, planning, permitting, and compliance activities; environmental inspection program; and environmental training.
- Ensuring compliance with and monitoring compliance of mitigation and other environmental requirements during construction.
- Monitoring and reporting post-construction restoration and compensation requirements.
- Communicating environmental requirements to the SCE Compliance Team and Construction Managers.
- Communicating with the CPUC Monitoring Team regarding environmental requirements, construction needs, and construction schedule changes.
- Reporting the effectiveness of mitigation and regularly submitting required documentation and notifications to CPUC.
- Providing leadership to correct any issues with environmental compliance.
- The SCE EPM will be an SCE employee.

3.1.2 Siemens-Beta Environmental Project Manager

Siemens-Beta will designate an EPM responsible for overseeing compliance with the APMs, MMs, and other project requirements. The Siemens-Beta EPM will be responsible for managing contracts with environmental subconsultants providing environmental services such as compliance monitoring. The Siemens-Beta EPM will also act as a liaison between environmental and construction staff. The Siemens-Beta EPM's responsibilities include:

- Ensuring compliance with mitigation and other environmental requirements during construction.
- Communicating environmental requirements to Construction Project Managers, Project Engineers, Construction Manager, and Construction Foremen.
- Communicating with the SCE Monitoring Team regarding environmental requirements, construction needs, and construction schedule changes.
- Providing oversight of environmental monitoring.
- Coordinating with construction management personnel.
- Monitoring and reporting post-construction restoration and compensation requirements.

- Resolving compliance issues.
- Providing leadership to correct any issues with environmental compliance.
- Identifying project changes requiring Global Information System (GIS) updates to address new work areas.
- The EPM will be filled by a Siemens-Beta staff member.

3.1.3 EPG Environmental Project Manager

This position will be filled by Environmental Planning Group, LLC (EPG), an environmental subconsultant to Siemens-Beta. The EPG EPM will work with the SCE and Siemens-Beta EPMs to coordinate the environmental compliance aspects of the project and share many of the same responsibilities. The EPG EPM will supervise the subcontract staff. The EPG EPM will be responsible for managing other environmental subconsultants providing environmental services such as compliance monitoring. The EPG EPM's responsibilities include:

- Ensuring project compliance with environmental requirements and mitigation during construction.
- Assisting in communicating environmental requirements to Construction Managers.
- Communicating with the SCE Monitoring Team regarding environmental requirements, construction needs, and construction schedule changes.
- Providing oversight of applicable mitigation requirements.
- Providing oversight of environmental monitoring.
- Coordinating with construction management personnel.
- Monitoring and report post-construction restoration and compensation requirements.
- Resolving compliance issues.
- Providing leadership to correct any issues with environmental compliance efforts.
- The subconsultant EPM will be filled by Subcontract staff (EPG).

3.1.4 EPG Environmental Coordinator(s) (EC)

Siemens-Beta will designate an EPG Environmental Coordinator (EC) or multiple EPG ECs to assist with implementation of the environmental requirements and the MMCRP. The roles and responsibilities of the EC(s) consist of those that are delegated by the SCE EPM, Siemens-Beta and/or EPG EPMs. In addition to sharing the delegated roles and responsibilities of the SCE EPM, the roles and responsibilities of the EC(s) may include:

- Providing oversight of applicable mitigation requirements.
- Coordinating with CPUC and compliance personnel.

- Providing oversight of environmental monitoring.
- Coordinating with subject matter experts (SME).
- Coordinating with Lead Environmental Monitors.
- Coordinating with construction management personnel.
- Communicating and resolving elevated compliance issues with Siemens-Beta, SCE, and the CPUC Monitoring Team.
- Coordinating project changes with Siemens-Beta, SCE, and the CPUC Monitoring Team in the form of Temporary Work Space, Minor Project Refinement, and Project Modifications.
- Coordinating mitigation plan changes with Siemens-Beta, SCE, appropriate agencies, and the CPUC Monitoring Team.
- Coordinating and preparing Compliance Documentation Tables.
- The EC role will be filled by consultant staff (EPG). The number of ECs may change over the course of the project depending on the levels of construction, as determined by the Siemens-Beta EPM, in coordination with EPG staff.

3.1.5 EPG Lead Biologist

The Lead Biologist will be responsible for compliance with the biological APMs, MMs, permit conditions, other biological project requirements, and mitigation plan implementation. The Lead Biologist will be responsible for managing all biological staff and will provide project history and subject matter expertise. The Lead Biologist will directly manage compliance with biological permits (e.g., Biological Opinion and Incidental Take Permit, Multiple Species Habitat Conservation Plans) and provide support and oversight for the Compliance Leads, Lead Environmental Monitors, and Environmental Monitors. The Lead Biologist will also be responsible for making recommendations regarding the monitoring approach and mitigation measure implementation. The Lead Biologist will be a point of contact for agency staff and responsible for working to resolve disputes. Other Lead Biologist responsibilities include:

- Providing oversight of applicable mitigation requirements.
- Coordinating with CPUC, Wildlife Agencies, and compliance personnel.
- Providing oversight for biological monitoring.
- Coordinating with subject matter experts (SME).
- Coordinating with Lead Environmental Monitors.
- Coordinating with construction management personnel.
- Resolving compliance issues in coordination with SCE EPM, Siemens-Beta EPM, and regulatory agencies.
- Developing recommendations for compliance processes and protocols.
- The Lead Biologist role will be filled by subconsultant staff (EPG).

3.1.6 EPG Compliance Leads (CL)

Siemens-Beta will designate two compliance leads collectively responsible for oversight of compliance and management of field staff, a Biological CL and an Environmental CL. The Biological CL will be responsible for oversight of compliance with the biological APMs, MMs, and other project requirements. The Environmental CL will be responsible for compliance with other resource area APMs, mitigation measures, and other project requirements. Each will work together to ensure compliance, to coordinate and manage field staff, and to resolve issues. Other CL responsibilities include:

- Providing oversight of applicable mitigation requirements.
- Coordinating with CPUC and compliance personnel.
- Providing oversight of environmental monitoring.
- Coordinating with subject matter experts (SME).
- Supervising/coordinating with Lead Environmental Monitors.
- Coordinating with construction management personnel.
- Resolving compliance issues.
- Issuing holds on construction Communicating environmental requirements to the SCE Compliance Team and Construction Managers.
- The CL positions will be filled by subconsultant staff (EPG).

3.1.7 EPG Lead Environmental Monitor (LEM)

EPG LEMs will oversee the day-to-day environmental monitoring activities during construction. In addition, LEMs will provide day-to-day direction to the Environmental Monitors (EMs) and Specialty Monitors and serve as the liaison between Siemens-Beta Site Foremen, Subcontractor management staff, and field staff. Roles and responsibilities for LEMs include:

- Coordinating with Siemens-Beta construction management.
- Scheduling field staff to support anticipated construction.
- Providing day-to-day direction, oversight, and mentoring of Environmental Monitors and specialty monitors based on SME guidance.
- Clarifying mitigation requirements and CPUC or agency/permit conditions to field staff.
- Reviewing and providing QA/QC of daily monitoring reports.
- Preparing weekly summary reports.
- Communicating with the CPUC and regulatory agency personnel in the field, in coordination with ECs, and SMEs.

- Providing immediate notification of non-compliance or place 1-hour holds on construction, in coordination with SMEs, CLs, and ECs.
- Conveying work stoppage information such as delay time .
- Participating in tailboard meetings to focus Siemens-Beta construction and monitors on issues or resources.

The FL positions will be staffed by EPG biologists with compliance monitoring experience and familiarity with all APMs, MMs, and permit conditions, including those not biology-specific. The number of LEMs may change over the course of the project depending on the levels of construction.

3.1.8 EPG Environmental Monitors (EM)

Siemens-Beta EMs shall work closely with construction personnel in the field to implement mitigation and perform, or oversee, required monitoring tasks. The EMs shall be the primary field employees responsible for monitoring day-to-day environmental compliance. EMs will primarily be biological monitors trained to monitor compliance with biological APMs, MMs, and permit conditions, as well as measures addressing other resources (e.g., SWPPP, fugitive dust) with the ability to coordinate with specialty monitors (e.g., cultural, tribal, paleontological) when needed.

The FMs responsibilities include:

- Understanding environmental project requirements and construction needs.
- Taking direction from the SCE EPM, EPG EC(s), CL(s), and LEMs.
- Supporting construction staff to ensure work is conducted in compliance with environmental requirements.
- Conducting, or overseeing, monitoring activities specified in project MMs, APMs, and permit conditions.
- Implementing the MMCRP.
- Participating in daily tailboards.
- Conducting preconstruction surveys/sweeps of the construction site and areas around equipment.
- Verifying staking, flagging, or marking sensitive resources in the field.
- Relocating biological resources under direction of qualified biologists/specialty monitors.
- Placing 1-hour holds on construction, as needed.
- Providing mitigation guidance as needed.
- Documenting non-compliance issues.
- Coordinating with the LEM, CLs, EC(s), SMEs, Siemens-Beta EPM, and construction management, as needed.

- Preparing daily monitoring reports.
- Determining the effectiveness of mitigation and reporting whether adjustments need to be made to the Compliance Team.

FMs will have the authority to place a 1-hour hold on work activities if a violation is taking place or is eminent, to investigate potential discoveries, or to provide MM guidance. Once a construction hold has begun, the FM will communicate with the LEMs, CLs, EC(s), and EPMs. The Siemens-Beta EPM, in consultation with the environmental staff, will communicate to construction workers regarding additional estimated time delays (if any) and the avoidance measures (i.e., flagged Environmentally Sensitive Area or construction site restriction). The LEM will also communicate the expected time delay, avoidance measures, or resolution to the EMs.

3.1.9 Subject Matter Experts (SMEs)/Specialty Monitors

Subconsultant SMEs will establish and manage the mitigation measure requirements and regulatory compliance for their areas of expertise (e.g., biology, cultural). Subject matter experts (SMEs) will be responsible for the management and delivery of final resource work products, resource-specific monitoring in support of construction schedules, and permit compliance. They will review their respective technical and reporting documents (i.e., survey reports, monitoring reports) and will submit final technical and reporting documents to the appropriate EPG EC(s) and Management Team who will provide quality assurance/quality control (QA/QC) and approval prior to submittal of the finalized drafts to the Siemens-Beta and SCE EPMs. Roles and responsibilities for SMEs include:

- Coordinating compliance issues with Siemens-Beta, SCE, and the CPUC Monitoring Team.
- Coordinating and consulting with resource agencies.
- Providing supporting data requirements for Project variances and agency permits.
- Reviewing regulatory documents that may require implementation of conditions.
- Managing applicable mitigation requirements.
- Coordinating with the Siemens-Beta EPM and/or appropriate EPG ECs, CLs, LEMs, EMs, and Specialty Monitors.
- Providing technical support for Siemens-Beta Management Team and field staff.
- Reviewing and providing QA/QC of monitoring reports and compliance documentation.
- Coordinating surveys and reports.
- Advising Siemens-Beta Management Team regarding compliance strategies and implementation of mitigation plan requirements.

Many SMEs will also function as Specialty Monitors (e.g., Authorized and Qualified Biologists), who shall be assigned as needed to perform monitoring tasks when project mitigation measures, APMs and permit conditions require a specifically qualified monitor to protect designated resources. The Specialty Monitors

have the authority to work with construction personnel to redirect any construction activities associated with the project, when it is safe to do so, if the activity poses an imminent threat or puts a sensitive resource at undue risk beyond that already permitted.

Specialty Monitors may include Authorized/Qualified Biologists as described in the BO and ITP for the project; approved avian biologist restoration specialist; cultural, tribal, and/or paleontological monitors (as needed); and other personnel with experience and qualifications required for specific resources. An EM may possess the necessary experience, expertise, and agency approvals and/or may work in cooperation with Specialty Monitors staffed independent of the LEM role.

The SME/Specialty Monitor positions may be staffed with third-party consultants and/or construction contractor environmental subconsultant staff, including EPG.

3.2 SIEMENS-BETA CONSTRUCTION MANAGEMENT TEAM

3.2.1 Siemens-Beta Construction Project Manager(s)

Siemens-Beta Construction Project Managers will oversee the activities of all EPC construction personnel. Siemens-Beta Construction Project Manager responsibilities include:

- Ensuring compliance with SCE specifications, project MMs, APMs, permit conditions, MMCRP policies, construction contracts, and applicable codes.
- Communicating construction needs and schedule changes to the SCE Compliance Team, via weekly look ahead schedules, plan of the day schedules, and email updates to the ECs, Compliance Leads, FLs, SCE EPM, and CPUC EMs, as changes occur throughout the day and evening.
- Communicating project design changes so that updates to the SCE GIS database can be made by the EPG GIS team, for Siemens-Beta requested changes. SCE requested project changes will be updated in the SCE GIS database by SCE GIS staff and communicated to the EPG GIS team. Monthly updates will then be submitted to the CPUC Environmental Team.
- Regularly facilitating field meetings with construction and environmental staff.

Siemens-Beta's Project Manager will be onsite full time and will share overall responsibility for the successful execution of the project with the Construction Manager. He will oversee project controls, engineering management, subcontractor management, quality control, scheduling, payment applications, and contract management. The Siemens-Beta Project Manager will interface with and be directly responsible and accountable to SCE's representative.

3.2.2 Siemens-Beta Construction Manager

Siemens-Beta's Construction Manager will be onsite full time and will share overall responsibility for the successful execution of the project with the Project Manager. He will oversee all field work, including supervising Subcontractor foremen and crews; scheduling and tracking of subcontractors and suppliers; daily cost controls; acquisition of equipment, material and labor. The Construction Manager will supervise implementation of all safety, quality control, environmental, or other project-specific programs.

3.2.3 Siemens-Beta Safety Manager & Fire Marshal

The Project Safety Manager/Fire Marshal will be responsible for developing and implementing the project safety plan and Fire Management Plan. Project Safety Manager/Fire Marshal responsibilities also include conducting safety orientation and training; ensuring compliance with project safety plans, managing project safety incidents; and coordinating project safety meetings. The Project Safety Manager/Fire Marshal will conduct field/facility investigations and communicate with Siemens-Beta's Project Manager and SCE's representative regarding incidents and injuries.

3.2.4 Siemens-Beta Project Engineers

Siemens-Beta's Project Engineers will perform a wide range of engineering management functions, including cost control, scheduling, outage coordination, progress reporting, quantity tracking, purchasing, subcontractor coordination, quality control, and document control. A Project Engineer will be assigned to each key scope component, including structures, conductor installation, civil construction, and environmental/SWPPP. The Engineers will manage these work scopes as their own project-within-a-project.

3.2.5 Siemens-Beta Construction Foremen

On-site construction leadership will be the responsibility of the Crew Foreman. The Crew Foreman shall be responsible for all construction activities at individual site(s) under the direction of Siemens-Beta construction management. The Crew Foreman will also be responsible for conducting day-to-day project activities in compliance with MMs and APM requirements, permit conditions, and the MMCRP, as directed by the environmental management team. Key environmental roles of the Siemens-Beta Crew Foreman are to plan construction activities around environmental requirements, as well as to identify and report potentially infeasible challenges to construction to the environmental management team.

3.2.6 Siemens-Beta Construction Workers

Construction workers who enter the project site are responsible for following all MMs and APM requirements, permit conditions, and the MMCRP. Construction workers are responsible for attending required environmental training(s) applicable to their position and directing any questions to the Siemens-Beta Construction Project Managers, Siemens-Beta Project Engineers, Siemens-Beta Construction Managers, Subcontractor Crew Foremen and EPG CLs, LEMs, EMs and Specialty Monitors.

3.2.7 SCE Self-Performed Work and EPC Subcontractors

Many of the construction tasks will be performed by SCE and construction subcontractors. SCE and subcontracted construction crews are also responsible for complying with MMs and APM requirements, permit conditions, and the MMCRP. The following table presents the primary subcontractors that will be used on the project.

Table 3.2-1. Main Construction Subcontractors

Role	Name
SCE Substation Subcontractor	TBD
SCE Trans Telecom / Telecom Subcontractor	TBD
SCE Distribution Subcontractor	TBD
Tubular Steel Pole Foundations	TBD
EPC JV Prime Contractor	Siemens-Beta
Lattice Tower Raising Subcontractor	AmpJack America Ltd
Grading, Below Grade, and Foundations Subcontractor	ACC Construction, Inc.
Electrical Subcontractor	NRG Power, Inc
Site Restoration, BMP Installation and Maintenance Subcontractor	TBD
OPGW Transmission Construction Subcontractor	American Power, LLC

3.3 SCE CONSTRUCTION MANAGEMENT TEAM

3.3.1 SCE Construction Managers

SCE Construction Managers will oversee substation and telecommunication construction activities associated with SCE self-performance work. Responsibilities of SCE Construction Managers include:

- Ensuring compliance with SCE specifications, project MMs, APMs, permit conditions, Project Plans, MMCRP policies, construction contracts, and applicable codes.
- Communicating construction needs and schedule changes to the SCE Compliance Team, via weekly look ahead schedules, plan of the day schedules, and email updates to the ECs, CLs, LEMs, SCE EPM, and CPUC EMs, as changes occur throughout the day and evening.
- Communicating project design changes so that updates to the SCE GIS database can be made for SCE requested changes. SCE requested project changes will be updated in the SCE GIS database by SCE GIS staff. Monthly updates will then be submitted to the CPUC Environmental Team.
- Regularly facilitating field meetings with construction and environmental staff.

SCE's Construction Managers oversee project controls, engineering management, subcontractor management, quality control, scheduling, payment applications, and contract management.

3.4 CPUC MONITORING TEAM

3.4.1 CPUC Project Manager (PM)

The CPUC PM has overall responsibility for ensuring that MMs and APMs are implemented as adopted by the CPUC. The CPUC PM will determine the effectiveness of the MMCRP based on the implementation of the measures and APMs included in the mitigation monitoring tables included as Attachments B, C, and D. The CPUC delegates field monitoring and reporting responsibilities to third-party EMs during construction

and will oversee their work through telephone calls and review of daily and weekly status reports. The CPUC PM will be notified of all noncompliance situations and may suggest measures to help resolve the issue(s).

IMPORTANT: The CPUC PM will issue NTPs for construction of each work package identified by SCE. However, the CPUC's NTP does not authorize construction to start if additional approvals are required from other agencies and such approvals have not been obtained at the time of issuance of an NTP. *No construction requiring a permit may occur on other jurisdictional lands without specific approval by those agencies.*

3.4.2 CPUC Environmental Monitoring (Aspen)

SCE has primary responsibility for ensuring that construction activities are conducted in accordance with approved Project mitigation measures, APMs, compliance plans, and permit conditions. The role of the CPUC third party monitor (Aspen) is to ensure that compliance is being achieved and to document compliance using verbal and written communications.

The overall monitoring program will be administered under the direction and oversight of the CPUC PM. The CPUC will delegate monitoring and reporting responsibilities to a third-party monitor (Aspen). The number of third-party monitors (CPUC EMs) and frequency of site inspections will depend on the number of concurrent construction activities and their locations with respect to sensitive resources and land uses, and compliance with Project mitigation measures, APMs, and permit conditions during construction. In coordination with the CPUC PM, the third-party team (Aspen) may, if necessary, communicate directly with federal/State/local agencies to ensure that compliance with their permit conditions are being met.

- **Aspen Monitoring Manager.** The Monitoring Manager supervises Aspen's CPUC EMs, determines the appropriate inspection frequency, and is responsible for weekly report preparation. The Monitoring Manager also serves as the main point of contact with the CPUC PM for major compliance matters.

- **Aspen Project Liaison.** The Project Liaison provides a direct line of contact with CPUC management and legal, as well as SCE, regarding public complaints and other issues. This person facilitates the development of new procedures to address new issues as they arise.

- **Aspen / CPUC Environmental Monitors (CPUC EMs).** The CPUC EMs will conduct on-site monitoring on non-federal lands and will primarily communicate with LEMs when information is needed or issues are observed. Cooperation between the CPUC EMs and the CLs, LEMs, EMs, and SME/Specialty Monitors is also encouraged. The CPUC EMs will be the primary point of contact with in-field agency personnel on behalf of CPUC. CPUC EMs will be an integral part of the project team and will stay apprised of construction activities and schedule changes and will monitor construction activities for compliance with project mitigation measures, APMs, compliance plans, and permit conditions. The CPUC EMs will document compliance through field notes and will prepare weekly reports documenting construction activities, progress, and compliance. The CPUC EMs shall note any issues or problems with implementation of mitigation/APM/permit conditions, notify the EC, CL, LEM, and/or EM, and report problems to the Aspen Monitoring Manager.

IMPORTANT: The enforcement authority of the CPUC EM in the field is limited to conditions posing imminent safety or resource endangerment concerns at a work location. The CPUC EM is authorized to work with the CL, LEM, EM, Construction Foreman or other Siemens-Beta Construction Management to temporarily stop work under these conditions if it is safe to do so. SCE will address the identified issues. Only the CPUC PM has authority to shut down the project completely.

Table 3.4-1. Key CPUC Monitoring Team Personnel

Role	Name
CPUC Project Manager	Eric Chiang
Aspen Project Manager	Vida Strong
Aspen Project Liaison	Fritts Golden
Aspen Environmental Monitors (EMs)	Jamie Miner Elliott D'Antin

3.5 JURISDICTIONAL AGENCIES

The jurisdictional agencies below have permitting authority over portions of the ELM Project on California private lands. As noted in Section 1.0, the CPUC will monitor project activities on non-federal lands in California, while federal agencies (BLM, NPS, and USBR) will monitor project activities on lands for which they have management responsibility, respectively.

Personnel from jurisdictional agencies identified below may periodically visit the Project site to verify compliance or to request information from SCE regarding compliance with laws, regulations, and Project permits identified in Table 2.2-1. All visitors, including regulatory agency personnel, must sign-in with the job site safety representative and receive the site safety briefing before entering work sites. Site visits to active substations will be coordinated with the SCE EPM and/or substation site representative ahead of time. SCE is responsible for responding to requests from jurisdictional agencies and submitting permits and authorizations to CPUC per Project requirements such as MMs, APMs, and Project Plans. SCE shall provide CPUC with documentation (i.e., email correspondence, letters, and/or memoranda) related to final agency approvals for the Project if CPUC is not directly involved with the coordination effort and the agency approval is tied to mitigation measures, APMs, or Project Plans. SCE shall also provide any copies of permit amendments or modifications to the CPUC and notify the CPUC of any proposed changes in permit conditions. In addition, CPUC may contact jurisdictional agencies at any time regarding the Project to clarify agency requirements, permit conditions, or approvals relating to their jurisdiction, as needed. Prior to CPUC communicating with jurisdictional agencies, CPUC will notify the SCE EPM of the CPUC's questions regarding the jurisdictional agency's requirements, permit conditions, or approval and the intention to contact the agency. If appropriate, the CPUC may request that SCE seek the requested clarification or invite SCE to participate in the discussion in a manner that is mutually convenient with all parties; however, the CPUC retains the authority to coordinate directly with other agencies regarding the Project and permit conditions or plan review comments.

3.5.1 United States Army Corps of Engineers (USACE)

Section 404 of the Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972) authorizes the USACE to regulate the discharge of dredged or fill material to the waters of the United States and adjacent wetlands associated with the approved Project. The USACE issues individual site-specific or general (nationwide) permits for such discharges. USACE issuance of a Section 404 permit triggers the requirement that a Section 401 certification must also be obtained.

The CPUC EMs are familiar with the USACE permit conditions and check for implementation in the field. If an issue arises during construction, the SCE EPM or designated SCE SME, will be the point person responsible to contact the resource agency and notify them of matters under their jurisdiction, with copying correspondence or notification within the SCE Field Reporting Environmental Database (FRED) to the CPUC EM. CPUC will be provided with documentation of agreements between SCE and the resource agency. If an unresolved issue regarding compliance with a mitigation measure affects a permit requirement under the jurisdiction of the resource agency, SCE, will notify the USACE representative (as well as the CPUC PM) so that he/she can take action.

In addition, the USACE representative will be asked if he/she would like to be on the weekly report distribution. The Section 404 Nationwide Permit was approved and certified on July 29, 2020.

3.5.2 United States Fish and Wildlife Service (USFWS)

Under Section 7 of the Federal Endangered Species Act (FESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and the Fish and Wildlife Coordination Act, BLM has consulted with USFWS. As part of the FESA Section 7 consultation process, SCE pursued take coverage for desert tortoise under the 2017 programmatic Biological Opinion for Activities in the California Desert Conservation Area for Project work in California, for which authorization was granted June 30, 2020. For Project work in Nevada, SCE sought coverage under the 2018 Biological Opinion (BO) issued for critical habitat in Southern Nevada, for which authorization was granted February 14, 2020. The BOs identify a series of Conservation Measures that SCE will implement, and the SCE SME will ensure compliance with the BOs, as applicable.

Where conservation measures relate to construction activities on private lands within California, the CPUC EMs will ensure that the conservation measures in the BO are implemented. If a potential violation occurs during construction, the SCE EPM or designated SCE SME, will be the point person responsible to contact the resource agency and notify them of issues under their jurisdiction, with copying correspondence or notification within FRED to the CPUC EM. CPUC will be provided with documentation of agreements between SCE and the resource agency. If an unresolved issue regarding compliance with a mitigation measure affects a permit requirement under the jurisdiction of the resource agency, SCE, will notify the USFWS representative(s) (as well as the CPUC PM) so that appropriate action can be taken. Consistent with Reporting Requirements specified in the 2017 programmatic BO, USFWS representatives will also be consulted by the CPUC PM if an issue arises relevant to an adopted conservation measure to protect the federally listed desert tortoise, or if the desert tortoise is affected during construction in a manner not anticipated in the BO. In addition, the USFWS representative(s) will be included in the weekly report distribution. Long-term monitoring during operations and maintenance will be addressed through consultation and a plan with USFWS.

The USFWS implements the Migratory Bird Treaty Act (MBTA, 16 USC Sections 703 711) and Bald and Golden Eagle Protection Act (BGEPA, 16 USC Section 668). The MBTA prohibits take of any migratory bird, including eggs or active nests, except as permitted by regulation (e.g., licensed hunting of waterfowl or upland game species). The BGEPA prohibits the take, possession, and commerce of bald eagles and golden eagles. Under the BGEPA and subsequent rules published by the USFWS, "take" may include actions that injure an eagle or affect reproductive success (productivity) by substantially interfering with normal behavior or causing nest abandonment. The USFWS may authorize incidental take of bald and golden eagles for otherwise lawful activities, although no take is anticipated and not such authorization is applicable for this project.

In accordance with MM BR-1, SCE will develop a Nesting Bird Management Plan for USFWS, CDFW, BLM, and CPUC review and approval which will specify nest survey, buffer, and monitoring requirements to minimize potential Project effects to nesting birds and avoid any potential for unauthorized take during construction, including golden eagles. The CPUC EMs will ensure implementation of the NBMP in the field. If an issue arises during construction, the SCE EPM or designated SCE SME, will be the point person responsible for contacting the resource agency and notifying them of issues under their jurisdiction, with copying correspondence or notification within FRED to the CPUC EM. CPUC will be provided with documentation of agreements between SCE and the resource agency. If an unresolved issue regarding compliance with a mitigation measure or NBMP affects a permit requirement under the jurisdiction of the resource agency, the CPUC EMs, along with SCE, will notify the USFWS representative (as well as the CPUC, BLM, and CDFW PMs) so that appropriate action can be taken. In addition, the USFWS representative will be included in the weekly report distribution.

3.5.3 California Department of Fish and Wildlife (CDFW)

The CDFW has jurisdiction over the conservation, protection, and management of California's fish, wildlife, native plants, and the habitats necessary for their sustenance. CEQA lead agencies have a legal obligation to consult with CDFW as to their projects' impacts on biological resources.

CDFW issues California Endangered Species Act (CESA) Incidental Take Permits (ITP) pursuant to Fish and Game Code Sections 2081(b) and 2081(c), and California Code of Regulations, Title 14, Subdivision 3, Chapter 6, Article 1, beginning with Section 783. CESA prohibits the take of any species of wildlife designated as an endangered, threatened, or candidate species by the Fish and Game Commission. However, the Department may authorize the take of such species by permit if the conditions set forth in Fish and Game Code Sections 2081(b) and 2081(c) are met. (See also California Code of Regulations, Title 14, Section 783.4.) SCE sought a Section 2081 ITP under the CESA for desert tortoise which was issued on September 18, 2020.

The California Fish and Game Code §3511, §4700, §5050, and §5515 provide for the highest level of protection for mammals, birds, reptiles and amphibians, and fish listed as Fully Protected. Designated species may not be taken or possessed at any time. CDFW cannot issue permits that authorize the "take" of any fully protected species, except for certain circumstances such as scientific research and live capture and relocation to protect livestock.

Three statutes outside of CESA provide protection for birds, nests, and eggs: Fish and Game Code §3503 prohibits the taking, possession, or needless destruction of nest, eggs, and birds, and Fish and Game Code §3503.5 prohibits the taking, possession, or destruction of birds of prey (*Falconiformes* and *Strigiformes*) or their nests and eggs; and §3503 provides for the State's adoption of the MBTA's provisions (above).

CESA's protection for plants is subject to the Native Plant Protection Act (NPPA, §§ 1900-1913). Prior to enactment of CESA, California adopted the NPPA. CESA (described above) generally replaces the NPPA for plants originally listed as endangered under the NPPA. However, plants originally listed as rare retain that designation, and take is regulated under provisions of the NPPA. The California Fish and Game Commission adopted revisions to the NPPA allowing CDFW to issue incidental take authorization for listed rare plants, effective January 1, 2015. Several State-listed rare plants are expected to be affected by the Project but would be mitigated through implementation of APMs and MMs.

The CDFW will require a Streambed Alteration Agreement, pursuant to Section 1600 *et seq.* of the Fish and Game Code, prior to the commencement of any activity that will substantially change the bed, channel, or bank (which may include associated riparian resources) of a river, stream or lake; use materials from a streambed; and/or result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. The CDFW's issuance of a Streambed Alteration Agreement for a project that is subject to CEQA requires CEQA compliance actions by the Department as a Responsible Agency. As a Responsible Agency under CEQA, CDFW may consider the local jurisdiction (Lead Agency's) CEQA documentation for the project. A 1602 agreement was executed by the CDFW and SCE for the portions of the project located outside of federal lands on September 1, 2020.

SCE, will coordinate with the CDFW, as needed during construction. The CPUC EMs are familiar with the CDFW permit conditions and will ensure implementation in the field. If an issue arises during construction, the SCE EPM or designated SCE SME, will be the point person responsible to contact the resource agency and notify them of issues under their jurisdiction. CPUC will be notified of correspondence and provided with documentation of agreements between SCE and the resource agency. If an unresolved issue regarding compliance with a mitigation measure affects a permit requirement under the jurisdiction of the resource agency, the CPUC EMs, along with SCE, will notify the CDFW representative (as well as the CPUC PM) so that appropriate action can be taken. In addition, the CDFW representative will be included in the weekly report distribution.

3.5.4 State & Regional Water Quality Control Board

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its' nine Regional Water Quality Control

Boards (RWQCB). The SCE ELM Project is within the area administered by the Colorado River Regional Water Quality Control Board.

The SCE ELM Project would disturb more than 1 acre of ground, placing the project under the NPDES and the California General Permit for Discharges of Storm Water Associated with Construction Activity (General Construction Permit). The NPDES Construction General Permit, administered by the California State Water Resources Control Board requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMPs) the discharger would use to protect stormwater runoff. A Project SWPPP was prepared and approved on August 10, 2020.

Section 401 of the CWA requires that any activity, including river or stream crossings during road, pipeline, or transmission line construction, which may result in a discharge into waters of the U.S. be certified by the RWQCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards. The SCE ELM Project is expected to result in discharges to waters of the U.S., and the Section 401 certification was obtained on July 29, 2020.

SCE, will coordinate with the SWRCB/RWQCB, as needed during construction. The CPUC EMs are familiar with the permit conditions and will ensure implementation in the field. If an issue arises during construction, the SCE EPM or designated SCE SME, will be the point person responsible to contact the resource agency and notify them of issues under their jurisdiction. CPUC will be notified of correspondence and provided with documentation of agreements between SCE and the resource agency. If an unresolved issue regarding compliance with a mitigation measure affects a permit requirement under the jurisdiction of the resource agency, the CPUC EMs, along with SCE, will notify the agency representative (as well as the CPUC PM) so that appropriate action can be taken. In addition, the SWRCB representative will be included in the weekly report distribution.

4 PROCEDURES

This section addresses MMCRP procedures for personnel identified in Section 3 that shall be implemented prior to, during, and following construction to facilitate successful implementation and documentation of Project requirements. Procedures in this section include general communication guidelines, standard CPUC practices, and documentation tools developed from experience with past CPUC projects that involved mitigation monitoring oversight.

4.1 COMMUNICATION GUIDELINES

Good communication is essential to successful implementation of an environmental mitigation compliance program. To avoid Project delays, CPUC and SCE environmental and Siemens-Beta construction representatives will interact regularly and maintain professional, responsive communications at all times. SCE and Siemens-Beta environmental representatives will coordinate closely with CPUC EMs throughout the monitoring effort to ensure that issues are addressed and resolved in a timely manner. To that end, this section provides a communication protocol for the timely and accurate dissemination of information to all levels of the Project regarding surveys, plans, mitigation measures, construction activities, non-compliance incidents, and planned or upcoming work.

To ensure that the CPUC EMs can get accurate and timely information on ongoing surveys, construction work, non-compliance incidents, and construction schedules, the following protocols have been established:

- The CPUC EMs' primary point(s) of contact in the field will be the LEMs. If not available, the CL or EC(s) will be the point of contact, followed by the SCE EPM if the EC(s) are not available.
- The LEMs will make every effort to inform CPUC EMs of all current and planned survey and construction activity, including status of permits and activity locations, in a timely manner.
- Siemens-Beta will provide look ahead schedules on a daily basis (plan of the day). Additionally, similar information will be discussed and provided during construction meetings and conference calls to which the CPUC is invited to attend. Timely notification, whether during construction meetings, conference calls, plan of the day distribution, plan of the day calls, Siemens-Beta email updates, and call/text updates from EC(s), CL, and/or LEMs, must be sufficient to allow response time for CPUC EMs to be present for that activity, if necessary. If daily or weekly look ahead schedules are generated, the CPUC EMs will be copied.

The EC(s) are the appropriate contacts for obtaining information on construction activity schedules or construction practices. The CPUC EM and other designated agency representatives or staff may talk to Construction Foremen to ask questions about their activity, but Construction Foremen may opt to refer the CPUC EM to the LEM, CL, or Siemens-Beta Construction Management personnel. In the event that the Foreman cannot be located onsite, questions should be directed to the LEM, CL, or EM. The CPUC EM may contact the LEM, CL, or EC directly, via cellular device at any time.

- The communication guidelines state that CPUC EMs will communicate with the EMs, LEMs, CLs, and EC(s), as appropriate, regarding schedules, status of surveys, permit status, compliance issues, and other matters affecting the project at-large or project components. This approach is due to the connection of these management positions to the Project Management Team, Construction Management Team, and agencies' representatives, especially as it relates to global project issues. However, communication and cooperation between CPUC EMs and Specialty Monitors is also encouraged for site-specific information, last-minute schedule changes, and to address potentially imminent compliance issues.

- A list of environmental monitoring personnel and construction managers, identified by title, with contact information is provided in Appendix G (contact information will be kept confidential). An updated list will be distributed as needed to keep all parties informed of monitor and staff additions/changes, as well as construction scheduling changes. This list of personnel, subsequent updates, and construction schedule changes will be distributed to all persons on the list throughout the construction process.

- Updated resource mapping is available on the EPG GIS Collector Application.

4.1.1 Pre-Construction Compliance Coordination

SCE is required by the terms of the mitigation measures, APMs, and permitting requirements of other agencies to prepare various plans and obtain approval of these plans, in addition to performing surveys and studies prior to construction. As necessary, SCE will revise the plans, conduct meetings, conference calls, and site visits with the CPUC, technical representatives of the CPUC third-party monitor, and other agencies. The purpose of the pre-construction compliance coordination process is to:

- Discuss and document the status of all required SCE's submittals,

- Document the findings of data reviews and jurisdictional agency approvals,

- Review SCE submittals,

- Document the status of mitigation measures/APMs as they apply to the Project or phased work packages, and

- Discuss refinements or minor changes to the Project.

The goal of the pre-construction process is to complete all required actions so the CPUC and other agencies, as appropriate, can issue NTP authorizations and permits for each Project work package.

A pre-construction meeting was held on October 8, 2020 with the CPUC, SCE, and CPUC EMs to review the MMCRP and mutually agree upon the Project's communication protocol, as reflected in this MMCRP. Other pre-construction activities include the following:

- Field verification of clearly delineated (e.g., staking, flagging, etc.) work locations to confirm any need for siting adjustments based on the presence of sensitive resources.

- Field verification of any construction yard sites.

4.1.2 Communication Protocol During Construction

Many mitigation measures were derived from agency input. The SCE EPM or designated SCE SME will be the point person responsible for contacting resource agencies and immediately notifying them of issues arising with regard to matters under their jurisdiction. CPUC shall be notified of correspondence (email or letter) and provided with copies of documentation that flow between SCE and resource agencies. If an unresolved issue regarding compliance with a mitigation measure affects a permit requirement under the jurisdiction of a resource agency, the CPUC EM will contact the SCE EPM, and they will contact the agency to discuss resolution. Please see Section 4.5, Incidents and Stop Work Orders, regarding environmental compliance and safety incidents.

4.1.2.1 Daily Communication During Construction

Generally, problems encountered during construction can be resolved in the field through regular communication among the CLs, LEMs, EMs, Specialty Monitors, Construction Management, and CPUC EMs. Field staff will be equipped with cell phones and will be available to receive phone calls during construction. The Project contact list is included in Appendix G and will be updated as needed by Siemens-Beta.

The following provides additional guidelines to ensure effective communication in the field.

CPUC EMs. The CPUC EM's primary point of contacts in the field are the LEMs. The CPUC EM will contact the LEMs if an activity is observed that conflicts with one or more of the mitigation measures, APMs, or permit conditions, so that the situation can be corrected by Siemens-Beta. The CPUC EM will also coordinate with the EMs and Specialty Monitors, as appropriate. If the CPUC EM cannot immediately reach the LEM, the EM, CL or EC will be contacted to address the issue. Similarly, the CPUC EM will contact the LEM, CL, or EC for information on where construction crews are working, the status of MMs, and for schedule forecasts. In all cases, the CPUC EM will contact the designated Siemens-Beta Construction Manager if a problem is noted that requires action from the construction subcontractors. The CPUC EM may discuss construction procedures directly with the Subcontractor Foreman or Siemens-Beta Construction Management, however they may elect to redirect the question to Siemens-Beta Environmental or Project Management personnel. The CPUC EM may also contact the LEM, CL, or EC directly via his/her cellular device, at any time.

IMPORTANT: The CPUC EM will not direct Siemens-Beta construction workers but will contact the designated Siemens-Beta Construction Management personnel. In the event an activity imposes an imminent threat to a sensitive resource or an undue risk, the CPUC EM will try to contact the LEM, who has the authority to stop work; however, if they are not immediately available, the CPUC EM has the authority to stop work at that location if it is safe to do so.

A contact list identifying environmental monitoring personnel and construction supervisory staff to contact regarding compliance issues is included in Appendix G. The contact list includes each person's title and responsibility, including the names of Siemens-Beta, Subconsultant, and CPUC staff, and other members of the ELM team. The list includes phone numbers and e-mail addresses where team members can be reached during construction. The contact list will be updated and redistributed as necessary by

Siemens-Beta as new personnel are assigned to the Project. [Note: this list is confidential and will not be published or posted on the website; however, project construction and monitoring personnel will have access to the complete MMCRP, including the updated contact list.] Prior to beginning the day's work at a job site, a tail-board briefing will be held by Siemens-Beta or SCE Construction Management in the case of SCE self-perform work. Possible subjects include reemphasizing safety and identifying any specific safety concerns associated with that day's operation, potential environmental issues that workers should be aware of, etc.

4.1.2.2 Progress Meetings During Construction

The SCE EPM will conduct bi-weekly meetings with Siemens-Beta Construction Managers, supervisors, environmental representatives, CPUC, and other appropriate staff to discuss work completed, work anticipated for the following period, and the status of mitigation measures. The meetings also will provide a forum for discussing environmental compliance issues or concerns.

4.1.2.3 Scheduled Conference Calls

The SCE EPM, Siemens-Beta EPM, EPG Lead Biologist, EC(s), CLs, CPUC PM, CPUC Monitoring Manager, the CPUC EMs, and other parties may participate in a bi-weekly teleconference call or as otherwise agreed-upon schedule. The teleconference calls will be scheduled for an agreed date and time and will be used to identify actual or potential issues and discuss solutions. The conference calls will focus on MMCRP implementation, including project progress and schedule, compliance, and project changes.

4.1.2.4 As-Needed Interagency Conference Calls

From time to time during the pre-construction process or during construction, the CPUC, SCE EPM, Siemens-Beta EPM, EPG Lead Biologist and/or Biological CL, EC, and/or resource agencies may determine that conference calls may be necessary or appropriate to discuss the status of specific mitigation compliance as they relate to permit requirements. These calls will be scheduled by the SCE EPM in advance, to the extent feasible, by e-mail, and will include appropriate staff. An agenda will be provided before the call.

4.1.2.5 Helicopter Flight Track Review Meetings

When helicopters are used, regular meetings (or at scheduled conference calls) between SCE, Siemens-Beta, and the CPUC shall take place to review helicopter tracks to verify compliance with permit conditions. Project helicopters must be equipped with GPS equipment that will track flight times and routes at all times during operation on the Project.

4.1.3 Questions and Clarifications

Questions and the need to clarify Project requirements will periodically arise throughout the implementation process. The SCE EPM or her designee and CPUC shall submit important questions and clarifications in writing via email. Siemens-Beta will submit compliance questions and clarifications to SCE via the Request for Information process. Resolutions and any CPUC determinations shall be documented in compliance and monitoring reports, and/or in email correspondence. Questions and clarifications that take an extended period of time to resolve shall be tracked by the CPUC Monitoring Team until a resolution has been reached.

4.1.4 Requests for Documentation

The CPUC Monitoring Team may periodically request written documentation and confirmations from SCE and EPG Compliance Personnel that will be entered into the Project record. Requests for documentation and confirmations shall be submitted via email. If the information will take an extended period of time to gather, both SCE and CPUC shall agree upon a timeframe to respond, and the request shall be tracked by the CPUC Monitoring Team until a resolution has been reached.

4.1.5 Construction Schedule Delays

The SCE EPM shall notify the CPUC Monitoring Team immediately of any significant delays in the construction schedule as laid out in the MMCRP that may affect the Project and implementation of the MMCRP.

4.1.6 Dispute Resolution

The MMCRP will likely reduce or eliminate many potential disputes. However, even with the best preparation, differences in mitigation implementation approaches may occur. The following procedure will be observed for dispute resolution *between CPUC staff and the applicant*:

- Disputes and complaints should be directed to the CPUC Project Manager for resolution.
- Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the approved project.

4.2 PRE-CONSTRUCTION COMPLIANCE VERIFICATION

Prior to beginning construction, SCE is required by the terms of the mitigation measures, APMs, and various permits and approvals for other regulatory agencies, to prepare and obtain approval of various plans and to perform various surveys and studies. Copies of plans, surveys, and studies will be retained by Aspen and will be provided to the CPUC with all files at the completion of the Project. The plans, surveys, studies, and other documentation required to be completed by SCE before construction are identified in Section 6.

While these documents are being reviewed by the approving agencies, they also are reviewed by the CPUC and its representatives. Resource agencies will also be involved in the review of applicable plans and reports.

As required by approved project MMs and APMs, the CPUC third-party EMs, including project management staff and technical experts, will review and provide comments on all mitigation plans and reports. As appropriate, resource agencies also will be involved in the review of applicable plans and reports and will provide comments. Comments on these documents will be provided to SCE to ensure that they adequately accomplish the intended reduction in impacts. For required local and State agency permitting/consultations, the CPUC EM will track SCE's progress as it relates to SCE's construction plans and project mitigation, APMs, and permitting requirements. Based on SCE's construction schedule, CPUC may authorize construction to begin on a phased basis, and the CPUC EM will handle pre-construction

compliance review accordingly. CPUC may issue NTPs for construction of each phase separately, as soon as pre-construction compliance is satisfactorily accomplished for that phase.

- Preconstruction biological and cultural resource survey reports shall be submitted to CPUC for review. The Biological Survey Area (BSA) shall include the Project Component (i.e., tower, access roads, yards, and all other work areas) plus a survey buffer. CPUC EMs shall review each preconstruction survey report and validate biological survey results, including installation of the required species-specific buffer demarcations.

- Once preconstruction survey reports are submitted, the CPUC EMs shall conduct site reviews to verify that the required site boundary and resource staking has been installed in work areas. Typically, each work site shall be delineated by markers (usually wooden stakes) which define the approved work area boundaries. Any Environmentally Sensitive Area (ESA) identified during preconstruction surveys shall also be delineated for avoidance. Only after the preconstruction survey reports and staking verification reviews occur, is construction permitted to begin.

IMPORTANT: Compliance with all pre-construction mitigation measures and APMs will be verified prior to construction, and construction may not start on any work package before SCE receives a written NTP from the CPUC PM and other necessary approvals, if any. In addition, demarcation of approved disturbance areas and any resource exclusion areas must be validated in the field by the CPUC EM prior to any construction activities authorized by the NTP. In general, the CPUC will not issue an NTP until all pre-construction requirements have been fulfilled for a given phase. To save time, SCE should identify all required additional work space needs for each phase of construction prior to the start of active construction, so that the locations and their use can be included in the NTP.

4.3 NOTICE TO PROCEED PROCESS

CPUC must issue a Notice-to-Proceed (NTP) before construction can start.

For CPUC NTPs identified in Table 1.3-2 above, SCE will submit a formal request for an NTP to CPUC/Aspen. If needed, minor project change requests can be submitted by SCE along with the NTP request for incorporation into the NTP (see Section 4.6.2 for minor project change submittal requirements). On projects where there may be multiple work packages or work sites, SCE may elect to request separate NTPs. Each separate NTP request will be applicable to a defined segment or aspect of the Project.

CPUC will review each NTP request and the applicable pre-construction requirements to ensure that all of the information required to process and approve the NTP is included. CPUC may request additional information or clarification as needed. Based on information provided in the request for an NTP and its review, the CPUC PM will issue the NTP.

In general, an NTP request must include the following:

- A description of the work to be performed, including a brief comparison of the proposed work and as described in the Final EIR.

- Detailed description of the location, including maps, GIS data, photos, and/or other supporting documents. Maps showing all proposed work areas, access roads, and staging areas (Contractor Yards) will be provided.
- Estimate of total new land disturbance (area) associated with the Project.
- Anticipated number of construction workers, including total workers and peak number.
- Anticipated equipment required for construction, including use of helicopters and associated helicopter landing and fueling areas.
- Verification that all mitigation measures, permit conditions or requirements, APMs, project parameters, or other project stipulations have been met, apply, or do not apply to the work covered by the NTP request.
- In a case where some outstanding requirements cannot be met prior to issuance of the NTP, an outline of outstanding submittals and how they will be met prior to construction.
- Up-to-date resource surveys or a commitment to conduct surveys and submit results prior to construction.
- Existing cultural resource surveys or verification that no cultural resources will be significantly impacted.
- Copies of permits issued by other agencies, including requirements.
- Date when construction is anticipated to begin and duration of work.
- Copies of any necessary landowner approvals.

Attachment B presents the mitigation measures and APMs, the timing for implementation, and whether CPUC review or approval is required before construction can begin. For reference, the NTP issued by CPUC will reiterate CPUC and other agency conditions or requirements that must be satisfied, either before work begins or during construction. The NTP will state whether pre-construction requirements in mitigation measures, APMs, and permits have been met, including the completion of any applicable surveys and studies to be undertaken. If compliance with some requirements cannot be met prior to NTP issuance, the reasons will be identified by SCE and noted in the NTP. At its discretion, CPUC may issue the NTP with conditions. In such an event, the NTP will clearly define any limitations that apply and the actions to be taken and documented by SCE prior to construction.

4.4 COMPLIANCE REPORTING DURING CONSTRUCTION

The CPUC EM will perform compliance inspections throughout construction to ensure compliance with all applicable mitigation measures, APMs, plans, permits, and conditions of approval from CPUC and other agencies. The CPUC EM will document observations in the Project area through field notes and digital photography, using the Fulcrum app. The photographs will be incorporated in weekly reports and related to a discussion of specific construction or compliance activity. In addition, daily field notes documenting

compliance of specific crews, construction activities, or resource protection measures will be maintained. Field notes will be used to prepare weekly reports and to track and update the status of mitigation measures listed in Section 6. An example Weekly Compliance Report is provided in Attachment F.

Site visits by CPUC may be coordinated with SCE or be unannounced. All visitors, including regulatory agency personnel, must sign-in with the job site safety representative and receive the site safety briefing before entering work sites. CPUC site visits to active substations will be coordinated with the SCE EPM and/or substation site representative ahead of time. Supplemental information provided by SCE, including pre-construction submittals, survey reports, weekly reports, and agency correspondence also will be used to verify compliance.

Compliance documents and reports will be posted on the CPUC public website, accessible at:

https://www.cpuc.ca.gov/environment/info/aspen/elm/elm.htm

Project documents available on the CPUC public website will include approved NTPs, Minor Project Refinements, and plans; lead agency permits; and the CPUC weekly reports.

4.4.1 SCE Weekly Environmental Compliance Reports and Checklists

The EPG compliance team will prepare and distribute a weekly environmental compliance status report for distribution to key team members, including the CPUC. The CPUC EM will review the weekly report to ensure that the status of mitigation measures, APMs, and permit conditions is consistent with observations in the field. Questions regarding the status of mitigation measures will be directed to the SCE EPM and/or EC(s)**.** The weekly environmental compliance status report also will be a tool to keep all parties informed of construction progress.

Prior to the start of monitoring activities, SCE shall provide a proposed format describing content and organization of Weekly Compliance Reports for CPUC review and approval. The Weekly Compliance Report shall be a condensed, singular report that includes, but is not limited to the following components:

- Clear and specific description of weekly construction activities and work locations.
- Up to date Project completion status.
- Monitoring reports describing construction activities monitored with specific Project locations and any findings or compliance incidents.
- All non-compliance incidents reported during the subject week, including date, detailed description, and corrective actions implemented.
- Summary including locations of preconstruction or focused surveys conducted.
- All new sensitive resources identified during surveys or construction monitoring for the subject week.
- Update of bird nesting activities and buffer distances.
- Summary of special status wildlife or plant relocations.

- Any SWPPP related corrective actions or maintenance observations identified during the subject week, including date, location, description, and resolution.
- Any hazardous materials spills defined as reportable by Project MMs, permits, and/or plans.
- List of personnel trained under the WEAP Program, including names and dates.

4.4.2 CPUC Environmental Compliance Reporting

The CPUC EM will determine whether the observed construction activities are consistent with mitigation measures, APMs, and project parameters as identified in the Final MND and adopted by the CPUC, as well as any applicable permit conditions. All observations and communications will be noted in a logbook, including photos. Deviations from mitigation measures, APMs, approved Plans, or permit conditions will be considered non-compliant events and will be documented.

The CPUC EM will report environmental compliance concerns first to the EMs and give them time to resolve compliance issues in coordination with Siemens-Beta construction management personnel. If this includes discussions with resource agencies, documentation of such communication and of any subsequent actions to be undertaken to achieve compliance will be provided to the CPUC EM. If the concern involves a permit, because SCE is the permit holder with jurisdictional agencies, the SCE EPM will consult with the applicable resource agencies. If the CPUC EM has an ongoing unresolved concern about a mitigation measure that could affect a permit condition or could result in resource endangerment, the SCE EPM will call the appropriate resource agency to discuss the issue. The SCE EPM and/or EC(s), or other SCE authorized personnel, will take the lead in the coordination effort and in resolving the issue.

- Prior to or subsequent to agency notification, the SCE EPM, assisted by the Siemens-Beta EPM, EC(s), Lead Biologist, CLs, and/or LEMs, will develop a plan to resolve the issue and will follow up with the respective agencies to explain the strategy and receive agency approval. SCE will communicate the strategy and provide agency approval to the CPUC.
- The CPUC EM may request copies of email correspondences, phone logs, or other documentation between SCE and resource agencies to avoid direct involvement from CPUC EMs. However, if there is an unresolved issue regarding compliance with a mitigation measure or permit requirement under the jurisdiction of a resource agency, the CPUC EM, along with the SCE EPM and SCE PM, may elect to contact the agency to discuss resolution.
- In coordination with the CPUC PM, the third-party monitoring team may, if necessary, communicate directly with federal/State/local agencies to ensure that compliance with their permit conditions are being met.
- If a “take” of a biological resource is imminent or if there is a danger/hazard to a special status biological resource, the CPUC EM can request that work be stopped in that area immediately (as long as it can be done safely); this request should be made to the Siemens-Beta Construction Manager or the EPG EM, LEM, or CL on site. At any time, anyone can order an activity to be halted temporarily if a take or a hazard is imminent, and the appropriate personnel have determined it is safe to do so.

Bi-weekly, weekly, or as-needed conference calls will be scheduled and should include a discussion of construction and compliance activities, with CPUC EM, SCE EPM, Siemens-Beta EPM, and/or EC(s), CLs, and agency staff participating. As project demands warrant, bi-weekly calls can be rescheduled to a weekly or monthly basis. In addition, additional calls will be scheduled to discuss urgent project needs.

4.4.3 SCE Observations (Self-Reporting)

All environmental non-compliance incidents will be recorded and reported. Based on the severity of the non-compliant event, notice to CPUC will be immediate and will also be documented in the weekly reports.

When an EM identifies an environmental non-compliance incident, the EM will notify the LEM and/or CL, who will then notify the EC, who will in turn notify the Siemens-Beta and SCE EPM. A preliminary electronic notification of the suspected non-compliance event will follow via SCE's FRED as a non-compliance incident, in the EM's daily monitoring report. A final notification that more fully characterizes the event, actions, and outcomes will follow in the non-compliance incident resolution, also issued via FRED. Instances that require immediate notification to the Aspen Monitoring Manager or CPUC EM are described as Level 0s, Level 2s, Level 3s, directed work stoppages, or work redirections due to unanticipated discoveries.

SCE must track all environmental non-compliance incidents and include a summary of incidents in the weekly reports.

The resource agencies will be notified as soon as reasonably possible by the SCE EPM, SCE PM, or designee of any substantive issues regarding resources under their jurisdiction and of any actions taken to resolve the issue, consistent with permit requirements. In addition, the Aspen Monitoring Manager or CPUC EM will receive immediate notification of these communications if not already aware of the issue and action.

4.4.4 Incident Reports

As presented in Table 4.5-1, definitions for incidents are provided (Level 1-3). Incident Reports for Level 1-3 incidents shall be prepared by the observing party (either CPUC or SCE/Siemens-Beta/EPG) and submitted to the alternate party within one business day of the observation. At a minimum, Incident Reports must include the following information:

- Incident Category
- Compliance Level (if applicable)
- Incident Start Date (i.e., date event began, if known, or initial observation date)
- Summary of incident (i.e., description of the vent or observation, personnel present, and actions taken to resolve the issue)
- Resolution date (if known)

- All incidents (Levels 1-3) shall be addressed in MMCRP reports prepared by both SCE and CPUC (e.g., daily, weekly, and post-construction reports), and Incident Reports shall be attached to the SCE weekly reports for the applicable period.
- In addition to Incident Reports, incidents arising to a Level 2 or higher non-compliance may require the request of additional information describing the event in greater detail and proposed corrective actions necessary to bring the Project back into compliance.

4.5 INCIDENTS AND STOP WORK ORDERS

The goal of this MMCRP is to plan for and avoid any non-compliance incidents that could occur during implementation; nonetheless, there is a potential for compliance incidents to arise due to a variety of factors. For the purposes of this MMCRP, compliance incident levels are defined in Table 4.5-1 below. This section addresses incidents that may occur and procedures that shall be followed to document them.

4.5.1 Incident Categories

Incident categories for the Project include compliance level incidents, Occupational Safety and Health Administration (OSHA)-recordable health and safety incidents, vehicle accidents that are related to Project traffic closures, and public complaints.

4.5.1.1 Environmental Compliance Incident Levels

SCE and CPUC are responsible for evaluating environmental compliance and addressing any inadequacies throughout implementation of the MMCRP. Environmental compliance incidents will be documented by assigning one of five compliance levels and associated terms. If all Project requirements are followed adequately, then the Project will be at an acceptable compliance level and no further actions are required. A description of compliance levels that will be used for the Project and examples of compliance level incidents are listed in Table 4-1. See Section 4.6 regarding safety incidents.

When documenting environmental compliance level incidents, the reporting party shall assign an initial compliance level that appropriately represents the severity of the incident based on factors including, but not limited to, the following:

- Scope and severity of the deviation or violation of the deviation or violation
- Risk of impact to resources
- Actual impact to resources
- Number of repeated incidents
- How the incident could have been prevented
- Whether the incident can be remediated
- Amount of temporal loss during remediation

The need to change initially reported compliance levels may arise if the incident level was over- or under-reported. The CPUC PM shall make final determinations regarding the appropriate compliance level for each incident as needed, and the CPUC Monitoring Team shall maintain a record of all incidents for the Project that will be analyzed in the CPUC Post-Construction and Final Monitoring Reports. In addition to the levels of compliance described in Table 4-1, the CPUC may note events or observations that, if left unaddressed, could have the potential to affect compliance and become a compliance incident. The CPUC will typically inform SCE Compliance Personnel of such observations in the field. If such events or observations continue to occur following CPUC's field notification to the SCE Compliance Personnel, and corrective action is not taken within the stated period, a Project Memorandum (written warning) or Non-Compliance Report (NCR) may be issued by the CPUC.

A compliance incident regarding environmental resources may involve other agencies, in which case, the CPUC EM will:

- Confirm that SCE has informed the applicable resource agency when non-compliant actions have the potential to harm an environmental resource or species (outside the reporting process associated with incidental takes as permitted by the resource agency).
- If timely notification is not made by SCE, the CPUC EM will contact the applicable resource agency.

If permit or resources issues are involved, the CPUC and/or resource agencies may order work stoppages and the development of strategies for successful resource/species protection, consistent with the applicable permit or mitigation measure.

IMPORTANT: The CPUC EM does not have the authority to shut down or restart construction, nor shall the CPUC EM direct the work of a construction contractor or subcontractor. However, if an imminent threat to safety or an unpermitted risk to a sensitive resource is observed, the CPUC EM has the responsibility to advise the SCE EPM or Siemens-Beta Construction Management to immediately cease the threatening activity until the situation is rectified, as long the activity can be stopped safely. The CPUC EM shall immediately notify the Aspen Monitoring Manager who will notify the CPUC PM. If no action is taken by SCE in response to the situation, CPUC will determine next steps in coordination with the SCE EPM.

Table 4-1. Environmental Compliance Incident Levels

Incident Level, Reporting Term, and Severity	Examples	Action	Follow-Up
Incident			
Level OB (Observation) and Maintenance/ Notification Item Definition: An event or observation that does not result in a deviation from project requirements but may result in a future incident if not addressed.	Incidental mortality of non-special status species. Non-project related trash or vegetation disturbance. Non-significant fossils Isolated artifacts within a known archaeological site	SCE: The Contractor is notified of the observation and takes measures to resolve the issue in a timely manner. OB incident included in Daily email summaries and in SCE weekly reports.	The Contractor notifies the SCE Compliance Team once the issue has been resolved. CPUC: EMs to verify that corrections were made as necessary.

Table 4-1. Environmental Compliance Incident Levels

Incident Level, Reporting Term, and Severity	Examples	Action	Follow-Up
	that are not significant as independent findings. Run-off sedimentation where BMPs were implemented and maintained in accordance with the Project SWPPP(s) (or) where BMPs were not required in the case of moderate discharge to uplands. SWPPP BMP improperly installed, damaged, dislodged, or containing excess sediment or debris. Wildlife agency approved relocation of an active nest without eggs or young present.	CPUC: EMs to verify that corrections were made as necessary. Run-off sedimentation will be reported by SCE to the SWRCB in accordance with the SWPPP and to the CPUC via FRED maintenance logs, as required.	
Level 0 – Unanticipated Event Definition: An event that is outside the Project's control.	Discovery of previously unknown significant cultural (archeological resource or feature) or significant paleontological resources. Identification of a special status species not analyzed in the FEIR/FEIS or a special-status species found in a new, previously undocumented area. Encountering previously undocumented subsurface hazardous substances during excavation activities. Any directed work stoppage or construction holds (1 hour or more) where construction activities are redirected due to unanticipated discoveries, etc.	SCE: The Subcontractor LEM, EM, or Specialty Monitor onsite will stop work. SCE's EPM or assigned designee will immediately inform the CPUC Lead Monitor and any other relevant resource agencies. SCE EPM will work with the agencies to develop and implement an appropriate solution. The event will be documented in the Daily Report and included in the Weekly Compliance Report. CPUC: EM to verify that appropriate actions were taken.	The SCE Compliance Team and Contractor staff will implement the solutions as developed in cooperation with the appropriate agencies. Ultimately, the efficacy of the solutions will be documented by the EM, LEM, CPUC EM, and/or specialty monitors as construction activities resume. CPUC: EM to verify that appropriate actions were taken.

Table 4-1. Environmental Compliance Incident Levels

Incident Level, Reporting Term, and Severity	Examples	Action	Follow-Up
Level 1 – Minor Incident Definition: Activities or conditions that result in a minor deviation from a Mitigation Measure, APM, Permit condition, or approved Plan, but do not impact sensitive resources.	Activities outside approved work areas (no impacts to ESAs). Construction activities without the required monitoring as stipulated by plans, permits, or other requirements. Failure to conduct bird netting inspections on a daily basis, on work days. Fugitive dust observed exiting project boundaries. Traveling on unpaved roads over 15 mph. Track-out (less than 25 ft) not swept up at the end of the workday or immediately if more than 25 ft. Excavations, open tanks, and trenches left uncovered or without ramps overnight. Construction activities occurring without appropriate ministerial permits (i.e. encroachment) or outside of approved work hours. Working in areas not identified on project schedules or without a POD change. Construction activities prior to a preconstruction survey/sweep and/or CPUC validation. Improperly installed bird netting, or bird netting not maintained within a reasonable time period (daily). Project-related entrapment, injury, or mortality of a non-listed, non-special-status species due to required protective	SCE: The Contractor is notified of the observation and takes measures to resolve the issue in a timely manner. A Level 1 Incident will be documented in the Daily FRED Report and included in the Weekly Compliance Report. Corrective action shall begin immediately. CPUC: EMs to verify that corrections were made as necessary.	The Contractor notifies the SCE Compliance Team once the issue has been resolved. CPUC: EMs to verify that corrections were made as necessary. If corrective action is not initiated by the next construction day or within 72-hours in the case of a SWPPP maintenance issue other than track-out, the CPUC EM will elevate the incident to the CPUC Monitoring Manager who will review courses of action available and will notify the CPUC PM if necessary. If allowed to continue, this non-compliance incident could result in a serious impact over time and result in an elevation of Incident Level and/or a Project Memorandum or Non-Compliance Report (NCR), a Project Stop Work Order, and/or action under the CPUC's CEQA Citation Program.

Table 4-1. Environmental Compliance Incident Levels

Incident Level, Reporting Term, and Severity	Examples	Action	Follow-Up
	measures not being properly implemented (e.g., improperly installed/ maintained bird netting). Run-off sediment (no impacts to ESAs) due to failure to properly implement BMPs required by the SWPPP, which disrupts the normal function of the watershed, as evidenced by: (1) common observation throughout large areas of the project or (2) observation ubiquitously in a given site, or (3) when particular risk of resource damage is possible due to a specific case of poor BMP installation. Minor helicopter incursions into ESAs, which do not impact the resource. Removal of an inactive nest without agency notification, where a biologist confirmed that no eggs or young were present prior to removal.		
Level 2 – Moderate Incident Definition: Activities that deviate from MM, APM, permit conditions, or Plans resulting in minor to moderate impacts to sensitive resources. Repeated Compliance Incidents of a lesser level left unaddressed may also rise to a Level 2 incident.	Construction activities within ESA, resulting in minor to moderate impacts to a resource. Fugitive dust observed exiting project boundaries impacting a sensitive receptor. Excavations, open tanks, and trenches left uncovered or without ramps installed resulting in wildlife becoming trapped. Project-related entrapment, injury, or mortality of a non-listed, special-status species due to required protective measures not being properly implemented	SCE: The Contractor is notified of the observation and immediate corrective action. SCE's EPM or assigned designee will immediately inform the CPUC Lead Monitor A Level 2 Incident will be documented in the Daily FRED Report and included in the Weekly Compliance Report. CPUC: EMs to verify that corrections were made as necessary. A written Project Memorandum (PM) from the CPUC may be issued. Based on the	The Contractor notifies the SCE Compliance Team once the issue has been resolved. CPUC: EMs to verify that corrections were made as necessary. If corrective action is not initiated by the next construction day, the CPUC EM will elevate the incident to the CPUC Monitoring Manager who will review courses of action available and will notify the CPUC PM if necessary. If allowed to continue, this non-compliance incident could result in a serious impact over time and result in an elevation of Incident Level and/or a Project Memorandum or Non-

Table 4-1. Environmental Compliance Incident Levels

Incident Level, Reporting Term, and Severity	Examples	Action	Follow-Up
	(e.g., improperly installed/ maintained bird netting). Excavation or fill in jurisdictional waters not listed in the Project 401/ 404 permits, that can be remediated with no substantial temporal loss to ecosystem functions. Erosion due to inadequate or improperly installed BMPs discharging directly to jurisdictional waters, that can be remediated with no substantial temporal loss to ecosystem functions. Removal of an inactive nest without verifying no eggs or young were present.	severity of a given infraction or pattern of non-compliant activity, the CPUC may direct that all or some portion of the work be stopped.	Compliance Report (NCR), a Project Stop Work Order, and/or action under the CPUC's CEQA Citation Program.
Level 3 – Major Incident Definition: Activities that significantly deviate from or violate MM, APM, Permit condition, or Plans, resulting in major impacts to sensitive resources. Repeated Compliance Incidents of a lesser level left unaddressed may also rise to a Level 3 incident.	Unauthorized major impacts or damage to sensitive resources. Take of an active nest, without regulatory agency authorization/approval. Major impacts to known significant cultural resources, human remains, or significant paleontological resources. Project-related entrapment, injury or mortality of a listed species due to required protective measures not being properly implemented.	SCE: The Contractor is notified of the observation and takes measures to take immediate corrective action. SCE's EPM or assigned designee will immediately inform the CPUC Lead Monitor. A Level 3 Incident will be documented in the Daily FRED Report and included in the Weekly Compliance Report. CPUC: EMs to verify that corrections were made as necessary. A written Non-Compliance Report (NCR) from the CPUC may be issued. Based on the severity of a given infraction or pattern of non-compliant activity, the CPUC may direct that all or some portion of the work be stopped.	The Contractor notifies the SCE Compliance Team once the issue has been resolved. CPUC: EMs to verify that corrections were made as necessary. If a shutdown of construction or an activity is ordered by the CPUC, the construction or activity shall not resume until authorized by the CPUC PM in writing. If corrective action is not taken immediately or the corrective action is insufficient, the CPUC EM shall notify the Monitoring Manager who will notify the CPUC EM to review courses of action available, potentially including a project Stop Work Order and/or action under the CPUC's CEQA Citation Program.

4.5.1.2 Health and Safety Incidents

SCE's and CPUC's most important responsibility is maintaining safe working conditions and protecting the public, including workers from exposure to hazards related to the Project. Accordingly, health and safety incident reporting by SCE will be conducted consistent with the "self-identified potential violation" requirements of the CPUC's Safety Citation Program[1] and the Accident Reporting Requirements.[2]

Unanticipated events may occur that impact project personnel and/or public safety. While these events may not result in a deviation from or violation of a mitigation measure or permit condition, it is important that these events be reported to the appropriate agencies and the CPUC, so they are in a position to respond to questions or concerns from the public or managers. Accordingly, the SCE EPM and/or SCE PM will immediately report these events as summarized in Table 4.5-2 and to other regulatory agencies, as appropriate. The SCE EPM and/or SCE PM will submit to the appropriate agency, if any, and to CPUC a final electronic notification characterizing the event, actions taken, and outcomes.

Any event that affects, or could potentially affect, Project personnel or public health and safety is immediately reportable and would include the examples provided in Table 4.5-2.

Table 4.5-2. Reportable Events – Safety and Other

Examples	SCE Reporting Protocol and Timeframe	Contact Information
▪ An occurrence that posed or could have posed a risk to public health and safety ▪ Any event involving construction personnel or property, requiring emergency response (EMTs, police. or fire) ▪ A 'near miss' event involving construction equipment and, in the SCE EPM's reasonable judgment, had the potential to result in serious bodily harm or death. ▪ Any instance of materials falling from helicopters including inadvertent line drops ▪ Any fire caused by construction activities ▪ Any vehicle accident within project traffic control areas ▪ Any toppled piece of heavy equipment	Immediately by phone call to CPUC Monitoring Manager. Electronic follow up to CPUC PM, CPUC Public Liaison, and Aspen Monitoring Manager.	
CPUC Safety Citation Program and Accidental Reporting Requirements including, but not limited to: • A potential violation that poses a significant safety threat to the public and/or utility staff, contractors, or subcontractors.	Immediately by phone call to CPUC Monitoring Manager who will then notify CPUC PM. Electronic follow up to CPUC PM, CPUC Public Liaison, and Aspen Monitoring Manager.	

[1] See D.16-09-055, Appendix A, at p. 8, Section G.3.b, criteria 1 and 3, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M167/K781/167781364.PDF.

[2] See http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/55906-05.htm#TopOfpage.

Table 4.5-2. Reportable Events – Safety and Other

Examples	SCE Reporting Protocol and Timeframe	Contact Information
• Any instance of fraud, sabotage, falsification of records and/or any other instances of deception by SCE's personnel, contractors, or subcontractors, that caused or could have caused a potential violation, regardless of the outcome. • Incidents that (a) result in fatality or personal injury rising to the level of in-patient hospitalization and attributable or allegedly attributable to utility owned facilities; or (b) are the subject of significant public attention or media coverage and are attributable or allegedly attributable to utility facilities; (c) involve damage to property of the utility or others estimated to exceed $20,000 that are attributable or allegedly attributable to utility owned facilities.		

4.5.1.3 Public Complaints

The public may take issue with one or more aspects of the Project. SCE will maintain a Project Information Line during construction and will assign a Public Liaison to the Project that will be responsible for tracking and handling public complaints. Public complaints may be submitted formally to SCE or CPUC through email or the Project Information Line. Members of the public that have questions, concerns, or complaints on the Project will be directed to the SCE Public Affairs Manager and Project Information Line, and contact information will be supplied as requested. Complainants who approach field personnel at the Project site will be referred to the Project Information Line to formally submit their complaint. SCE shall work with the CPUC on best practices for handling public complaints that are received. The Public Liaison (SCE PM) will respond to public complaints within 24 hours upon receipt. CPUC shall notify SCE of public complaints received by the CPUC to facilitate SCE's timely response to these complaints and SCE will add these to the electronic complaint log. SCE shall make every reasonable effort to work with members of the public and correct actions leading to complaints, as feasible.

SCE shall also provide monthly summaries of the public complaints and how each complaint was addressed. The CPUC PM will coordinate with the SCE EPM and SCE PM on the adequacy of corrective actions or additional measures to be implemented, as needed.

Public complaints will not reflect negatively on SCE's environmental compliance record unless a specific Project requirement, permit, or plan requirement was violated.

4.5.2 Identifying Incidents

The EM, LEM, and CPUC EM are primarily responsible for identifying and initially reporting incidents during inspection of the Project site; however, compliance incidents may also be observed by other personnel in the field or during review of project reports. The CPUC Monitoring Team may also identify compliance incidents through review of SCE's compliance reporting.

SCE shall make every attempt to self-report any compliance incidents that occur. Self-reporting compliance incidents and preventing them from repeating demonstrate a commitment to compliance and will foster a relationship of trust between SCE and CPUC.

4.5.3 Notification

SCE and CPUC shall notify one another of non-compliance and safety incidents consistent with reporting timelines outlined in Sections 4.4.3 (Compliance Incidents) and 4.5.1.2 (Safety Incidents). Response procedures do not need to be finalized when initial notification is provided.

Jurisdictional agencies may also require notification if incidents are documented that relate to their jurisdiction over the Project. The SCE EPM, SCE PM, or designee shall make all such notifications to each jurisdictional agency and will provide copies to the CPUC of official notifications and submittals provided to other agencies or advise CPUC of notifications that were made to other agencies, as necessary. If CPUC believes additional notifications are required, the CPUC may direct the SCE EPM and/or SCE PM to provide those notifications or make those notifications in coordination with SCE Compliance Personnel.

4.5.4 Stop Work Orders

When it is safe to do so, any SCE Compliance Personnel or the CPUC Monitoring Team has the authority to issue Stop Work Orders to temporarily halt or redirect project activities if a sensitive resource is put in undue risk beyond previously authorized or permitted levels. In addition, the CPUC Monitoring Team may also stop or redirect work if unauthorized project activities are observed, such as use of work area that has not been approved or is significant compliance risks remain unresolved. The CPUC PM will make any final determinations regarding Stop Work Orders for the project and will notify the SCE EPM and SCE PM accordingly.

4.5.5 CEQA Citation Program

CPUC may exercise the CEQA Citation Program adopted by the Commission in Resolution E-4550. The program delegates authority to Commission staff to draft and issue citations and levy fines for non-compliance with a PTC or CPCN. The Resolution allows Commission staff to efficiently issue fines when needed to quickly address non-compliance incidents that are occurring in the field.

4.6 PROJECT CHANGES

At various times throughout project construction (following approval of final design plans), changes to the Project requirements may be needed to facilitate construction or provide more effective protection of resources. When changes are necessary for specific field situations, SCE and CPUC, in consultation with the applicable resource agencies, will work together to find solutions that avoid conflicts with adopted MMs.

4.6.1 Transition from Preliminary Design to Final Engineering

The Final MND for the Project is based on preliminary design. Because the Project has now been approved by CPUC and other jurisdictional agencies, SCE has been in the process of completing final project design and engineering. Some project component locations may have been refined as engineering progresses in order

to comply with mitigation measures, avoid or minimize environmental impacts, and reduce or eliminate feasibility constraints.

Mitigation measure requirements were finalized at the time of project approval, and pre-construction compliance submittals will be reviewed based on the requirements in these measures. The process outlined below allows for changes in the case of unforeseen circumstances, as long as the intent of the mitigation measure is satisfied (i.e., the impact is mitigated as intended, consistent with residual impact determinations in the Final MND).

4.6.2 Minor Project Refinements

The CPUC PM, along with the CPUC Monitoring Team, will ensure that any process, to consider minor project refinements that may be necessary due to final engineering or variances or deviations from the procedures identified under the monitoring program, is consistent with CEQA requirements.

- No project refinements will be approved by the CPUC PM if they
  - would be located outside of the geographic boundary of the project study area,
  - create new or substantially more severe significant impacts, or
  - conflict with any mitigation measure or applicable law or policy.
- Minor project refinements are strictly limited to changes that
  - will not trigger other permit requirements unless the appropriate agency has approved the change, and
  - clearly and strictly comply with the intent of the mitigation measure or applicable law or policy.

This determination is ministerial and shall be made by the CPUC PM. SCE must seek any other project changes by a Petition for Modification (PFM). Should a project change require a PFM, supplemental environmental review under CEQA would be required.

Requests for staff approval of a minor project refinement must be made in writing and should include the following:

- A detailed description of the proposed minor refinements, including an explanation of why the refinements are necessary, and a reference to the approved documents.
- Maps, GIS data, and other supporting documentation illustrating the difference between the existing conditions in the area, the approved project, and the proposed minor refinements.
- The potential impacts of the proposed minor refinements, including a discussion of each environmental issue area that could be affected by the minor refinements with accompanying verification that there will be no substantial increase in the severity of any previously identified significant impacts to resources affected by the project and no new significant impacts, after application of previously adopted mitigation.
- Whether the minor refinements conflict with any applicant proposed measures or mitigation measures.
- Whether the minor refinements conflict with any applicable guideline, ordinance, code, rule, regulation, order, decision, statute or policy.

- Water/wetland/storm water related resource information if the minor refinements would result in any additional land disturbance, road distance or width, changes to jurisdictional delineation of waters, or changes to water protection best management practices.
- Date of expected construction at the minor refinements site area.

The CPUC PM may request additional information or a site visit in order to process the request. Possible examples of refinements that may be approved by staff after final engineering include, but are not limited to:

- Adjusting the alignment of a project within the study area that was used in the original environmental analysis to avoid unanticipated impacts related to cultural artifacts, buried utility infrastructure, hazardous and toxic substances, and other land use impacts including effects on homeowners, so long as the adjustment does not create a new significant impact or a substantial increase in the severity of a previously identified significant impact.
- Adjusting the alignment of a project within the study area that was used in the original environmental analysis to avoid or adapt to conditions on the ground that vary from the conditions that existed at the time of the original environmental analysis, so long as the adjustment does not create a new significant impact or a substantial increase in the severity of a previously identified significant impact.

IMPORTANT: To initiate a project minor refinement request, SCE will fill out a Project Minor Refinement Request Form (see Attachment G), prepare the appropriate supporting documentation, and obtain the required signatures. SCE will complete and submit the Minor Project Refinement Request Form and supporting documentation by email (electronic copy) to Aspen.

As soon as reasonably possible, the CPUC Monitoring Team will review and field validate the request to ensure that all of the information required to process the minor project refinement is included, and then forward the request to the CPUC Project Manager for review and approval. The CPUC Project Manager may request additional information to process the request. In some cases, project minor refinements may require approval by jurisdictional agencies as well.

All approved minor refinement requests will be tracked in tabular format in the CPUC monitoring reports.

4.6.3 Temporary Extra Work Space

For the purposes of this MMCRP, Temporary Extra Work Space (TEWS) is defined as a preexisting work space (i.e., no site preparation is required) that would be used by SCE during construction for a period of up to 60 days, and that was not specifically identified and evaluated during the CEQA process. Anything required to be utilized for a period longer than 60 days will require a minor project refinement approval (see Section 4.6.2). The CPUC EMs have authority to approve TEWS.

In the event that SCE determines a need for a construction TEWS, it must submit such a request to the CPUC EM, consistent with the communication protocol. SCE will not be permitted to use a TEWS prior to receiving written authorization from the CPUC EM. If appropriate, SCE will also send a copy of the TEWS to affected jurisdictional agencies.

SCE must demonstrate that:

(1) The TEWS is located in a disturbed (void of native vegetation) area with no sensitive resources or land uses onsite or adjacent to the proposed work space such that they may be significantly impacted by the work,

(2) No ground-disturbing activities or site improvements will occur,

(3) SCE has permission of the applicable landowner (e.g., municipality or private) to use the work space, and

(4) Use of the TEWS will not result in any significant environmental impacts.

Following is a list of the specific information that SCE would be required to submit with its TEWS request:

- Date of request
- Location of the TEWS (detailed description, including maps if required)
- Property owner of TEWS
- An explanation of the need for the TEWS
- An analysis that demonstrates no new significant impacts will result from use of the TEWS including: compaction contributing to runoff rates or other stormwater/watershed effects; observed existing impacts to the site, such as old oil spills or other potentially hazardous or polluting substances; abandoned vehicles, equipment, or other materials; or other sensitive resources
- Biological surveys (prior to construction)
- Cultural resource survey if appropriate (if site is not paved)
- Duration and dates of expected use of the TEWS
- Details of the expected condition of the site after use

A sample TEWS form is included as Attachment H.

4.7 COMPLIANCE TRACKING

Compliance with mitigation requirements will be tracked by the CPUC. Important Project procedures, such as formal requests and approvals, as well as incidents, will also be tracked throughout the Project for record keeping and post-project analysis.

CPUC will track other important information for the Project record as part of the CPUC prepared Monitoring Reports, including NTP and MPR requests and approvals, resolutions to important compliance risks that require follow-up, and documented incidents.

5 RECORDS MANAGEMENT

Detailed monitoring reports would be prepared and submitted by the CPUC environmental monitoring team. These would include detailed information on construction activities, including helicopter GPS tracking; compliance activities observed by the CPUC EMs and others documented by SCE, including incidents; identified special status species, including nesting birds; SWPPP maintenance notifications and their resolution; and photographs of relevant activities and conditions.

SCE has required Siemens-Beta to have its own monitors for particular resources, depending on project needs and activities. These monitors provide daily reports/surveys that are entered into SCE's FRED system. It is assumed that FRED or a similar database would be employed on this project. CPUC EMs have access to the reports and the database. Construction is not allowed to start in a particular area until the required pre-construction surveys and flagging/staking are completed per the MMCRP, and the CPUC EM has validated compliance.

SCE, through Siemens-Beta, is to provide the CPUC with written weekly and annual reports of the project, which shall include progress of construction, resulting impacts, mitigation implemented, and all other noteworthy elements of the project.

Weekly and annual SCE status reports will be filed and used by the CPUC EM to prepare a final environmental compliance report following the completion of construction. The final report will provide an overview of construction and a discussion of environmental compliance and lessons learned.

A publicly accessible website for the Project is maintained by the CPUC to make available current versions of monitoring reports, approved NTPs and MPRs, plans, permits, and other documents prepared for mitigation compliance.

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available by the CPUC for public inspection on request, consistent with critical infrastructure requirements, requirements to protect cultural resources, and General Order (G.O.) 66-C. In order to facilitate the public's awareness, the CPUC will post this MMCRP document, monitoring reports, and other pertinent Project documents on the CPUC public website. Other monitoring compliance reports, copies of permits, and documents will be available in their final form on the Project website once they are approved by the CPUC or other permitting agencies. Access to Critical Energy Infrastructure Information (CEII) documentation, the location of protected cultural resources, and other information meeting the standards for non-disclosure set forth in G.O. 66-C will not be available on the public Web site.

The CPUC public website is accessible at:

http://www.cpuc.ca.gov/environment/info/aspen/elm/elm.htm

6 MITIGATION MONITORING PROGRAM TABLES

6.1 TRACKING TABLES

Section 6.3 below provides and overview of the mitigation measures and APMs included in the Final MND. The CPUC will use expanded versions of the mitigation measure/APM tables in Attachments B, C, and D to accurately track the status of mitigation measures during the pre-construction planning, construction monitoring, and post-construction monitoring/operation and maintenance phases of the Project. Similarly, separate tables listing measures that require CPUC approval may be generated. During construction, a copy of the mitigation measure/APM tables with measures to be implemented during construction (Attachment C) will be maintained by the EC, and all supervisory staff working on the Project should be familiar with its contents. In addition, copies of all applicable plans and permits compiled prior to construction as a result of the pre-construction measures (e.g., Stormwater Pollution Prevention Plan, Hazardous Substance Treatment Plan, USFWS Biological Opinion, etc.) shall also be kept on-site on flash drives, computers, tablets, or binders in SCE construction trailers and all supervisory staff working on the Project should be familiar with their contents.

6.2 EFFECTIVENESS REVIEW

The CPUC may conduct a comprehensive review of conditions which are not effectively mitigating impacts at any time it deems appropriate, including as a result of the Dispute Resolution procedure outlined in Section 4.1.6. If in review the Commission determines that any conditions are not adequately mitigating significant environmental impacts caused by the project, then the Commission in coordination with the jurisdictional agency(ies) may impose additional reasonable conditions to effectively mitigate these impacts. These reviews will be conducted in a manner consistent with the Commission's rules and practices.

6.3 MITIGATION MEASURES AND APPLICANT PROPOSED MEASURES

SCE identified measures to address potentially significant impacts — the Applicant-Proposed Measures (APMs) — and these APMs are considered to be part of the description of the Proposed Project. Based on the MND analysis, additional mitigation measures were identified for adoption to reduce potential significant impacts of the Proposed Project. The additional mitigation measures supplement and supersede the APMs where the mitigation measures are more stringent. Any APMs that have been entirely superseded by mitigation measures have not been included in the following tables.

Attachments B, C, and D include the mitigation measures and APMs from the Final MND that constitute the environmental requirements that will be the primary guideline for determining compliance with the MMCRP. The tables (separated by environmental issue area) indicate the resource of concern, the measure to be implemented, the monitoring requirement, and when the measure is to be implemented.

The tables have also been sorted and divided into pre-construction measures (Attachment B), measures to be implemented during construction (Attachment C), and post-construction mitigation measures (Attachment D). Note: In Attachments B, C, and D, mitigation measures are denoted with Mitigation Measure preceding the measure title and Applicant Proposed Measures are denoted with APM. To facilitate tracking of the measures' requirements, some measures have been subdivided by task and/or

timing. In these instances, text in the table indicates that the row does not contain the entire measure, only a specific task.

During construction a copy of the Mitigation Measure/Applicant Proposed Measure tables with measures to be implemented during construction (Attachment C) should be kept with each crew foreman and/or monitor working on the right-of-way (ROW), stored in a laptop, tablet, or binder, or cellular device and all supervisory staff working on the project should be familiar with its contents. In addition, copies of all applicable plans and permits compiled prior to construction as a result of the pre-construction measures (i.e., SWPPP, Hazardous Substance Treatment Plan, USFWS BO, etc.) shall also be kept with each crew foreman and/or monitor working on the ROW, stored in a laptop, tablet, or binder, or cellular device and all supervisory staff working on the project should be familiar with their contents.

Table 6.3-1 summarizes the timing requirements of each project mitigation measure.

Table 6.3-1. Implementation Phases Applicable to Each MM and APM

Measure Title	Pre-Construction	Construction	Post-Construction/ Restoration
Final MND			
Aesthetics			
MM AES-1: Minimize visual contrast in project design.	✓	✓	
MM AES-2: Screen construction activities from view.	✓	✓	
MM AES-3: Minimize vegetation removal and ground disturbance.		✓	
MM AES-4: Minimize night lighting at new project facilities.		✓	
Air Quality			
MM AQ-1: Prepare and implement a Dust Control Plan. (Supplements AIR-1).	✓	✓	
APM AIR-1: Dust Control Plan		✓	✓
APM AIR-2: Tier 4 Engines.		✓	✓
APM AIR-3: Idling.		✓	✓
APM AIR-4: Equipment Maintenance.		✓	✓
APM AIR-5: Ridesharing.		✓	✓
Biological Resources			
MM BR-1: Conduct biological monitoring and reporting.	✓	✓	✓
MM BR-2: Prepare and implement a Worker Environmental Awareness Program (WEAP).	✓	✓	
MM BR-3: Minimize native vegetation and habitat loss.	✓	✓	✓
MM BR-4: Restore or revegetate temporary disturbance areas.		✓	✓
MM BR-5: Prepare and Implement an Integrated Weed Management Plan. [Supersedes APM BIO-03]	✓	✓	✓
MM BR-6: Minimize and mitigate impacts to special-status plants. [Supersedes APM BIO-02]	✓	✓	✓

Table 6.3-1. Implementation Phases Applicable to Each MM and APM

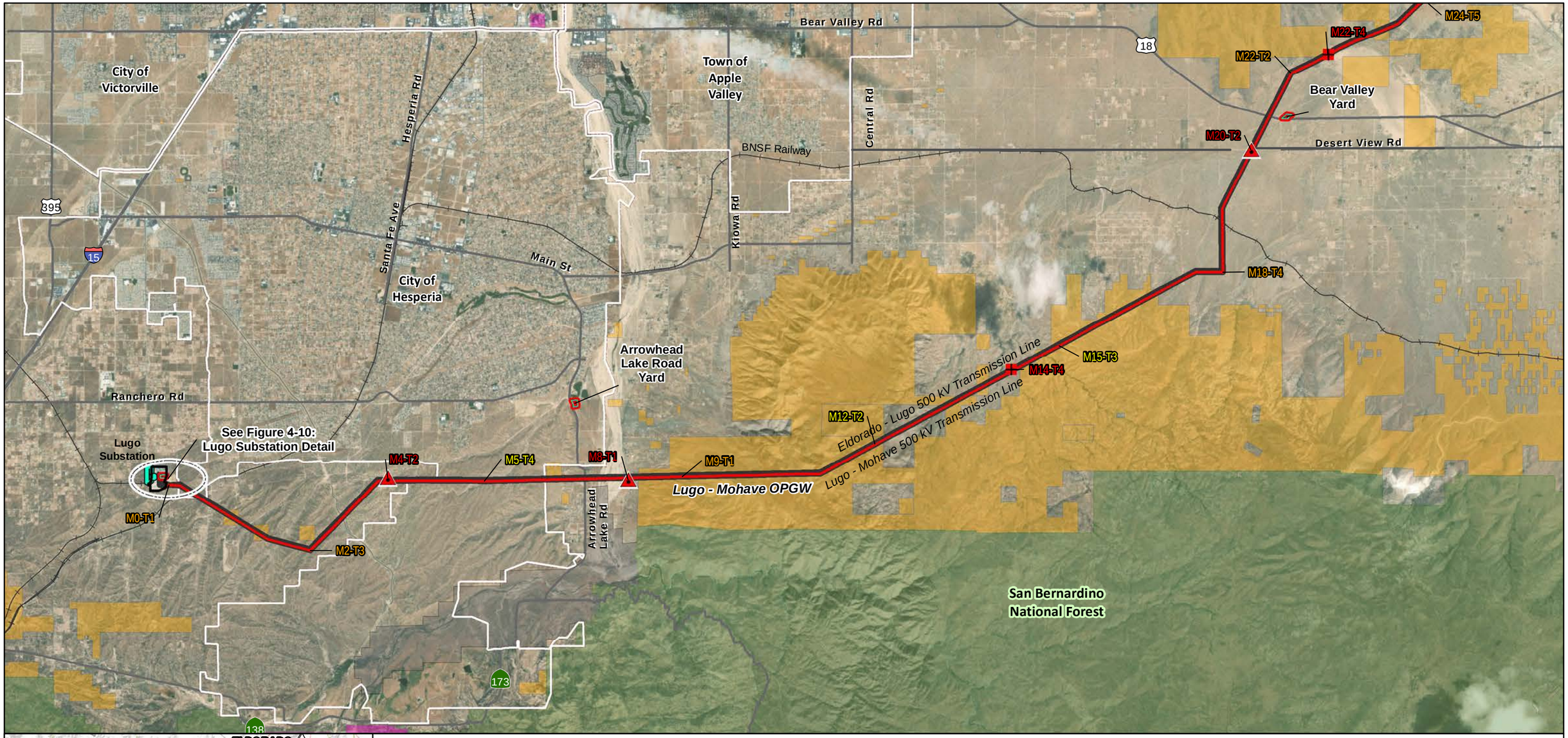
Measure Title	Pre-Construction	Construction	Post-Construction/ Restoration
MM BR-7: Ensure wildlife impact avoidance and minimization.		✓	✓
MM BR-8: Compensate for desert tortoise habitat loss. [Supersedes APM BIO-05]	✓	✓	✓
BR-9: Conduct surveys and avoidance for special-status reptiles. [Supersedes APM BIO-04]	✓	✓	✓
MM BR-10: Prepare and implement a Nesting Bird Management Plan. [Supersedes APM BIO-06]	✓	✓	✓
MM BR-11: Conduct surveys and avoidance for burrowing owl. [Supersedes APM BIO-07]	✓	✓	✓
MM BR-12: Conduct surveys and avoidance for bats.	✓	✓	✓
MM BR-13: Conduct surveys and avoidance for American badger, ringtail, and desert kit fox.	✓	✓	✓
Cultural Resources			
APM-CUL-02: Cultural Resources Survey.	✓	✓	
MM CR-1: Retain a Cultural Resources Specialist.	✓		
MM CR-2: Cultural resources environmental awareness training.	✓	✓	✓
MM CR-3: Prepare and implement a Cultural Resources Management Plan.	✓	✓	✓
MM CR-4: Inadvertent discovery of cultural or tribal cultural resources.	✓	✓	✓
MM CR-5: Avoidance of cultural and tribal cultural resources.	✓	✓	✓
MM CR-6: Prepare monitoring reports.			✓
MM CR-7: Inadvertent discovery of human remains on state owned land or private property.		✓	✓
MM CR-8: Inadvertent discovery of human remains on federal land.		✓	✓
Geology & Soils			
MM PAL-1: Retain qualified paleontological staff.	✓		
MM PAL-2: Provide paleontological environmental awareness training.	✓	✓	✓
MM PAL-3: Prepare and implement a Paleontological Resource Mitigation and Monitoring Plan (PRMMP). [Supersedes APM CUL-04]	✓	✓	✓
MM PAL-4: Conduct monitoring for paleontological resources.		✓	✓
Hazards & Hazardous Materials			
MM HH-1: Prepare and implement a Hazardous Materials and Waste Management Plan.	✓	✓	✓
MM HH-2: Manage discovery of unanticipated contamination.		✓	✓
Hydrology and Water Quality			
MM HWQ-1: Implement an Erosion Control Plan.	✓	✓	✓

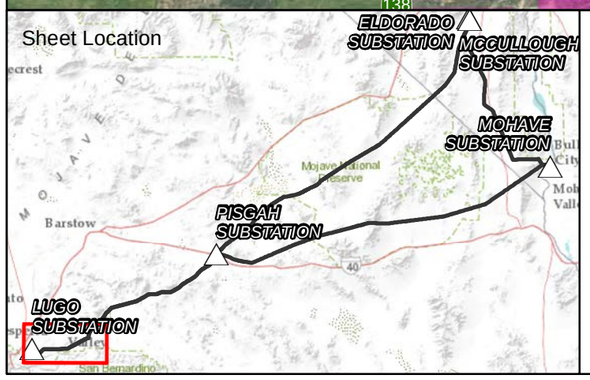
Table 6.3-1. Implementation Phases Applicable to Each MM and APM

Measure Title	Pre-Construction	Construction	Post-Construction/ Restoration
MM HWQ-2: Prepare and implement an HDD Fluid Management Plan.		✓	
Noise			
MM N-1: Limit construction noise levels.		✓	✓
MM N-2: Provide advance notification of construction noise.	✓	✓	✓
Transportation			
MM T-1: Prepare and implement a Construction Traffic Control Plan.	✓	✓	✓
MM T-2: Repair roadways and transportation facilities damaged by construction activities.		✓	✓
MM T-3: Prepare and implement a final helicopter use plan.	✓	✓	
Tribal Cultural Resources			
APM-TCR-1: Tribal Monitoring.		✓	✓
APM-TCR-2: Tribal Engagement Plan.	✓	✓	✓
See MMs CR-1 through CR-8 above, under Cultural Resources			
Utilities and Service Systems			
MM UT-1: Provide cathodic protection.	✓	✓	✓
MM UT-2: Implement mitigation measures during pipeline protection work.	✓	✓	✓
MM UT-3: Provide safety features for induced currents on adjacent metallic objects.	✓	✓	✓
Wildland Fire			
MM WF-1: Prepare and implement a Fire Management Plan.	✓	✓	✓

ATTACHMENT A

Project Maps





Existing Transmission Line
Existing Yard
Temporary Yard
New OPGW

Discrepancy Work
Raise Tower
Other

Jurisdiction
Bureau of Land Management
State Lands
Dept. of Defense
US Forest Service

Source: SCE, 2018

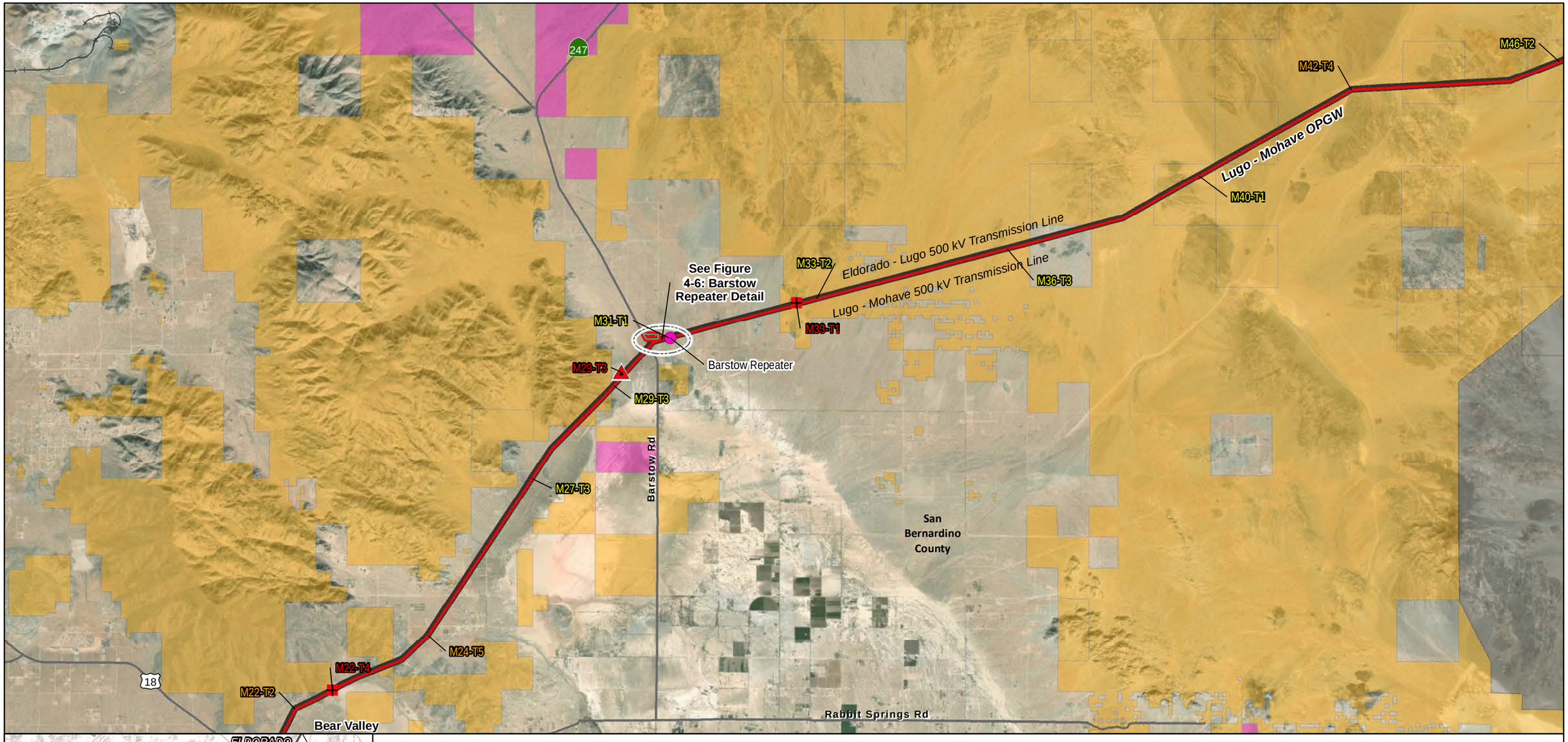
Figure A-1

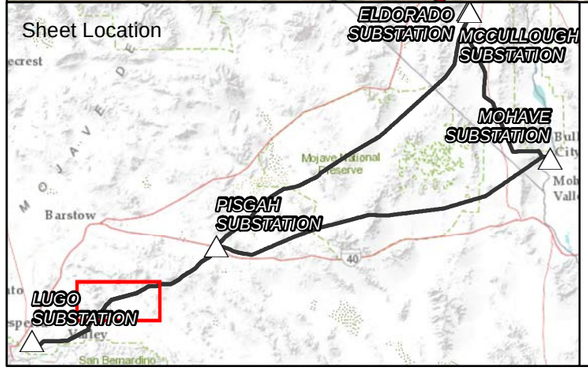
Project Overview

Sheet 1

N

0 1 2
Scale in Miles





Existing Transmission Line
Temporary Yard
Repeater Site
New OPGW

Discrepancy Work
Raise Tower
Other

Jurisdiction
Bureau of Land Management
State Lands
Dept. of Defense

Source: SCE, 2018

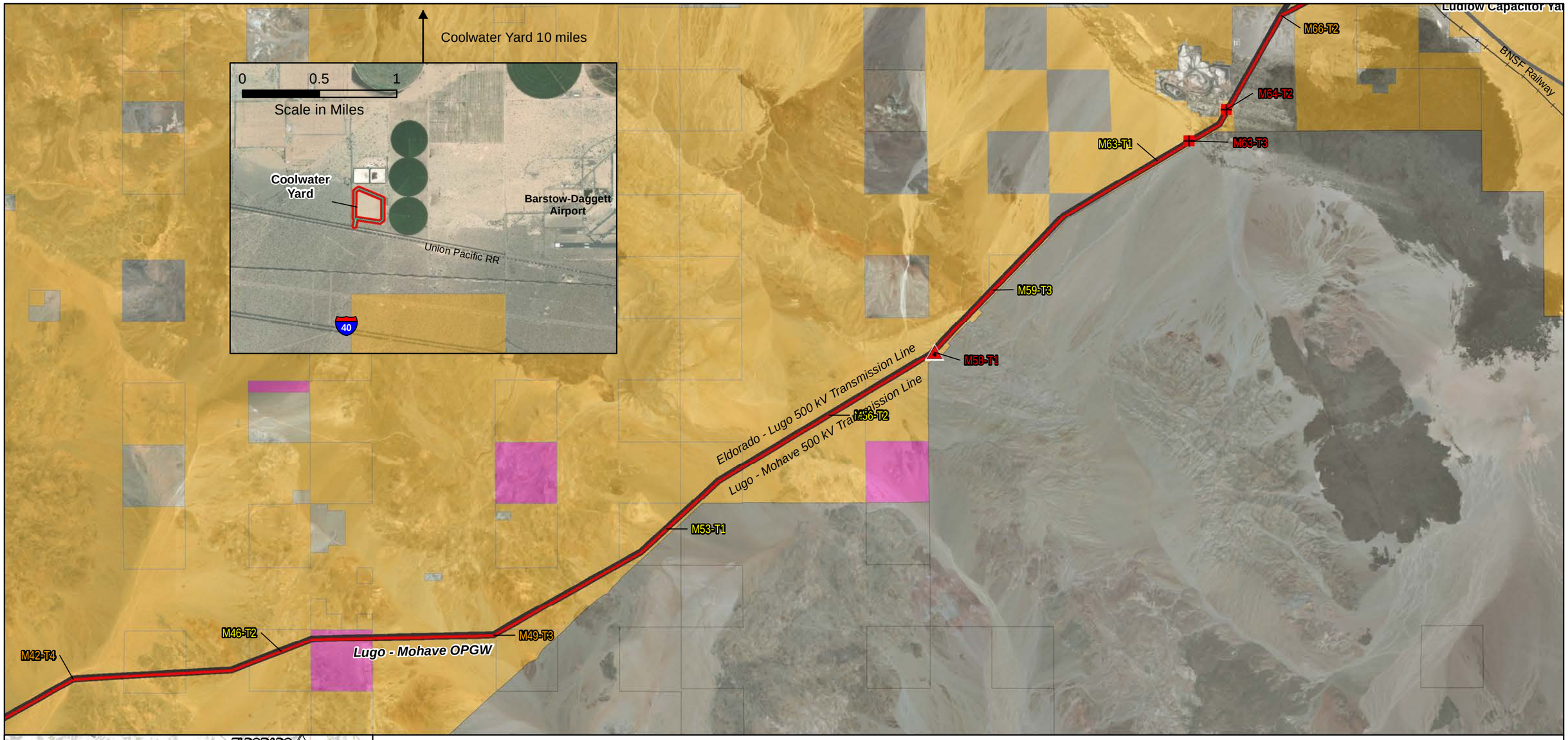
Figure A-2

Project Overview

Sheet 2

N

0 1 2
Scale in Miles



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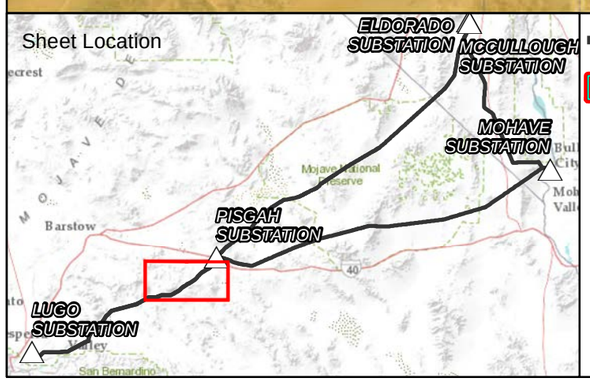


Existing Transmission Line

Temporary Yard

OPGW Work

- OPGW Modification and Splicing Tower
- OPGW Splicing Only Tower
- New OPGW

Discrepancy Work

- Raise Tower
- Other

M58-T1: Modify Conductor

Jurisdiction

- Bureau of Land Management
- State Lands
- Dept. of Defense

Source: SCE, 2018

Figure A-3

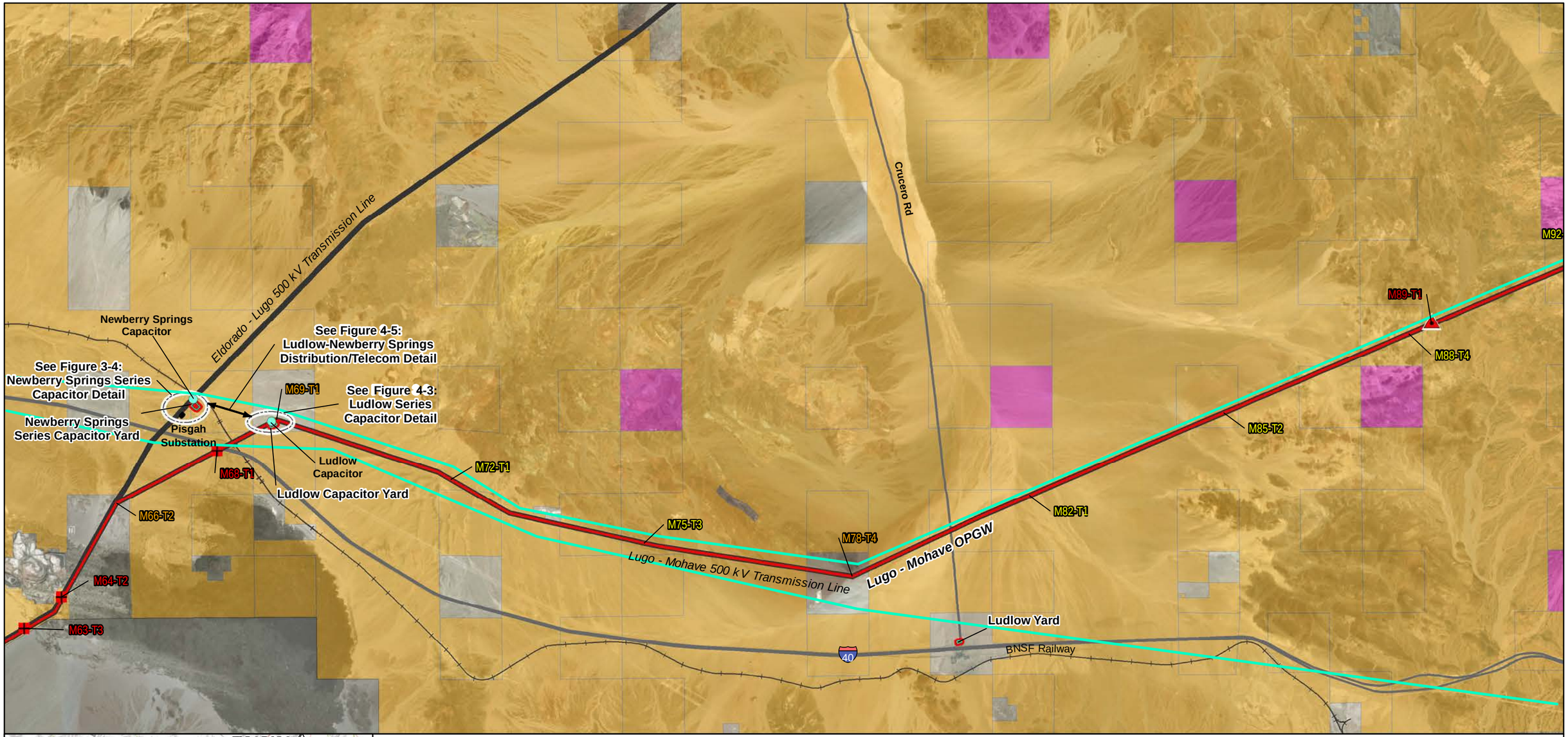
Project Overview

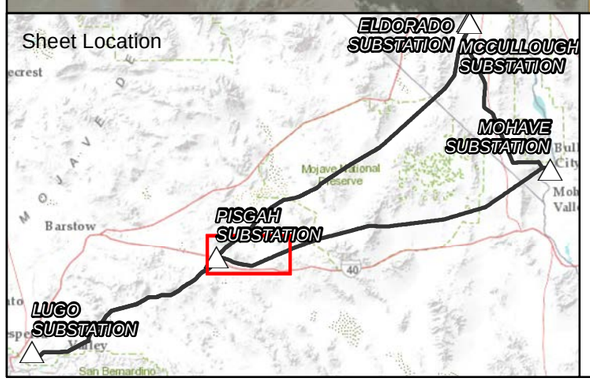
Sheet 3

N

0 1 2

Scale in Miles





Existing Transmission Line
Capacitor
Temporary Yard
New OPGW

Discrepancy Work

Raise Tower
Other

Jurisdiction

Bureau of Land Management
State Lands
Dept. of Defense

Approximate Location of Natural Gas Pipeline

Sources: SCE, 2018 and SoCalGas, 2019

Figure A-4

Project Overview

Sheet 4

N

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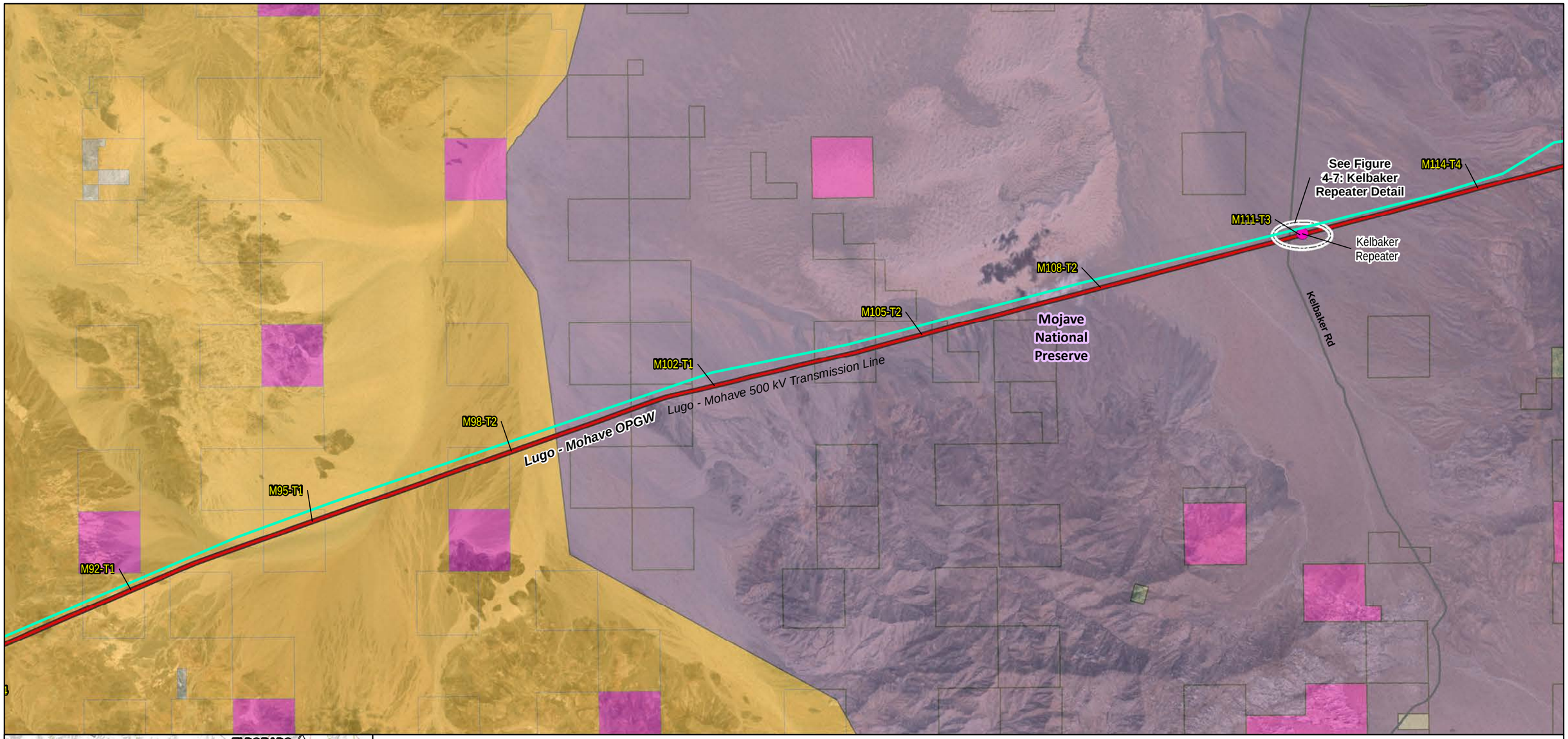
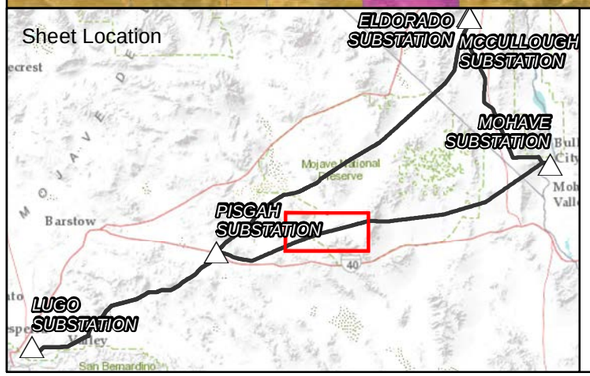
Scale in Miles





Existing Transmission Line
Repeater Site
New OPGW

Jurisdiction

Bureau of Land Management
State Lands
National Park Service

Approximate Location of Natural Gas Pipeline

Sources: SCE, 2018 and SoCalGas, 2019

Figure A-5

Project Overview

Sheet 5

N

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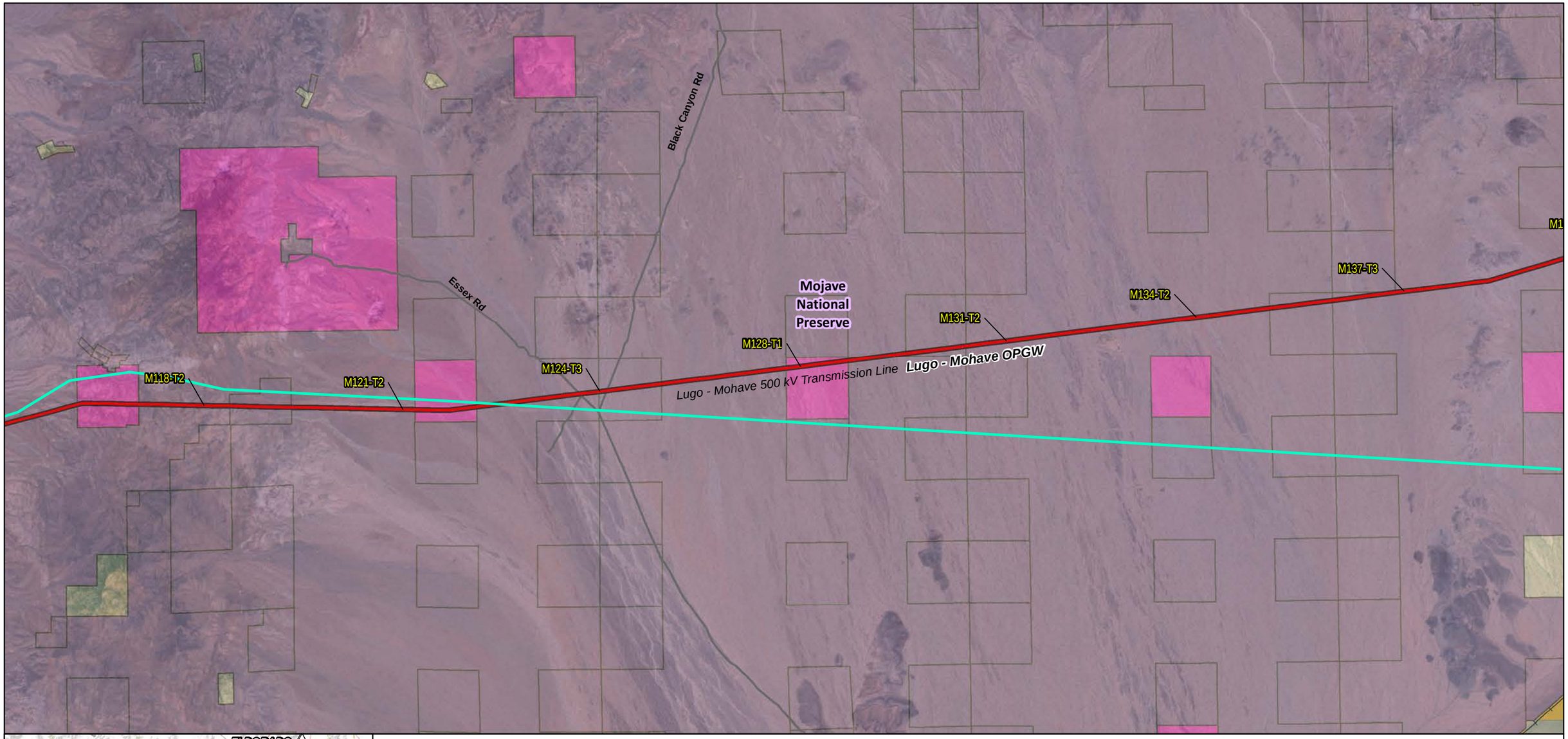
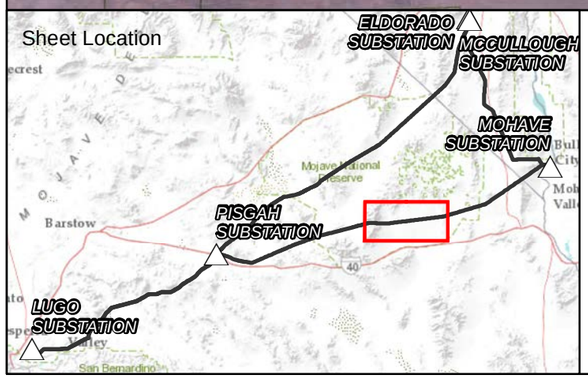
Scale in Miles





Existing Transmission Line

New OPGW

Jurisdiction

Bureau of Land Management

State Lands

National Park Service

Approximate Location of Natural Gas Pipeline

Sources: SCE, 2018 and SoCalGas, 2019

Figure A-6

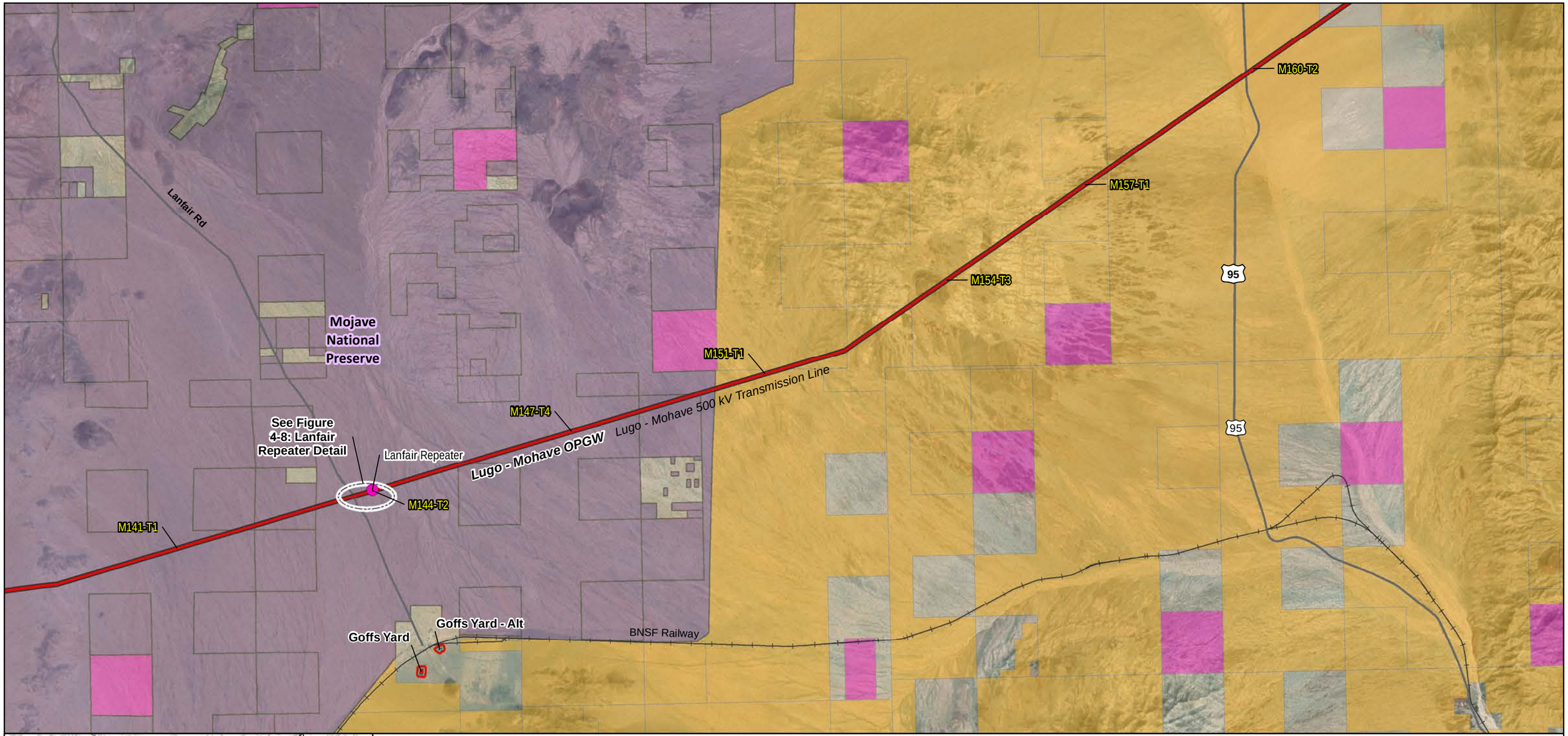
Project Overview

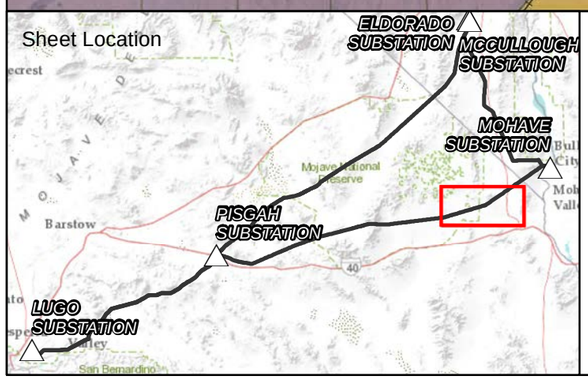
Sheet 6

N

0 1 2

Scale in Miles





Existing Transmission Line
Temporary Yard
Repeater Site
New OPGW

Jurisdiction

Bureau of Land Management
State Lands
National Park Service

Source: SCE, 2018

Figure A-7

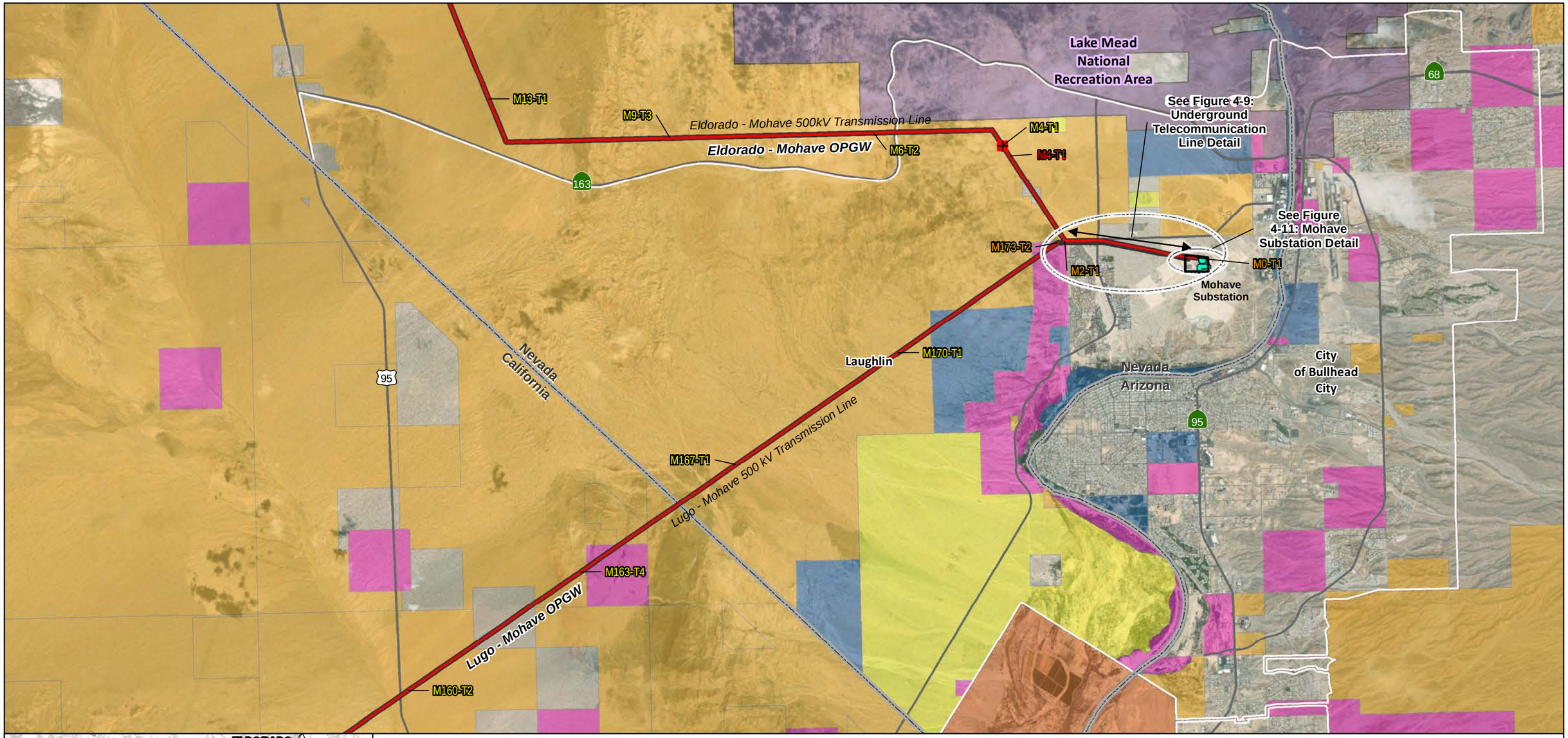
Project Overview

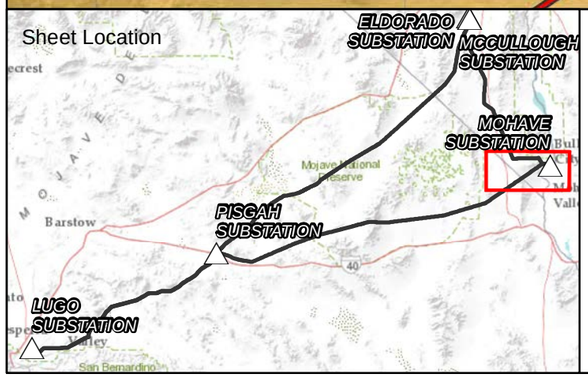
Sheet 7

N

0 1 2

Scale in Miles





Existing Transmission Line
Existing Yard
New OPGW

Discrepancy Work

Raise Tower

Jurisdiction

Bureau of Indian Affairs
Bureau of Land Management
Bureau of Reclamation
State Lands
County
National Park Service

Source: SCE, 2018

Figure A-8

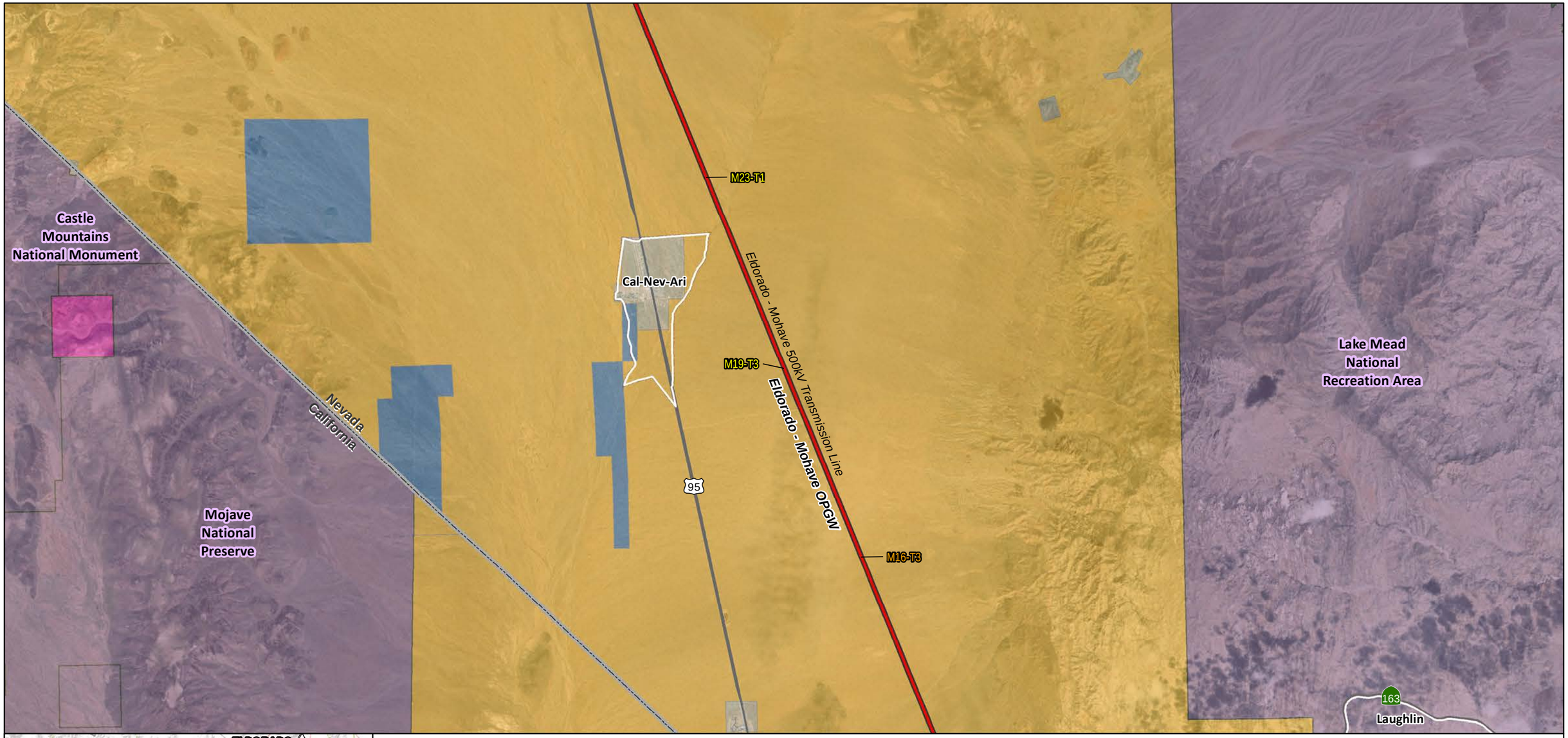
Project Overview

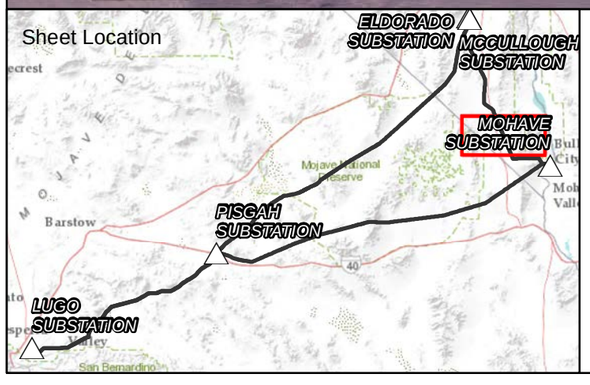
Sheet 8

N

0 1 2

Scale in Miles





Existing Transmission Line

New OPGW

Jurisdiction

- Bureau of Land Management
- Bureau of Reclamation
- State Lands
- National Park Service

Source: SCE, 2018

Figure A-9

Project Overview

Sheet 9

N

0 1 2

Scale in Miles

M36-T4

164

Eldorado - Mohave OPGW

Eldorado - Mohave 500 kV Transmission Line

Searchlight

M33-T2

Lake Mead
National
Recreation Area

Arizona

Nevada

M29-T4

95

M26-T2

Mojave
National
Preserve

Nevada

California

Castle Mountains
National Monument

Sheet Location

ELDORADO SUBSTATION

MCCULLOUGH SUBSTATION

MOHAVE SUBSTATION

PISGAH SUBSTATION

LUGO SUBSTATION

Barstow

Mojave National Preserve

Existing Transmission Line

New OPGW

Jurisdiction

Bureau of Land Management

County

National Park Service

Source: SCE, 2018

Figure A-10

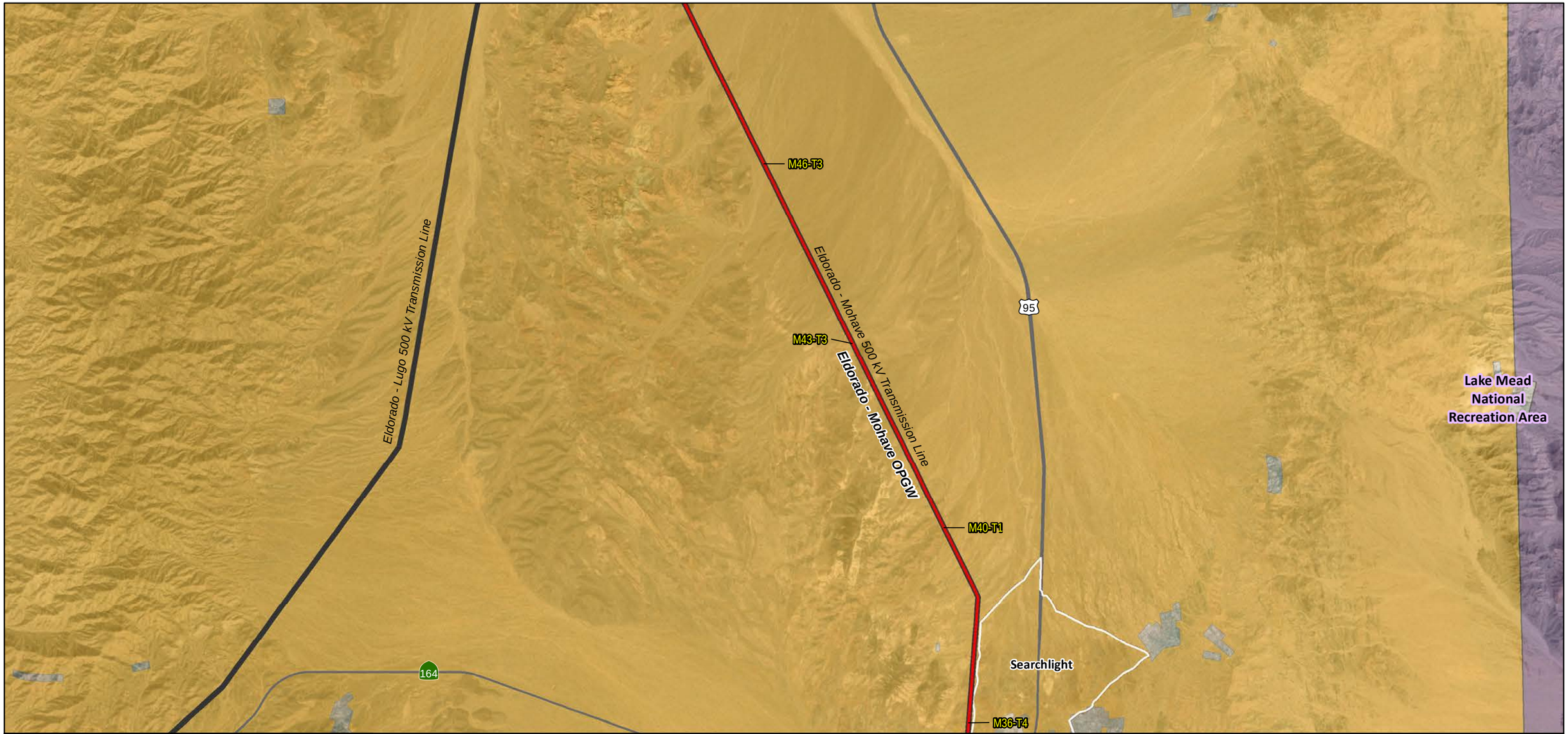
Project Overview

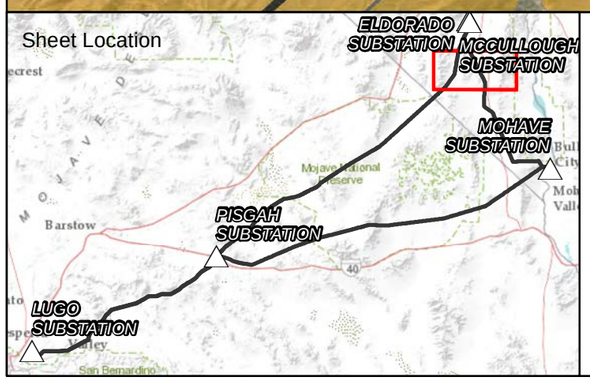
Sheet 10

N

0 1 2

Scale in Miles





Existing Transmission Line

New OPGW

Jurisdiction

Bureau of Land Management

National Park Service

Source: SCE, 2018

Figure A-11

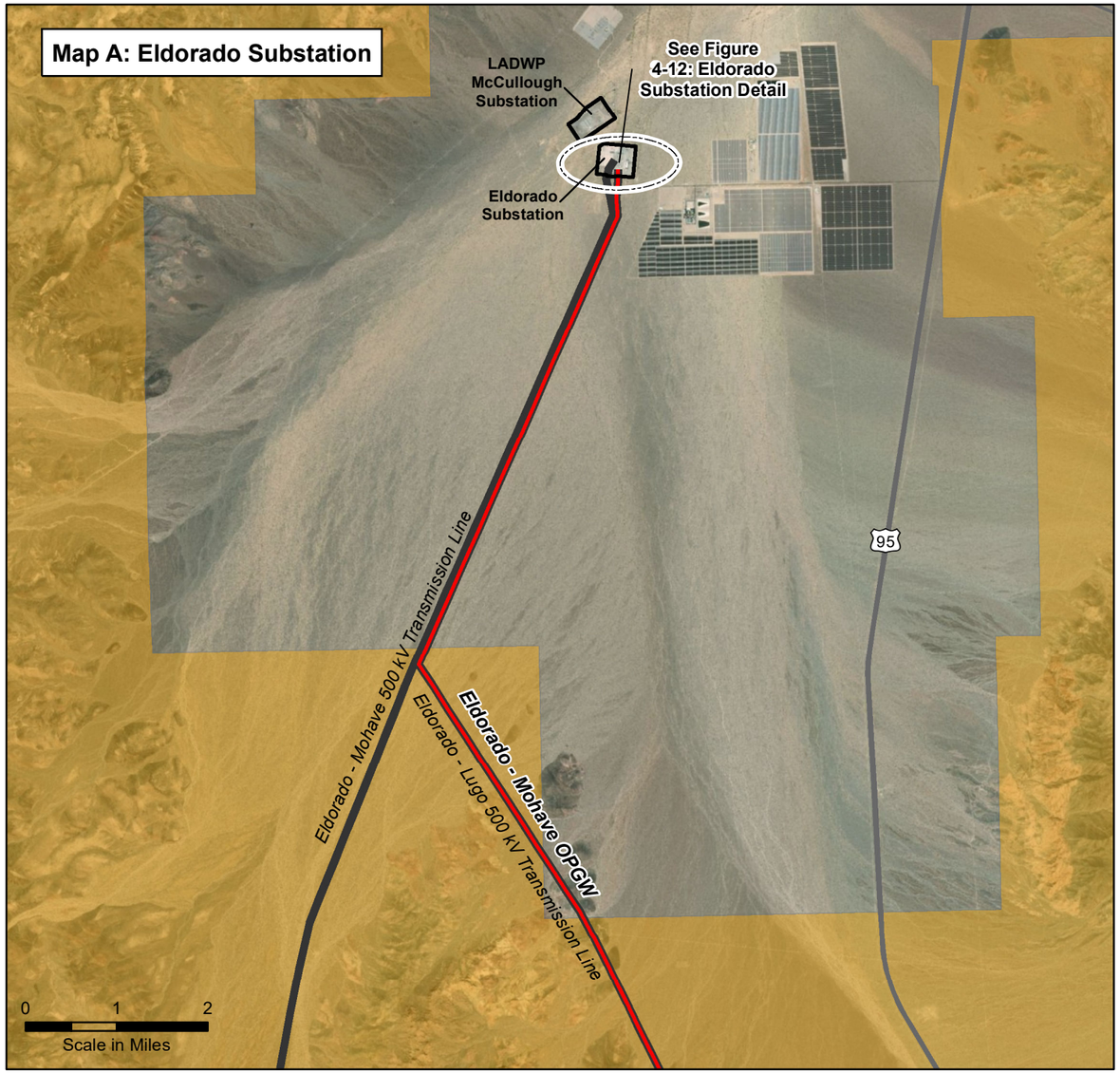
Project Overview

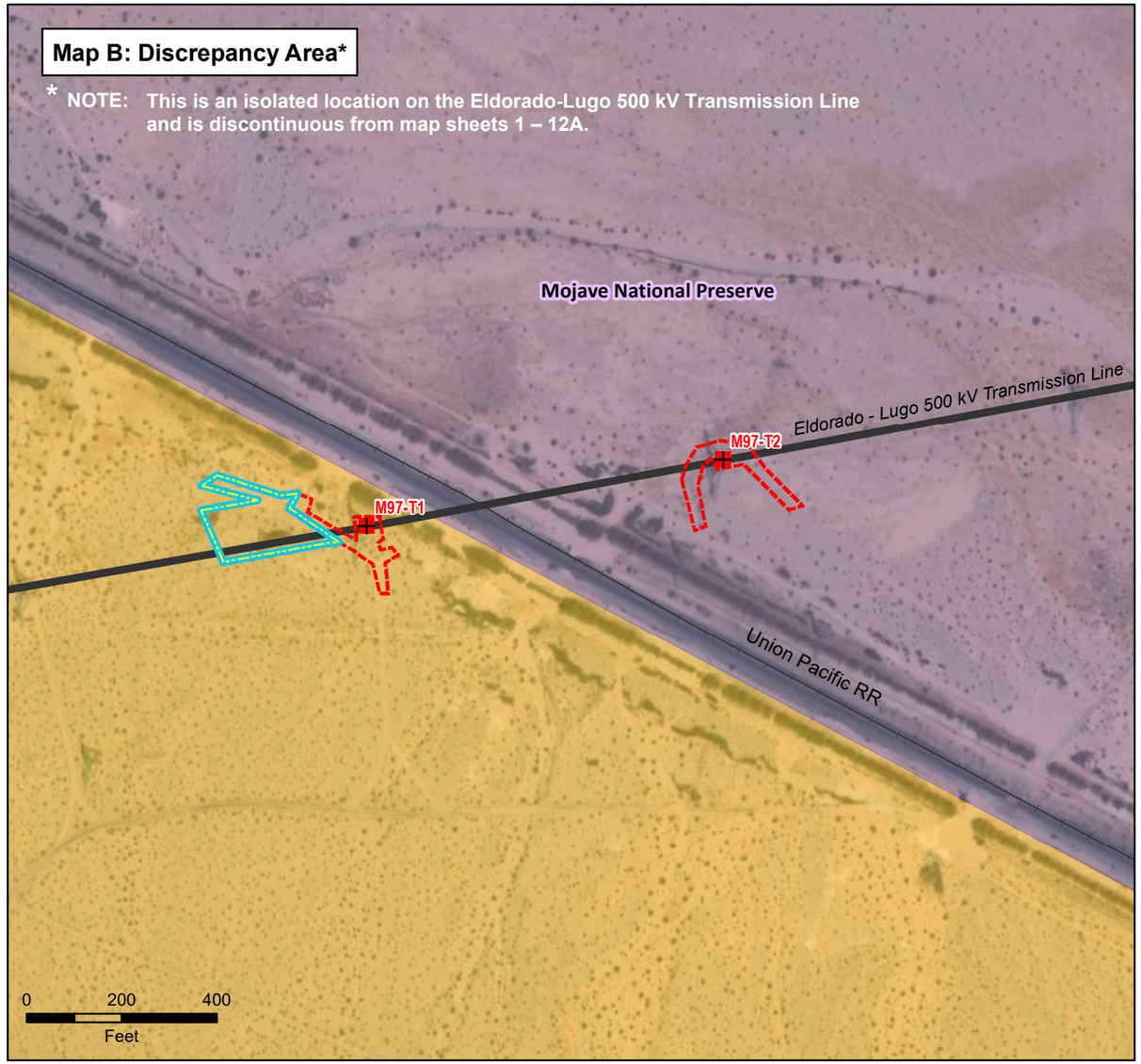
Sheet 11

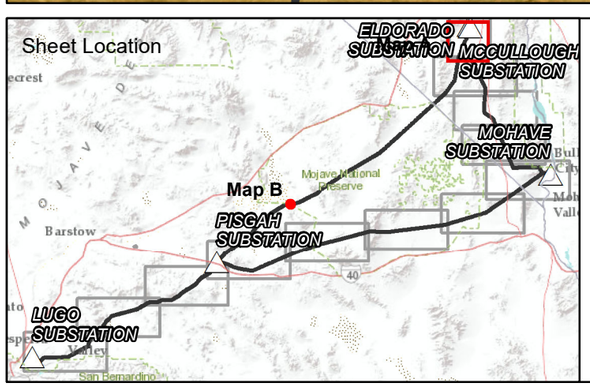
N

0 1 2

Scale in Miles







Existing Substation
Existing Transmission Line
Helicopter Landing Zone
Structure Work Area

OPGW Work
- OPGW Modification and Splicing Tower
- OPGW Splicing Only Tower
- New OPGW

Discrepancy Work
- Raise Tower

Jurisdiction
- Bureau of Land Management
- National Park Service

Sources: SCE, 2018

Figure A-12

Project Overview

Sheet 12

N

ATTACHMENT B

Pre-Construction Mitigation Measures and APMs

ATTACHMENT B: PRE-CONSTRUCTION MITIGATION MEASURES AND APMs

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Aesthetics			
MM AES-1	**Minimize visual contrast in project design**. In the final design of approved project structures, SCE shall use design fundamentals that reduce the visual contrast of new facilities with the characteristic landscape. These include surface treatments; siting and location; reduction of visibility; repetition of form, line, color, and texture of the landscape; and reduction of unnecessary disturbance. New and modified transmission structures shall be of a dulled galvanized steel consistent with that of existing structures. SCE shall treat the surfaces of other structures and new buildings visible to the public such that: (a) their colors minimize visual contrast by blending with the characteristic landscape colors; and (b) their colors and finishes do not create excessive glare. The steel used to repair or strengthen structures, new steel structures, and conductors, and OPGW shall have surfaces that are non-specular and non-reflective. Project elements with colored surfaces shall be in hues and tones that do not contrast with the surrounding landscape and are consistent with the palette of natural colors that occur in the area. SCE shall provide for review by the CPUC, BLM, and NPS, a draft Project Design and Surface Treatment Plan describing the siting, placement, and other design considerations to be employed to minimize Proposed Project contrast. The draft plan must explain how the design will minimize visual intrusion and contrast by effectively blending earthwork, vegetation manipulation, and facilities with the landscape. The Project Design and Surface Treatment Plan shall describe the colors and textures to be applied to all new facility structures, buildings, walls, fences, and components to be constructed. The draft Project Design and Surface Treatment Plan shall be submitted at least 60 days prior to the start of construction. If the CPUC notifies SCE that revisions to the plan are needed, SCE shall within 30 days of receiving that notification, prepare and submit for review and approval a revised plan to the CPUC.	SCE to submit Project Design and Surface Treatment Plan for review and approval at least 60 days prior to construction.	
MM AES-2	**Screen construction activities from view**. To reduce significant impacts associated with construction yards, staging areas, and material and equipment storage areas shall be visually screened using temporary screening fencing, with the exception of construction yards, staging areas, and material and equipment storage areas on existing substation properties. Fencing will be of an appropriate structure, material, and color for each specific location. This requirement shall not apply if SCE can demonstrate that construction yards are located away from areas of high public visibility including public roads, residential areas, and public recreational facilities or the yards are in areas where high winds pose a risk of the screening detaching and creating a hazard. For any site that SCE proposes to exempt from the screening requirement, SCE shall define the site on a detailed map demonstrating its visibility from nearby roads, residences, or recreational facilities to the agency having jurisdiction over the land (CPUC, BLM, or NPS) for review and approval at least 60 days prior to the start of construction at that site.	For exempt yards and other project areas, request to be submitted 60 days prior to construction at that site. Prior to use of yards and other project areas, visual screening shall be installed.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Air Quality			
MM AQ-1	**Prepare and implement a Dust Control Plan.** SCE shall minimize visible fugitive dust emissions by implementing the following dust control measures derived from MDAQMD Rule 403.2. Prior to commencing earth-moving activity, SCE shall prepare and submit to the MDAQMD, Clark County DAQ, CPUC, BLM and NPS a Dust Control Plan that describes all dust control measures that will be implemented for the project, including, but not limited to: ▪ Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions. If used, non-water-based or chemical soil stabilizers and dust suppressants shall be non-toxic and must not cause loss of vegetation, adverse odors, or additional emissions of ozone precursor reactive organic gases (ROG) or volatile organic compounds (VOC). ▪ Provide stabilized access route(s) to the project site as soon as is feasible and enforce a maximum 15 mile per hour vehicle speed limit on any unpaved surface. ▪ Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions. ▪ Maintain natural topography to the extent possible. ▪ Construct parking lots and paved areas first, where feasible. ▪ Take actions sufficient to prevent project-related trackout or spills onto publicly maintained paved surfaces, and cleanup project-related trackout or spills on publicly maintained paved surfaces within 24 hours. ▪ Cover loaded haul vehicles or provide adequate freeboard while operating on publicly maintained paved surfaces. ▪ Reduce non-essential earth-moving activity under high wind conditions, gusts exceeding 25 miles per hour.	SCE to submit Dust Control Plan to MDAQMD, Clark County DAQ, CPUC, BLM and NPS prior to commencing earth-moving activity.	
Biological Resources			
MM BR-1	**Conduct biological monitoring and reporting.** **Lead biologist:** SCE shall propose one or more lead biologist(s) and submit their resume(s) to the CPUC and BLM for concurrence, no less than 60 days prior to the start of any ground-disturbing activities, including those occurring prior to site mobilization (including, but not limited to geotechnical borings or hazardous waste evaluations). At minimum the lead biologist will hold a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; have at least three years of experience in field biology and at least one year of direct field experience with biological resources found in or near the project area, *OR* relevant education and experience that demonstrates the ability to carry out the tasks required of a lead biologist. The resume(s) shall demonstrate to the satisfaction of the CPUC	SCE to submit resumes for Lead Biologist and Biological Monitors for concurrence by the CPUC and BLM, at least 10 working days prior to the monitor commencing field duties. SCE shall provide training to biological monitors, in addition to WEAP, on bio resources, MM requirements,	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	and BLM the appropriate education and experience to accomplish the assigned biological resources tasks. The lead biologist will be SCE's primary point of contact to CPUC, BLM, NPS, CDFW, and USFWS regarding any biological resource issues and implementation of related mitigation measures and permit conditions throughout project construction and post-construction restoration work. In addition, the lead biologist will oversee supervision and training of biological monitors (below) and preparation and submission of all monitoring reports and notifications (below). If the lead biologist is replaced, the specified information of the proposed replacement must be submitted to the CPUC and BLM at least ten working days prior to the termination or release of the preceding lead biologist. In an emergency, SCE shall immediately notify the CPUC and BLM to discuss the qualifications and approval of a short-term replacement while a permanent lead biologist is proposed for consideration. **Biological monitors:** SCE shall assign qualified biological monitors to the project to monitor all work activities with the potential to impact special status species or their habitat during the construction phase. Work sites or activities considered to have no potential to impact special-status species or habitats will be subject to review and approval by CPUC in coordination with CDFW, USFWS, and BLM. ….. Resumes of all biological monitors, including specialty monitors (including but not limited to bat, nesting bird, and special-status species monitors), shall be provided for concurrence by the CPUC and BLM, at least 10 working days prior to the monitor commencing field duties. The resumes shall demonstrate, to the satisfaction of the CPUC and BLM, the appropriate education and experience to accomplish the assigned biological resources tasks. SCE shall provide training to biological monitors, in addition to WEAP (see Mitigation Measure BR-2) and prior to the monitor commencing field duties, on biological resources present or potentially present on the Proposed Project, as well as mitigation measures, permit requirements, project protocols, and the duties and responsibilities of a biological monitor. ….. **Reporting:** SCE shall prepare and implement a procedure for communication among biological monitors and construction crews, to ensure timely notification (i.e., daily or sooner, as needed) to crews of any resource issues or restrictions. SCE will notify the CPUC and BLM of the procedure and will maintain records of daily communication. SCE will provide CPUC and BLM on-line access to project resource management maps and GIS data. …. Prior to the start of monitoring activities, SCE shall provide proposed monitoring report formats, describing content and organization, for CPUC and BLM review and approval in consultation with CDFW and USFWS.	etc., prior to the monitor commencing field duties. Prior to the start of monitoring activities, SCE shall provide proposed communication protocols, monitoring report formats, describing content and organization, for CPUC and BLM review and approval in consultation with CDFW and USFWS.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
MM BR-2	**Prepare and implement a Worker Environmental Awareness Program (WEAP).** SCE shall prepare and implement a project-specific Worker Environmental Awareness Program (WEAP) to educate on-site workers about the Proposed Project's sensitive environmental issues. The WEAP shall be presented by the lead biologist or a biological monitor to all personnel on-site during the construction phase, including but not limited to surveyors, engineers, inspectors, contractors, subcontractors, supervisors, employees, monitors, visitors, and delivery drivers. If the WEAP presentation is recorded on video, it may be presented by any competent project personnel. …… The WEAP shall consist of a training presentation, with supporting written materials provided to all participants. At least 60 days prior to the start of ground-disturbing activities, SCE shall submit the WEAP presentation and associated materials to the CPUC and BLM for review and approval in consultation with the USFWS and CDFW. The WEAP training shall include, at minimum: ▪ Overview of the project, the jurisdictions the project route passes through (e.g., San Bernardino County, CA; Clark County, Nevada; CSLC; BLM; NPS; BOR; DOD) and any special requirements of those jurisdictions. ▪ Overview of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and the consequences of non-compliance with these acts. ▪ Overview of the project mitigation and biological permit requirements, and the consequences of non-compliance with these requirements. ▪ Sensitive biological resources on the project site and adjacent areas, including nesting birds, special-status plants and wildlife and sensitive habitats known or likely to occur on the project site, project requirements for protecting these resources, and the consequences of non-compliance. ▪ Construction restrictions such as limited operating periods, Environmentally Sensitive Areas (ESAs), and buffers and associated restrictions, and other restrictions such as no grading areas, flagging or signage designations, and consequences of non-compliance. ▪ Avoidance of invasive weed introductions onto the project site and surrounding areas, and description of the project's weed control plan and associated compliance requirements for workers on the site. ▪ Function, responsibilities, and authority of biological and environmental monitors and how they interact with construction crews. ▪ Requirement to remain within authorized work areas and on approved roads, with examples of the flagging and signage used to designate these areas and roads, and the consequences of non-compliance. ▪ Procedure for obtaining clearance from a biological monitor to enter a work site and begin work (including moving equipment), and the requirement to wait for that clearance.	At least 60 days prior to the start of ground-disturbing activities, SCE shall submit the WEAP presentation and associated materials to the CPUC and BLM for review and approval in consultation with the USFWS and CDFW. Conduct WEAP training for crews prior to the start of construction.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	▪ One-hour hold (or other method SCE will use to halt work when necessary to maintain compliance) and the requirement for compliance. ▪ Nest buffers and associated restrictions and the consequences of non-compliance. Procedure and time frame for halting work and removing equipment when a new buffer is established. Discussion of nest deterrents. ▪ Explanation that wildlife must not be harmed or harassed. Procedures for covering pipes, securing excavations, and installing ramps to prevent wildlife entrapment. What to do and who to contact if dead, injured, or entrapped animals are encountered. ▪ General safety protocols such as hazardous substance spill prevention, containment, and cleanup measures; fire prevention and protection measures; designated smoking areas (if any) and cigarette disposal; safety hazards that may be caused by plants and animals; and procedure for dealing with rattlesnakes in or near work areas or access roads. ▪ Project requirements that have resulted in repeated compliance issues on other recent transmission line projects, such as dust control, speed limits, track out (dirt or mud tracked from access roads or work sites onto paved public roads or other areas), personal protective equipment (PPE), work hours, working prior to clearance, and waste containment and disposal. ▪ Printed training materials, including photographs and brief descriptions of all special-status plants and animals that may be encountered on the project, including behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures. ▪ Contact information for SCE, construction management, and contractor environmental personnel, and who to contact with questions. ▪ Training acknowledgment form to be signed by each worker indicating that they understand and will abide by the guidelines, and a hardhat sticker so WEAP attendance may be easily verified in the field. **……**		
MM BR-3	**Minimize native vegetation and habitat loss.** Final engineering of the project shall minimize the extent of disturbance and removal of native vegetation and habitat, to the extent safely possible. Work activities and roadways will avoid or minimize direct or indirect effects to sensitive habitat types or jurisdictional waters and provide buffer areas to minimize disturbance. Project access will utilize existing routes or bridges over jurisdictional waters wherever possible. Consistent with project safety and security protocols, landowner preferences, and any other applicable regulations or requirements, existing gates on project access roads will be closed and secured when project personnel enter or leave an area. Prior to beginning any ground-disturbing activities, SCE shall provide CPUC and BLM with final engineering GIS shapefiles depicting all temporary and permanent disturbance areas, as well	Prior to any ground-disturbing activities, SCE shall provide CPUC and BLM with final engineering GIS shapefiles depicting all temporary and permanent disturbance areas, as well as summary data on temporary and permanent disturbance for each vegetation or habitat type. CPUC EM to verify site staking.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	as summary data on temporary and permanent disturbance for each vegetation or habitat type. ……. Prior to any construction, equipment or crew mobilization at each work site, work areas will be marked with staking or flagging to identify the limits of work and will be verified by project environmental staff and CPUC Environmental Monitor. Staking and flagging will clearly indicate the work area boundaries. Where staking cannot be used, traffic cones, traffic delineators, or other markers shall be used. Staking and flagging or other markers shall be in place during construction activities at each work site and refreshed as needed. Coded flagging colors or color combinations will be consistent and uniform across the project. All work activities, vehicles, and equipment will be confined to approved roads and staked and flagged or marked work areas.		
MM BR-4 [Supersedes APM BIO-01]	**Restore or revegetate temporary disturbance areas.** SCE will implement a restoration or revegetation plan for all temporarily disturbed sites. Given that temporary impacts to desert tortoise habitat is considered a permanent impact in this MND and under BLM's Programmatic Biological Opinion (BO) provides federal take authorization for the Project, SCE will mitigate for all desert tortoise habitat impacts as permanent impacts through compensatory mitigation. These temporarily disturbed sites will be subject to revegetation (i.e., re-establishment of vegetation to minimize long-term erosion, dust, and weed infestation) but habitat restoration will not be required. SCE will be required to implement habitat restoration at temporarily disturbed sites not mitigated through off-site compensation. SCE will provide a Habitat Restoration and Revegetation Plan (HRRP) to cover all temporarily disturbed sites, identifying sites to be subject to revegetation alone and those to be restored. The HRRP will describe, at a minimum, which revegetation or restoration method (e.g., natural revegetation, planting, or reseeding with native seed stock in compliance with the Proposed Project's SWPPPs) will be implemented at each temporarily disturbed site. It will include the plant species or habitats to be restored or revegetated, the restoration or revegetation methods and techniques, and the monitoring periods and success criteria. All temporarily disturbed areas will be subject to revegetation and site management activities and success criteria of the Proposed Project's SWPPP/Erosion Control Plan (HWQ-1) and the Integrated Weed Management Plan (BR-5) to ensure soil stabilization, vegetation cover, and weed prevention. In addition to those requirements, for any temporarily disturbed area not subject to compensatory mitigation (BR-8), the HRRP shall include: ▪ Restoration goals and objectives for each portion of the project area, based on vegetation type and jurisdictional status of each site. ▪ Quantitative success criteria for each restoration site, area, or category. ▪ Implementation details, including but not limited to topsoil stockpiling and handling; post-construction site preparation; soil decompaction and recontouring; planting and seeding palettes to include only native, locally sourced materials with confirmed availability from	Prior to construction, SCE shall submit HRRP for review and approval. SCE shall provide compensatory mitigation for DETO.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	suppliers; fall or other suitable season planting or seeding dates (seeding outside the fall season may increase the risk of revegetation failure and need for subsequent remedial reseeding, irrigation, or other measures). ▪ Maintenance details, including but not limited to irrigation or hand-watering schedule and equipment, erosion control, and weed control measures. ▪ Monitoring and Reporting, specifying monitoring schedule and data collection methods throughout establishment of vegetation with key indicators of successful or unsuccessful progress, and quantitative criteria to objectively determine success or failure at the conclusion of the monitoring period. ▪ Contingency measures such as reseeding, replanting, drainage repairs, adjustments to irrigation or weeding schedule, and extension of maintenance beyond the original schedule, to repair or remediate sites not on track to meet success criteria, or not meeting the criteria at the close of the originally scheduled monitoring period. ▪ A Gantt Chart or similar exhibit identifying all components of the HRRP, including acquisition of plant materials, specifying site preparation and seeding or planting dates, identifying entity to perform each task (e.g., EPC contractor or restoration contractor) and indicating critical path activities. The Draft HRRP shall be submitted to CPUC and BLM review and approval prior to the beginning of ground-disturbing activities. SCE shall incorporate all requested revisions in coordination with the CPUC and BLM and finalize the HRRP within 12 months from the start of construction. For all restoration areas, if a fire, flood, or other disturbance beyond the control of SCE, CPUC, and BLM damages the area within the monitoring period, SCE shall be responsible for a one-time replacement. If a second event occurs, no replacement is required. For all revegetation (per SWPPP requirements) or restoration sites (per the HRRP), only seed or potted nursery stock of locally occurring native species will be used. Seeding and planting will be informed by Chapter 5 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen, 2003). The list of plants observed during botanical surveys of the project area will be used as a guide to site-specific plant selection. Monitoring of the restoration sites will continue annually for up to 5 years or until the defined success criteria in the HRRP are achieved. SCE will be responsible for implementing remediation measures as needed. Following remediation work, each site will still be subject to the success criteria required for the initial restoration. The monitoring period for remediation work will be concurrent with the monitoring period required for the initial restoration. **Reporting.** For all restoration areas, SCE will provide annual reports to the CPUC and BLM verifying the total vegetation acreage subject to temporary and permanent disturbance, identifying which items of the HRRP have been completed, and which items are still outstanding. The annual reports will also include a summary of the restoration activities for the year, a discussion of whether success criteria were met, any remedial actions conducted		

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	and recommendations for remedial action, if warranted, that are planned for the upcoming year. Each annual report will be submitted within 90 days after completion of each year of restoration work.		
MM BR-5 [Supersedes APM BIO-03]	**Prepare and Implement an Integrated Weed Management Plan.** SCE shall prepare and implement an Integrated Weed Management Plan (IWMP) describing the proposed methods of preventing or controlling project-related spread or introduction of weeds. The IWMP also must meet BLM's requirements for NEPA disclosure and analysis if herbicide use is proposed for the project. A Draft IWMP shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to SCE's application for Notice to Proceed, and no pre-construction activities (e.g., for geotechnical borings, hazardous waste evaluations, etc.), construction, equipment or crew mobilization, or project-related ground-disturbing activity shall proceed until the IWMP is approved. For the purpose of the IWMP, "weeds" shall include designated noxious weeds, as well as any other non-native weeds or pest plants identified on the weed lists of the California Department of Food and Agriculture, the California Invasive Plant Council, or identified by BLM as special concern. The IWMP will include the contents listed below. The IWMP will be implemented throughout project pre-construction, construction, and post-construction revegetation phases, including throughout implementation of the HRRP (Mitigation Measure BR-4). The IWMP will include the information defined in the following paragraphs. **Background.** An assessment of the Proposed Project's potential to cause spread of invasive non-native weeds into new areas, or to introduce new non-native invasive weeds into the ROW. This section must list known and potential non-native and invasive weeds occurring on the ROW and in the project region and identify threat rankings and potential consequences of project-related occurrence or spread for each species. This section must also identify control goals for each species (e.g., eradication, suppression, or containment) likely to be found within the Proposed Project area. **Pre-construction weed inventory.** SCE shall inventory weeds in all areas (both within and outside the ROW) subject to project-related vegetation removal/disturbance, "drive and crush," and ground-disturbing activity. The weed inventory shall also include vehicle and equipment access routes within the ROW and all project staging and storage yards. Weed occurrences shall be mapped and described according to density and area covered. **Pre-construction weed treatment.** Weed infestations identified in the pre-construction weed inventory shall be evaluated to identify potential for project-related spread and potential benefits (if any) of pre-construction treatment, considering the specific weeds, potential seed banks, or other issues. The IWMP will identify any infestations to be controlled or eradicated prior to project construction, or other site-specific weed management requirements (e.g., avoidance of soil or transport and site-specific vehicle washing where threat or spread potential is high). Control and follow-up monitoring of pre-construction weed treatment sites will follow methods identified in appropriate sections of the IWMP.	At least 60 days prior to requesting an NTP, SCE shall submit IWMP for review and approval, and conduct pre-construction weed inventory and treatment.	

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	Prevention. The IWMP shall specify methods to minimize potential transport of new weed seeds onto the ROW, or from one section of the ROW to another. The ROW may be divided into "weed zones," based on known or likely invasive weeds in any portion of the ROW. The IWMP will specify inspection procedures for construction materials and equipment entering the Proposed Project area. Vehicles and equipment may be inspected and cleaned at entry points to specified portions of the ROW, and before leaving work sites where weed occurrences must be contained locally. Construction equipment shall be cleaned of dirt and mud that could contain weed seeds, roots, or rhizomes. Equipment shall be inspected to ensure it is free of any dirt or mud that could contain weed seeds, and the tracks, outriggers, tires, and undercarriage will be carefully washed, with special attention being paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/ brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Tools such as chainsaws, hand clippers, pruners, etc., shall be cleaned of dirt and mud before entering project work areas. All vehicles shall be washed off-site when possible. If off-site washing is infeasible, on-site cleaning stations will be set up at specified locations to clean equipment before it enters the work area. Wash stations will be located away from native habitat or special-status species occurrences. Wastewater from cleaning stations will not be allowed to run off the cleaning station site. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used, and personnel present. The log shall contain the signature of the responsible crewmember. Written or electronic logs shall be available to BLM and CPUC monitors on request. Erosion control materials (e.g., hay bales) must be certified free of weed seed before they are brought onto the site. The IWMP must prohibit on-site storage or disposal of mulch or green waste that may contain weed material. Mulch or green waste will be removed from the site in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility. The IWMP must specify guidelines for any soil, gravel, mulch, or fill material to be imported into the Proposed Project area, transported from site to site within the Proposed Project area, or transported from the Proposed Project area to an off-site location, to prevent the introduction or spread of weeds to or from the Proposed Project area. **Monitoring.** The IWMP shall specify methods to survey for weeds during pre-construction, construction, and restoration phases; and shall specify qualifications of botanists responsible for weed monitoring and identification. It must include a monitoring schedule to ensure timely detection and immediate control of new weed infestations to prevent further spread. Surveying and monitoring for weed infestations shall occur at least two times per year through the close of the restoration phase, to coincide with the early detection period for early season and late season weeds (i.e., species germinating in winter and flowering in late winter or spring, and species germinating later in the season and flowering in summer or fall). It also must include methods for marking invasive weeds on the ROW and recording and		

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	communicating these locations to weed control staff. The map of weed locations (discussed above) shall be updated at least once a year. The monitoring section shall also describe methods for post-eradication monitoring to evaluate success of control efforts and any need for follow-up control. **Control.** The IWMP must specify manual and chemical weed control methods to be employed. The IWMP shall include only weed control measures with a demonstrated record of success for target weeds, based on the best available information. The plan shall describe proposed methods for promptly scheduling and implementing control activity when any project-related weed infestation is located (e.g., located on a project disturbance site), to ensure effective and timely weed control. Weed infestations must be controlled or eradicated upon discovery, and before they go to seed, to the extent feasible with the goal to prevent further spread. All proposed weed control methods must minimize the extent of any disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage from herbicide use or other control methods to any environmentally sensitive areas identified within or adjacent to the ROW. New weed infestations shall be treated at a minimum of once annually until eradication, suppression, or containment goals are met. For eradication, when no new occurrences are observed for three consecutive years, the weed occurrence can be considered eradicated and weed control efforts may cease for the site. Manual control shall specify well-timed removal of weeds or their seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the San Bernardino County Agricultural Commissioner and Nevada Department of Agriculture, if such guidelines are available. The chemical control section must include specific and detailed plans for any herbicide use. It must indicate where herbicides will be used, which herbicides will be used, and specify techniques to be used to avoid drift or residual toxicity to wildlife and native vegetation or special-status plants, consistent with BLM's *Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States* (BLM, 2007) and *National Invasive Species Management Plan* (NISC, 2008). Only state and BLM-approved herbicides may be used. Herbicide treatment will be implemented by a Licensed Qualified Applicator. Herbicides shall not be applied during or within 24 hours of predicted rain. Only water-safe herbicides shall be used in riparian areas or within channels (engineered or not) where they could run off into downstream areas. Herbicides shall not be applied when wind velocities exceed six (6) mph. All herbicide applications will follow U.S. Environmental Protection Agency label instructions and will be in accordance with federal, state, and local laws and regulations. **Reporting schedule and contents.** The IWMP shall specify the reporting schedule and contents of each report.		
MM BR-6 [Supersedes APM BIO-02]	**Minimize and mitigate impacts to special-status plants.** **Pre-construction survey.** SCE shall conduct focused pre-construction surveys for federal- and state-listed and other special-status plants within suitable habitat. All special-status plant	SCE shall conduct focused pre-construction surveys for federal- and state-listed and	

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	species (including listed threatened or endangered species, and CNPS California Rare Plant Rank (CRPR) 1 and 2 ranked species likely to be impacted by project activities shall be documented in pre-construction survey reports. Surveys shall be conducted by a qualified botanist during the appropriate season in all suitable habitat within 50 feet of disturbance areas. The field surveys and reporting must conform to current CDFW botanical field survey protocol (CDFG, 2018). Where any special-status plants may be discovered, the survey area will extend beyond the ROW to determine the extent of the local occurrence, to evaluate the significance of any project impacts. The reports will describe any conditions that may have prevented target species from being located or identified, even if they are present as dormant seed or below-ground rootstock. If pre-construction survey areas conducted in years of poor rainfall or following other extreme events (e.g., recent intense overgrazing or wildfire), then the project shall use data from 2016/2017 and 2019 surveys to define population area and maximum number of individuals (Note, the unusually high rainfall in 2017 and 2019 are likely to better define rare plant locations and have more accurate results than subsequent years with lower rainfall). For species not previously detected on surveys but for which have a high potential to occur, reference populations will be used to determine if the species is detectable for pre-construction surveys conducted in suitable habitat. Prior to initial ground disturbance at individual construction work areas, SCE shall submit pre-construction field survey reports along with maps showing locations of survey areas and special-status plants to the CPUC and BLM for review and approval in coordination with CDFW. **Native cactus and *Yucca*.** Most native cactus and shrubby *Yucca* species (Joshua tree and Mohave yucca) can be successfully salvaged and transplanted, and yuccas often provide an important vertical component to wildlife habitat. Therefore, native cactus (excluding chollas in the genus *Cylindropuntia*) and yuccas (including Joshua trees, *Y. brevifolia*), shall be avoided or salvaged as follows: SCE will prepare and implement a cacti and yucca salvage plan. The goal shall be maximum practicable survivorship of salvaged plants. The Plan will include at minimum: (a) species and locations of plants identified for salvage; (b) criteria for determining whether an individual plant is appropriate for salvage; (c) the appropriate season for salvage; (d) equipment and methods for collection, transport, and re-planting plants or seed banks, to retain intact soil conditions and maximize success; (e) a requirement to mark each plant to identify the north-facing side prior to transport, and replant it in the same orientation; (f) details regarding storage of plants or seed banks for each species; (g) location of the proposed recipient site, and detailed site preparation and plant introduction techniques for top soil storage, as applicable; (h) a description of the irrigation, weed control, and other maintenance activities; (i) success criteria, including specific timeframe for survivorship and reproduction of each species; and (j) a detailed monitoring program, commensurate with the Plan's goals. **Mitigation.** SCE shall mitigate impacts to any state or federally listed plants or CRPR 1 or Nevada ranked S1, S2, or S3 species that may be located on the project disturbance areas or	other special-status plants within suitable habitat prior to construction at individual work sites and submit reports to CPUC and BLM for review and approval. SCE shall prepare a cacti and yucca salvage plan. SCE shall prepare Mitigation Plan for impacts to any state or federally listed plants or CRPR 1 or Nevada ranked S1, S2, or S3 species.	

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	surrounding buffer areas through one or a combination of the following strategies. Additionally, impacts to CRPR 2 ranked plants occurring in California will be similarly mitigated. Avoidance of special-status plants will be the preferred strategy wherever feasible. Where avoidance is not feasible, and the project would directly or indirectly affect more than 10 percent of a local occurrence,[1] by either number of plants (shrubs and trees) or extent of occupied habitat (annuals or perennial herbs), SCE shall prepare and implement a mitigation plan to consist of off-site compensation, salvage, horticultural propagation / off-site introduction, or a combination of these. ▪ **Avoidance.** Work areas shall be located to avoid or minimize impacts to special-status plants to the greatest extent possible. Effective avoidance through project design shall include a buffer area surrounding each avoided occurrence, where no project activities will take place. The buffer area will be clearly staked, flagged, and signed for avoidance prior to the beginning of ground-disturbing activities, and maintained throughout the construction phase. At minimum, the buffer for shrub species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems. The buffer for herbaceous species shall be a minimum of 50 feet from the perimeter of the occupied habitat or the individual(s). However, for locations in the mountains, a larger buffer may need to be applied to shrub and herbaceous species if the construction monitors determine there is a risk of indirect effects from erosion or inundation. If a smaller buffer is necessary due to other project constraints, SCE will develop and implement site-specific monitoring and put other measures in place to avoid the take of the species, with the approval of the CPUC and BLM, in coordination with CDFW. ▪ **Off-site compensation.** SCE shall provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plant populations at a 1:1 ratio of acreage and number of plants for any occupied habitat directly impacted (whether temporary or permanent) by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence and a surrounding 50-foot buffer area. If compensation is selected as a means of mitigating special-status plant impacts, it may be accomplished by purchasing credit in an established mitigation bank, acquiring conservation easements, or direct purchase and preservation of compensation lands. Compensation for these impacts may be "nested" or "layered" with compensation for habitat loss described in Mitigation Measure BR-8. ▪ **Salvage.** SCE shall consult with a qualified restoration ecologist or horticulturist regarding the feasibility and likely success of salvage efforts for each species. If salvage is deemed to be feasible, based on prior success with similar species, then SCE shall prepare and implement a Special-status Plant Salvage and Relocation Plan, to be reviewed and approved by the CPUC and BLM, in consultation with CDFW and USFWS, prior to direct or indirect dis-		

[1] An occurrence for a plant is defined as any population or group of nearby populations located more than 0.25 miles from any other population (CDFW, 2009).

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	turbance of any occupied habitat. For special-status plants, excluding cacti and Yuccas (see above), the goal shall be to improve existing populations or establish new populations. For cacti and yuccas, the goal shall be maximum practicable survivorship of salvaged plants. The Plan will include at minimum: (a) species and locations of plants identified for salvage; (b) criteria for determining whether an individual plant is appropriate for salvage; (c) the appropriate season for salvage; (d) equipment and methods for collection, transport, and re-planting plants or seed banks, to retain intact soil conditions and maximize success; (e) for shrubs, cacti, and yucca, a requirement to mark each plant to identify the north-facing side prior to transport, and replant it in the same orientation; (f) details regarding storage of plants or seed banks for each species; (g) location of the proposed recipient site, and detailed site preparation and plant introduction techniques for top soil storage, as applicable; (h) a description of the irrigation, weed control, and other maintenance activities; (i) success criteria, including specific timeframe for survivorship and reproduction of each species; and (j) a detailed monitoring program, commensurate with the Plan's goals. Annual monitoring reports shall be submitted to CPUC and BLM for five years or until the relocation effort is deemed successful on agreement of SCE and the CPUC. Reports shall include, but not be limited to, details of plants salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of transplantation. ▪ **Horticultural propagation and off-site introduction.** If salvage and relocation is not believed feasible for special-status plants, then SCE shall consult with a qualified entity to develop an appropriate experimental propagation and relocation strategy, based on the life history of the species affected. The Plan will include at minimum: (a) collection and salvage measures for plant materials (e.g., cuttings), seed, or seed banks, to maximize success likelihood; (b) details regarding storage of plant, plant materials, or seed banks; (c) location of the proposed propagation facility, and proposed methods; (d); time of year that the salvage and other practices will occur; (e) success criteria; and (f) a detailed monitoring program, commensurate with the Plan's goals.		
MM BR-8 [Supersedes APM BIO-05]	**Compensate for desert tortoise habitat loss.** SCE shall compensate for all desert tortoise habitat loss through off-site habitat acquisition and management, or through participation in an approved in-lieu fee compensatory mitigation bank, or other agency approved mitigation strategies. This mitigation measure will be applicable to all temporary and permanent project disturbance to natural habitat types, (i.e., all vegetation types identified in Table 5.4-2, excluding active agriculture, barren, and developed lands). This compensatory mitigation for desert tortoise will also mitigate for habitat impacts to other native wildlife species. Habitat compensation shall be accomplished by acquisition of mitigation land or conservation easements or by providing funding for specific land acquisition, endowment, restoration, and management actions. SCE shall prepare a Habitat Compensation Plan to be reviewed and approved by the CPUC- and, BLM, in coordination with the USFWS and CDFW.	Prior to construction, SCE shall prepare a Habitat Compensation Plan to be reviewed and approved by the CPUC and BLM, in coordination with the USFWS and CDFW. If the compensation land is held by a private entity, SCE or approved third party shall prepare a management plan	

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	SCE shall acquire and protect, in perpetuity, compensation habitat to mitigate impacts to biological resources as detailed below. SCE shall be responsible for the acquisition, initial protection and or habitat improvement. SCE may convey title of the compensation lands to a public agency such as BLM, NPS, or CDFW or the lands may be held by a private conservation entity. If the land is conveyed to BLM, it shall be within a land use designation such as Area of Environmental Concern, wilderness, or similar designation consistent with long-term management for biological resource values and excluding incompatible land uses (e.g., energy development). If it is conveyed to CDFW, or retained under private ownership, it shall be covered by a conservation easement or other terms acceptable to CDFW. If there is any conflict between the requirements of this mitigation measure and requirements of any resource agency permit (e.g., USFWS Biological Opinion or CDFW Incidental Take Permit), the more stringent requirement shall apply. The acreages of compensation land shall be based upon final engineering calculation of impacted acreage for each resource and on ratios set forth in this measure, or a USFWS Biological Opinion, a CDFW Streambed Alteration Agreement, a CDFW Incidental Take Permit, or the Consistency Determination, whichever presents a higher ratio. Acreages will be adjusted as appropriate for other alternatives or future modifications during implementation. Compensation shall be provided for impacts to the following resources, at the ratios specified below (acres acquired and preserved to acres impacted). These ratios reflect multiple biological resource values, including habitat suitability for special-status species. ▪ Previously disturbed lands (agriculture, developed/disturbed) and open water: n/a (no habitat compensation required) ▪ Undisturbed land, including suitable desert tortoise habitat outside designated critical habitat: 1:1 ▪ Suitable desert tortoise habitat within designated critical habitat: 5:1 The Habitat Compensation Plan must specify compensation acreage for each habitat type, based on final engineering. Final compensation requirements may be adjusted to account for any deviations in project disturbance, according to the as-built shapefiles aerial imagery. **Compensation Land Selection Criteria.** Criteria for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of compensation lands for impacts to biological resources shall include all of the following: ▪ Compensation lands will provide habitat value that is equal to or better than the quality and function of the habitat impacted by the project, taking into consideration soils, vegetation, topography, human-related disturbance, wildlife movement opportunity, proximity to other protected lands, management feasibility, and other habitat values, subject to review and approval by CPUC and BLM; ▪ Potential compensation sites where creosote rings are found will be prioritized where feasible, and where consistent with the other selection criteria;	for review and approval by the CPUC and BLM, in consultation with CDFW and USFWS. If the land is conveyed to a public agency, SCE will coordinate with the agency as needed to identify management planning needs (if any).	

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	▪ To the extent that proposed compensation habitat may have been degraded by previous uses or activities, the site quality and nature of degradation must support the expectation that it will regenerate naturally when disturbances are removed and SCE will receive appropriate ratio credits for restoration; ▪ Be 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; ▪ 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; ▪ 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; ▪ Not contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat; ▪ Have water and mineral rights included as part of the acquisition, unless the CPUC and BLM, in consultation with CDFW and USFWS, agree in writing to the acceptability of land without these rights. **Review and Approval of Compensation Lands Prior to Acquisition.** SCE shall submit a Draft Habitat Compensation Plan for review and approval by the CPUC and BLM describing the parcel(s) intended for protection. This Plan will discuss the suitability of the proposed parcel(s) as compensation lands in relation to the selection criteria listed above. **Management Plan.** If the compensation land is held by a private entity, SCE or approved third party shall prepare a management plan for the compensation lands in consultation with the entity that will be managing the lands. The goal of the management plan will be to support and enhance the long-term viability of the biological resources. The Management Plan must be submitted for review and approval to the CPUC and BLM, in consultation with CDFW and USFWS. If the land is conveyed to a public agency, SCE will coordinate with the agency as needed to identify management planning needs (if any). **Compensation Lands Acquisition Requirements.** Compensation land parcels, management planning and funding mechanism, management entities, habitat protection and improvement measures, title conveyance, conservation easement language and easement holder, all will be subject to review and approval by CPUC and BLM in coordination with CDFW and USFWS.		
MM BR-9 [Supersedes APM BIO-04]	**Conduct surveys and avoidance for special-status reptiles.** Pre-activity Surveys: No more than seven days prior to the onset of ground-disturbing activities, an agency-approved biologist — with experience monitoring and handling desert tortoise — will conduct a pre-activity survey in all work areas within potential desert tortoise, banded Gila monster, desert rosy boa, or Mojave fringe-toed lizard habitat, plus an approximately 300-foot buffer. If	No more than 7 days prior to ground-disturbance, conduct survey in all work areas within potential desert tortoise, banded Gila	

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	potentially suitable burrows, sand fields, or rock piles are found, they shall be checked for occupancy. All desert tortoise burrows within the pre-activity survey area (including desert tortoise pallets) must be flagged or marked using an alternate method with minimal potential risk of cuing predators, to be developed in coordination with CDFW so that they may be avoided during work activities. ….. ▪ Raven Management: SCE shall prepare (for CPUC review and wildlife agency approval) and implement a Raven Management Plan (RMP) to minimize avian predation of desert tortoise for the Proposed Project. The purpose of the RMP is to utilize methods that deter raven depredation of juvenile desert tortoises, and other wildlife species. The RMP is not intended to eliminate or control raven populations but will target offending ravens that have been found to prey upon desert tortoises. The RMP will incorporate an adaptive management strategy for immediate implementation following construction of the Proposed Project. The RMP will be evaluated after three years of implementation, or as needed, if avian predation becomes apparent. The following activities may be implemented as part of the RMP: 1) Common raven nest/power line monitoring, 2) Funding of offending raven control via contract with the U.S. Department of Agriculture, and 3) Alternative control strategies developed in coordination with USFWS (e.g. egg-oiling, laser deterrents, etc.). Mutual and timely cooperation between SCE and the BLM, USFWS, and CDFW is central to effective implementation of the RMP.	monster, desert rosy boa, or Mojave fringe-toed lizard habitat, plus an approximately 300-foot buffer. If potentially suitable burrows, sand fields, or rock piles are found, they shall be checked for occupancy and flagged. SCE shall prepare (for CPUC review and wildlife agency approval) Raven Management Plan.	
MM BR-10 [Supersedes APM BIO-06]	**Prepare and implement a Nesting Bird Management Plan.** SCE shall prepare and implement a Nesting Bird Management Plan (NBMP) in coordination with CPUC, BLM, CDFW, and USFWS. The NBMP shall describe methods to minimize potential project effects to nesting birds and avoid any potential for unauthorized take. Where scheduling allows SCE will endeavor to conduct clearing of any vegetation, site preparation in open or barren areas, or other project-related activities that may adversely affect breeding birds outside the nesting season. Project-related disturbance including construction and pre-construction activities shall not proceed within 300 feet of active nests of common bird species or 500 feet of active nests of raptors or special-status bird species (except for golden eagle) until approval of the NBMP by CPUC and BLM in consultation with CDFW and USFWS. **NBMP Content.** The NBMP shall include: (1) definitions of default nest avoidance buffers for each species or group of species, depending on characteristics and conservation status for each species and the nature of planned Project activities in the vicinity; (2) a notification procedure for buffer distance reductions should they become necessary; (4) a pre-construction survey protocol (surveys no longer than 7 days prior to starting work activity at any site); (5) a monitoring protocol, to be implemented until adjacent construction activities are completed or the nest is no longer active, including qualifications of monitors, monitoring schedule, and field methods, to ensure that any project-related effects to nesting birds will be minimized; and (6) a protocol for documenting and reporting any inadvertent contact with or effects to birds or nests. The NBMP will be applicable throughout the nesting season (beginning	SCE shall prepare a Nesting Bird Management Plan (NBMP) for approval by CPUC and BLM in consultation with CDFW and USFWS.	

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	January 1 for raptors, February 1 for most other birds, and continuing through the end of August). **Golden eagles.** SCE shall review all available USFWS data to identify known golden eagle nest sites or territories in the vicinity of the Project route. SCE shall either assume that known nest sites are occupied or at its discretion conduct nesting season surveys within a 1 mile radius of the portions of the project area where suitable nesting habitat may exist and where work will occur during the breeding season (December 1 through July 31). If a potentially occupied nest (based either on assumption or field data) is detected within 1 mile of the project, SCE shall implement a one-mile line-of-sight and one-half mile no line-of-sight buffer to ensure that project construction activities do not result in injury or disturbance to golden eagles. **Nest deterrents.** The NBMP shall describe any proposed measures or deterrents to prevent or reduce bird nesting activity on project equipment or facilities, such as buoys, visual or auditory hazing devices, bird repellents, securing of materials, and netting of materials, vehicles, and equipment. It shall also include timing for installation of nest deterrents and field confirmation to prevent effects to any active nest; guidance for the contractor to install, maintain, and remove nest deterrents according to product specifications; and periodic monitoring of nest deterrents to ensure proper installation and functioning and prevent injury or entrapment of birds or other animals. In the event that an active nest is located on project facilities, materials or equipment, SCE will avoid disturbance or use of the facilities, materials or equipment (e.g., by red-tag) until the nest is no longer active. **Communication.** The NBMP shall specify the responsibilities of construction monitors with regard to nests and nest issues and specify a direct communication protocol to ensure that nest information and potential adverse impacts to nesting birds can be promptly communicated from nest monitors to construction monitors, so that any needed actions can be taken immediately. The NBMP shall specify a procedure to be implemented following accidental disturbance of nests, including wildlife rehabilitation options. It also shall describe any proposed measures, and applicable circumstances, to prevent take of precocial young of ground-nesting birds such as killdeer or quail. For example, chick fences may be used to prevent them from entering work areas and access roads. Finally, the NBMP will specify a procedure for removal of inactive nests, including verification that the nest is inactive and a notification/approval process. **Reporting.** Throughout the construction phase of the project, nest locations, project activities in the vicinity of nests (including helicopter traces), and any adjustments to buffer areas shall be updated and available to CPUC monitors on a daily basis. All buffer reduction notifications and prompt notifications of nest-related non-compliance and corrective actions will be made via email to CPUC monitors. The draft NBMP shall include a proposed format for daily and weekly reporting (e.g., spreadsheet available online, tracking each nest). In addition, the NBMP shall specify the format and content of nest data to be provided in regular monitoring and compliance reports. At the end of each year's nest season, SCE will		

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	submit an annual NBMP report to the CPUC, BLM, CDFW, and USFWS. Specific contents and format of the annual report will be reviewed and approved by the CPUC and BLM in consultation with CDFW and USFWS.		
MM BR-11 [Supersedes APM BIO-07]	**Conduct surveys and avoidance for burrowing owl.** Burrowing owl surveys shall be conducted in accordance with the most current CDFW guidelines in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFG, 2012; or updated guidelines as they become available) in all potential habitat, regardless whether or not the previous assessment identified burrows. SCE shall take measures to avoid impacts to any active burrowing owl burrow within or adjacent to a work area. The default buffer for a burrowing owl burrow is 300 feet for ground construction, and 300 feet horizontal and 200 feet vertical for helicopter construction. Effectiveness of the buffer area will be monitored, and adjustments will be made if necessary. The Nesting Bird Management Plan (Mitigation Measure BR-10) will specify a procedure for adjusting this buffer, if needed. Binocular surveys may be substituted for protocol field surveys on private lands adjacent to the project site only when SCE has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission. If active burrowing owl burrows are located within project work areas, SCE may passively relocate the owls by preparing and implementing a Burrowing Owl Passive Relocation Plan, as described below. SCE shall prepare a draft Burrowing Owl Passive Relocation Plan for review and approval by CPUC and BLM in consultation with CDFW and USFWS prior to the start of any ground-disturbing activities. SCE may not initiate burrowing owl passive relocation prior to finalization of the Plan and approval by CPUC and BLM. No active relocation shall be permitted. No passive relocation of burrowing owls shall be permitted during breeding season, unless a qualified biologist verifies through non-invasive methods that an occupied burrow is not occupied by a mated pair, and only upon authorization by CDFW. The Plan shall include, but not be limited to, the following elements: ▪ **Assessment of Suitable Burrow Availability.** The Plan shall include an inventory of existing, suitable, and unoccupied burrow sites within 500 feet of the affected project work site. Suitable burrows will include inactive desert kit fox, ground squirrel, or desert tortoise burrows that are deep enough to provide suitable burrowing owl nesting sites, as determined by a qualified biologist. If two or more suitable and unoccupied burrows are present in the area for each burrowing owl that will be passively relocated, then no replacement burrows will need to be built. ▪ **Replacement Burrows.** For each burrowing owl that will be passively relocated, if fewer than two suitable unoccupied burrows are available within 500 feet of the affected project work site, then SCE shall construct at least two replacement burrows within 500 feet of the affected project work site. Burrow replacement sites shall be in areas of suitable habitat for burrowing owl nesting, and subject to minimal human disturbance and access. The Plan shall describe measures to ensure that burrow installation or improvements would not affect sensitive species habitat or any burrowing owls already present in the relocation area. The Plan shall provide guidelines for creation or enhancement of at least two natural	Prior to construction, conduct burrowing owl surveys. Prepare a draft Burrowing Owl Passive Relocation Plan for review and approval by CPUC and BLM in consultation with CDFW and USFWS	

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	or artificial burrows for each active burrow within the project disturbance area, including a discussion of timing of burrow improvements, specific location of burrow installation, and burrow design. Design of the artificial burrows shall be consistent with CDFW guidelines (CDFG, 2012; or more current guidance as it becomes available) and shall be approved by the CPUC, BLM, CDFW, and USFWS. ▪ **Methods.** Provide detailed methods and guidance for passive relocation of burrowing owls, outside the breeding season. An occupied burrow may not be disturbed during the nesting season (generally, but not limited to, February 1 to August 31), unless a qualified biologist determines, by non-invasive methods, that it is not occupied by a mated pair. Passive relocation would include installation of one-way doors on burrow entrances that would let owls out of the burrow but would not let them back in. Once owls have been passively relocated, burrows will be carefully excavated by hand and collapsed by, or under the direct supervision, of a qualified biologist. ▪ **Monitoring and Reporting.** Describe monitoring and management of the replacement burrow site(s) and provide a reporting plan. The objective shall be to manage the relocation area for the benefit of burrowing owls, with the specific goal of maintaining the functionality of the burrows for a minimum of two years. Monitoring reports shall be available to the CPUC and BLM on a weekly basis.		
MM BR-12	**Conduct surveys and avoidance for bats.** SCE shall conduct surveys for roosting bats within 200 feet of project work areas within 14 days prior to any grading of rocky outcrops or removal of large trees (12 inches in diameter or greater at 4.5 feet above grade) with loose bark or other cavities, foliage, and palm fronds. Surveys shall be conducted during the breeding season (1 March to 31 July) and the non-breeding season. Surveys shall be performed by a qualified bat biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding or equivalent agreement with CDFW allowing the biologist to handle bats). The resume of the biologist shall be provided to the CPUC and BLM for concurrence in consultation with CDFW and USFWS prior to the biologist beginning field duties on the project. Surveys shall include a minimum of one day and one evening. Any active bat roosts, including occupied day roosts, maternity roosts, and hibernacula, must be identified and clearly marked. An exclusion area will be established 165 feet from any active roost, and these areas will be avoided during construction activities. Ingress and egress along established routes will be permitted in those areas, and additional buffer reductions may be considered in coordination with the qualified bat biologist, CPUC, and CDFW. If active roosts are found, then SCE will either (1) delay construction activities at these sites until the roost is no longer active, or (2) conduct follow-up focused surveys to determine if the sites support special-status bat species. If the roost is occupied by common species, then work activities may proceed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the special-status bats is completed. SCE shall consult with CDFW regarding eviction of non-breeding bats. SCE shall submit documentation providing pre-construction survey results and any avoidance of roosting and nursery sites to the CPUC and BLM for review and approval.	Submit resume of biologist for CPUC and BLM concurrence in consultation with CDFW and USFWS. Conduct pre-construction surveys within 200 feet or bat habitat and submit to CPUC and BLM for review and approval. An exclusion area will be established 165 feet from any active roost, and these areas will be avoided during construction activities; CPUC EM to validating flagging.	

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MM BR-13	**Conduct surveys and avoidance for American badger, ringtail, and desert kit fox.** SCE shall conduct pre-construction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of construction activities. Surveys shall be conducted in areas that contain habitat for this these species and shall include project disturbance areas and access roads plus a 200-foot buffer surrounding these areas. SCE shall submit documentation providing pre-construction survey results to the CPUC and BLM for review and approval. If dens are detected, each den shall be classified as inactive, potentially active, active non-natal, or active natal. Inactive dens located in project disturbance areas may be excavated by hand and backfilled to prevent reuse, only upon confirmation that they are inactive. Active or potentially active dens shall be flagged and project activities, with exceptions as listed below, within 100 feet (non-natal dens) or 200 feet (natal dens, or any active den during the breeding season) shall be avoided. …..	SCE shall conduct pre-construction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of construction activities and submit to CPUC and BLM for review and approval. Active or potentially active dens shall be flagged and project activities shall be avoided, unless otherwise specified.	
Cultural Resources			
APM-CUL-02	**Cultural Resources Survey.** SCE would perform surveys prior to construction for any Proposed Project areas not yet surveyed (e.g., new or modified staging areas, pull sites, or other work areas).	SCE to submit survey results to CPUC and BLM.	
MM CR-1	**Retain a Cultural Resources Specialist.** Prior to the start of construction, a project Cultural Resources Specialist (CRS) whose training and background conforms to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61) shall be retained by SCE to supervise monitoring of construction excavations and to prepare a Cultural Resources Management Plan (CRMP) for the approved project. Their qualifications shall be appropriate to the needs of the project, specifically an archaeologist with demonstrated prior experience in the southern California desert and previous experience working with Southern California Tribal Nations. A copy of their qualifications shall be provided to the CPUC for review and approval. The project Cultural Resources Specialist shall use the services of Cultural Resources Monitors, tribal monitors and Field Crew as needed, to assist in mitigation, monitoring, and curation activities, as outlined in the CRMP. A copy of all proposed cultural staff qualifications shall be provided to the CPUC for review and approval prior to beginning work.	Prior to construction, resumes for all proposed cultural staff, including Cultural Resources Specialist, shall be provided to the CPUC for review and approval.	
MM CR-2	**Cultural resources environmental awareness training.** Project personnel, including cultural resources monitors and tribal monitors, shall receive training that includes sensitivity training provided through participating tribes in video format regarding the appropriate work practices necessary to effectively implement the APMs and mitigation measures related to cultural resources and tribal cultural resources, including human remains. Training shall be required for all personnel before they begin work on a project site and repeated as needed for all new personnel before they begin work on the Project. This training program shall be submitted to the CPUC for approval at least 30 days before the start of construction and include procedures to be followed upon the discovery or suspected discovery of	At least 30 days prior to the start of construction, cultural training program shall be submitted to the CPUC for approval. Training shall be required for all personnel before they begin work on a project site.	

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	archaeological materials, tribal cultural resources, and human remains, consistent with the procedures set forth in the CRMP. This training may be integrated with a broader Worker Environmental Awareness Training program. Documentation of the training will be provided to the BLM and CPUC. The CPUC will provide documentation to the consulting tribes.	Documentation of training to be provided to CPUC and BLM; CPUC to provide to tribes.	
MM CR-3	**Prepare and implement a Cultural Resources Management Plan.** Prior to the beginning of construction, SCE shall submit at least 90 days before construction a Cultural Resources Management Plan (CRMP) for the project to the BLM and CPUC for review. The CPUC will submit the CRMP to representatives of consulting tribes for a 30-day review and comment period prior to approving the CRMP. The CPUC will in good faith consider any comments received from consulting tribes and incorporate such comments into the CRMP as deemed feasible. A single plan document that meets the requirements of both BLM and CPUC is acceptable. The CRMP shall be implemented under the direction of the SCE and the project Cultural Resources Specialist. The CRMP shall be prepared at the sole expense of the project proponent and shall meet all regulatory requirements. At a minimum the CRMP must address the following: ▪ The duties of the project Cultural Resources Specialist and associated staff shall be fully explained, including oversight/management, monitoring, and reporting duties with respect to known cultural resources and tribal cultural resources as well as site evaluation, data collection, and reporting for any newly identified resources discovered during project activities. The professional standards and ethical guidelines for all cultural resource personnel will be clearly outlined in the CRMP. ▪ No collection of artifacts is authorized or planned for this project. If an unanticipated discovery requires evaluation via excavation and artifact collection, the retention/disposal, and permanent and temporary curation policies shall be specified. The decision-making process for identifying which artifacts are curated or reburied, where they are reburied and the individuals, including tribal participants, making these decisions shall be described. These policies shall apply to cultural resources materials and documentation resulting from evaluation and treatment of cultural resources and tribal cultural resources discovered during project activities. ▪ The CRMP shall define and map all known prehistoric and historic resources eligible to the NRHP and CRHR within 100 feet of proposed work areas. How these resources will be avoided and protected during construction will be described. Avoidance measures to be used will be described, including where and when they will be implemented. How avoidance measures and enforcement of Environment Sensitive Areas (ESAs) will be coordinated with construction personnel will be included. ▪ The implementation sequence and the estimated time frames needed to accomplish all project-related tasks (i.e., evaluation of new resources resulting in work stoppage, time to complete reports, etc.) during the project activities and any post-project analysis phases of the project, if necessary, shall be specified. The intensity of monitoring proposed for each resource that may be impacted by project activities shall be outlined in the CRMP.	At least 90 days before construction, SCE to submit CRMP to the BLM and CPUC for review. The CPUC will submit the CRMP to representatives of consulting tribes for a 30-day review and comment period prior to approving the CRMP.	

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	▪ Person(s) expected to perform each monitoring and, if necessary, treatment task, their responsibilities, and the reporting relationships between project construction management and the monitoring and treatment team shall be outlined in the CRMP. ▪ Tribal Monitors shall be retained to monitor ground disturbing activities within 100 feet of prehistoric and protohistoric resources. Tribal Monitors shall be retained for data recovery within prehistoric and protohistoric resources identified for data recovery. The ELM Project area spans multiple Tribal areas. The Tribe affiliated with a specific area will be considered first to provide Tribal Monitors. If multiple Tribes or Tribal Organizations are affiliated with a specific area, Tribal Monitors will be selected on a rotating basis. The CRMP will describe the roles and responsibilities of the monitors. Tribal monitors will be compensated. All impact-avoidance measures (such as the presence of monitors) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during ground disturbance, construction, and/or operation shall be described. Areas where these measures are to be implemented shall be identified. The description shall address how these measures would be implemented prior to the start of ground disturbance and how long they would be needed to protect the resources from project-related impacts. ▪ The commitment to record resources on Department of Parks and Recreation (DPR) 523 forms, to map, and to photograph all newly identified cultural resources over 50 years of age shall be stated. Participating tribes may offer their perspective regarding the newly identified cultural resource. Comments by tribes may be documented on the DPR 523c, parts A13 (Interpretation) and A14 (Remarks). ▪ The commitment to curate all artifacts retained as a result of any archaeological investigations in accordance with the appropriate requirements and the California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections, into a retrievable storage collection in a public repository, museum, or reburial at the request of tribal representatives shall be stated. The different curation policies for archaeological material collected on BLM land as opposed to private or state land, shall be clearly articulated. ▪ The commitment of SCE to pay all curation or reburial fees for artifacts recovered and for related documentation produced during cultural resources investigations conducted for the project shall be stated. Should consulting tribes request that artifacts not be reburied, the CRMP shall identify a curation facility that could accept cultural resources materials resulting from project cultural resources investigations on private or state land. Tribal monitors shall be present for any reburials. ▪ A final report shall be prepared presenting the results of the monitoring efforts. The contents, format, and review and approval process of the final report shall meet appropriate federal, state, and local guidelines.		

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Geology and Soils			
MM PAL-1	**Retain qualified paleontological staff.** Project Paleontologist – Prior to the start of ground disturbance, a qualified paleontologist to serve as Project Paleontologist shall be retained by SCE. The qualifications of the Project Paleontologist shall be submitted to CPUC and BLM for approval. This individual shall retain a BLM paleontological resource use permit for the project and other appropriate permits. To do so this individual shall have the following qualifications as stipulated in BLM Manual 8270-1: ▪ Professional instruction in a field of paleontology relevant to the work proposed (vertebrate, invertebrate, trace, paleobotany, etc.), obtained through: – Formal education resulting in a graduate degree from an accredited institution in paleontology, or in geology, biology, botany, zoology or anthropology if the major emphasis is in paleontology; or – Equivalent paleontological training and experience including at least 24 months under the guidance of a professional paleontologist who meets qualification above that provided increased responsibility leading to professional duties similar to those in qualification above; and ▪ Demonstrated experience in collecting, analyzing, and reporting paleontological data, similar to the type and scope of work proposed in the application; ▪ Demonstrated experience in planning, equipping, staffing, organizing, and supervising crews performing the work proposed in the application; ▪ Demonstrated experience in carrying paleontological projects to completion as evidenced by timely completion and/or publication of theses, research reports, scientific papers and similar documents. As described in BLM Instruction Manual (IM) 2009-011, the Project Paleontologist will serve as the Principal Investigator (PI) under the BLM permit and is responsible for all actions under the permit, for meeting all permit terms and conditions, and for the performance of all other personnel. This person is also the contact person for the project proponent, CPUC, and the BLM. Additional Paleontological Staff – The Project Paleontologist may obtain the services of Paleontological Field Agents, Field Monitors, and Field Assistants, if needed, to assist in mitigation, monitoring, and curation activities. These individuals must meet the qualifications described in BLM IM 2009-011.	Prior to ground disturbance, resume for the Project Paleontologist shall be submitted to CPUC and BLM for approval. Additional paleontological staff must meet the qualifications described in BLM IM 2009-011.	
MM PAL-2	**Provide paleontological environmental awareness training.** SCE will provide worker's environmental awareness training on paleontological resources protection as part of its WEAP required under Mitigation Measure BR-2, Prepare and implement a Worker Environmental Awareness Program. This training may be administered by the project paleontologist as a stand-alone training or included as part of the overall worker's environmental awareness training. At a minimum, the training would include the following: ▪ the types of fossils that could occur at the project site;	Prior to working on the project, as part of the WEAP, each crew member shall be trained in paleontological resources protection**.**	

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	▪ the types of lithologies in which the fossils could be preserved; ▪ the procedures that should be followed in the event of a fossil discovery; and ▪ penalties for disturbing paleontological resources.		
MM PAL-3 [Supersedes APM CUL-04]	**Prepare and implement a Paleontological Resource Mitigation and Monitoring Plan (PRMMP).** Prior to the start of the project, SCE shall submit a Paleontological Mitigation and Monitoring Plan (PRMMP) for the project to the CPUC and BLM for review and approval. The PRMMP shall be prepared and implemented under the direction of the Project Paleontologist and shall address and incorporate mitigation measures PAL-1, PAL-3 and PAL-4. The PRMMP shall be based on Society of Vertebrate Paleontology (SVP) assessment and mitigation guidelines and meet all regulatory requirements. A monitoring plan indicates the avoidance or treatments recommended for the area of the proposed disturbance and must at a minimum address the following: ▪ Identification and mapping of impact areas of high sensitivity that will be monitored during construction; ▪ A coordination strategy to ensure that a qualified paleontologist will conduct monitoring at the appropriate locations at the appropriate intensity; ▪ The significance criteria to be used to determine which resources will be avoided or recovered for their data potential; ▪ Procedures for the discovery, recovery, preparation, and analysis of paleontological resources encountered during construction, in accordance with standards for recovery established by the SVP; ▪ Provisions for verification that the project proponent has an agreement with a recognized museum repository, for the disposition of recovered fossils and that the fossils shall be prepared prior to submittal to the repository as required by the repository (e.g., prepared, analyzed at a laboratory, curated, or cataloged); ▪ Specifications that all paleontological work undertaken by the project proponent shall be carried out by qualified paleontologists with appropriate current permits, including but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM) and any other permits required by other jurisdictions; ▪ Description of monitoring reports that will be prepared which shall include daily logs, monthly reports, and a final monitoring report with an itemized list of specimens found to be submitted to the BLM, the CPUC, the project proponent and the designated repository within 90 days of the completion of monitoring; ▪ The implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the ground-disturbance and post-ground-disturbance analysis phases of the project shall be specified; and ▪ Person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team shall be identified.	Prior to the start of the project, SCE shall submit PRMMP to the CPUC and BLM for review and approval.	

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	▪ All impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during ground disturbance, construction, and/or operation shall be described. Any areas where these measures are to be implemented shall be identified. The description shall address how these measures would be implemented prior to the start of ground disturbance and how long they would be needed to protect the resources from project-related impacts.		
Hazards and Hazardous Materials			
MM HH-1	**Prepare and implement a Hazardous Materials and Waste Management Plan.** SCE shall prepare and implement a Project-specific Hazardous Materials and Waste Management Plan pursuant to Title 24, Part 9 of the California Code of Regulations (CCR) that identifies hazardous materials to be transported, used, and stored on site for the proposed construction activities — as well as hazardous wastes generated onsite as a result of the proposed construction activities — and appropriate management procedures according to the specifications outlined below. ▪ **Hazardous Materials and Hazardous Waste Handling:** The Plan will include the following components: (1) the program shall identify types of hazardous materials to be used during the project and the types of wastes that would be generated; (2) proper hazardous materials use, storage and disposal requirements as well as hazardous waste management procedures; and (3) all project personnel shall be provided with project-specific training to ensure that all hazardous materials and wastes associated with the project are handled in a safe and environmentally sound manner and disposed of according to applicable rules and regulations. Specifically, employees handling wastes shall have or receive hazardous materials training and shall be trained in hazardous waste procedures, spill contingencies, waste minimization procedures and treatment, storage and disposal facility (TSDF) training in accordance with current OSHA Hazard Communication Standard and Title 22 CCR. The Plan shall identify the landfill facilities that are authorized to accept the types of waste generated and hauled, and these landfills shall be used for hazardous waste disposal during construction. ▪ **Transport of Hazardous Materials:** Hazardous materials that would be transported by truck include fuel (diesel fuel and gasoline) and oil and lubricants for equipment. Containers used to store hazardous materials would be properly labeled and kept in good condition. The Plan shall include written procedures for the transport of hazardous materials used in accordance with U.S. Department of Transportation and Caltrans regulations. A qualified transporter would be selected to comply with U.S. Department of Transportation and Caltrans regulations. The Plan shall identify proposed trucking routes. ▪ **Fueling and Maintenance of Construction Equipment:** Written procedures for fueling and maintenance of construction equipment shall be included in the Plan. Refueling and maintenance procedures may require vehicles and equipment to be refueled on site or by tanker trucks. Procedures will require the use of drop cloths made of plastic, drip pans and trays to be placed under refilling areas to ensure that chemicals do not come into contact	Submit Project-specific Hazardous Materials and Waste Management Plan CPUC and BLM 30 days prior to the start of construction for review and approval by CPUC.	

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	with the ground. Refueling would be located in areas where absorbent pad and trays would be available. The fuel tanks would also contain a lined area to ensure that accidental spillage does not occur. Drip pans or other collection devices would be placed under the equipment at night to capture drips or spills. Equipment would be inspected daily for potential leakage or failures. Hazardous materials such as paints, solvents, and penetrants would be kept in an approved locker or storage cabinet. ▪ **Fueling and Maintenance of Helicopters:** Written procedures for fueling and maintenance of helicopters shall be included in the Plan. Procedures may require helicopters be refueled at construction work areas, helicopter staging areas, or local airports. Procedures would include the use of drop cloths made of plastic, drip pans and trays to be placed under refilling areas to ensure that chemicals do not come into contact with the ground. Refueling areas shall be identified in the Plan and necessary spill response materials shall be available within each refueling area. ▪ **Emergency Release Response Procedures:** The Plan shall include emergency response procedures in the event of a release of hazardous materials. The Plan must prescribe hazardous materials handling procedures for reducing the potential for a spill during construction and would include an emergency response program to ensure quick and safe cleanup of accidental spills. Hazardous materials shall not be stored near drains or waterways. Fueling shall not take place within 50 feet of drains or waterways with flowing water or within 75 feet of drains or waterways that are dry. All construction personnel, including environmental monitors, would be made aware of state and federal emergency response reporting guidelines for accidental spills. The Plan shall be submitted to CPUC and BLM 30 days prior to the start of construction for review and approval by the CPUC.		
Hydrology and Water Quality			
MM HWQ-1	**Implement an Erosion Control Plan.** SCE shall develop and submit an Erosion Control Plan to the CPUC and BLM for review at least 60 days prior to construction. The Erosion Control Plan may be part of the Stormwater Pollution Prevention Plan (SWPPP) and kept onsite and readily available on request. Soil disturbance at structures and access roads is to be minimized and designed to prevent long-term erosion. The Erosion Control Plan shall include: ▪ The location of all soil-disturbing activities, including but not limited to new and/or improved access and spur roads. ▪ The location of all streams and drainage structures that would be directly affected by soil-disturbing activities (such as stream crossings or public storm drains by the right-of-way and access roads). ▪ BMPs to protect drainage structures, such as public storm drains, downstream of soil disturbance activities.	SCE to submit Erosion Control Plan to the CPUC and BLM for review at least 60 days prior to construction. Prior to construction submit grading plans and all applicable permits.	

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	▪ Design features to be implemented to minimize erosion during construction and during operation (if the project feature is to remain permanent after construction). ▪ If soil cement is proposed, the specific locations must be defined in the Plan, and evidence of approval by the appropriate jurisdiction shall be submitted to the CPUC and BLM prior to its use. ▪ The location and type of BMPs that would be installed to prevent off-site sedimentation and to protect aquatic resources. ▪ Specifications for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design and installation details. ▪ Proposed schedule for inspection of erosion control/SWPPP measures and schedule for corrective actions/repairs, if required. Erosion control/SWPPP inspection reports shall be provided to the CPUC EM. Locations requiring erosion control/SWPPP corrective actions/repairs shall be tracked, including dates of completion, and documented during inspections. Inspections and monitoring shall be performed in compliance with the Federal and California Construction General Permits. The inspection reports shall be maintained and kept with their respective SWPPP, kept on site as required by the Federal and State Construction General Permits, and made available upon request to the RWQCB, CPUC, BLM, and representatives of the traversed counties and cities. Additionally, an Annual Report shall be filed for each reporting period in compliance with Federal and California Construction General Permit reporting requirements. SCE shall submit Grading Plans to the CPUC and BLM for approval that define the locations of the specific features listed above. SCE shall submit to the CPUC and BLM evidence of possession of applicable required permits for the representative land disturbance prior to engaging in soil-disturbing construction/demolition activities. Such permits may include, but are not limited to, a CWA Section 402 NPDES California General Permit for Storm Water Discharges Associated with Construction Activities (General Permit) from the applicable Regional Water Quality Control Board(s) (RWQCBs), and the Federal General Permit for Storm Water Discharges Associated with Construction Activities on Tribal Land. Prior to any ground disturbance in stream channels or other waters jurisdictional to the State of California or the Federal Government, SCE shall obtain a Streambed Alteration Agreement from the California Department of Fish and Wildlife, a Section 404 permit from the USACE, and a CWA Section 401 certification from the SWRCB and submit to the CPUC and BLM evidence of possession of such Agreement/permits.		
MM HWQ-2	**Prepare and implement an HDD Fluid Management Plan.** If Horizontal Directional Drilling (HDD) is required, an HHD Fluid Management Plan shall be prepared and implemented. The plan shall include, at a minimum, the following measures: ▪ Worst-case scenario development and response effort descriptions.	If HDD is required, an HHD Fluid Management Plan shall be prepared.	

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	▪ Drilling pressure monitoring to ensure pressures do not exceed those needed to penetrate the formation. ▪ Monitoring by a minimum of two monitors (located both upstream and downstream) throughout drilling operations to ensure early detection and swift response in the event of a surface expression of drilling fluid. ▪ Site-specific contingency measures shall be developed for the drill site, taking into consideration terrain, access, resource sensitivities, and proximity of suitable areas for staging response equipment for the unanticipated surface expression of drilling fluid. ▪ Agency notification procedures. ▪ Training for responding personnel. ▪ Prevention, containment, clean up, and disposal of released drilling mud. Preventative measures shall include incorporation of the recommendations of a pre-construction geo-technical investigation to determine the most appropriate drilling depth and drilling mud mixture for the HDD bore site. Containment shall be accomplished through construction of temporary berms/dikes and use of silt fences, straw bales, absorbent pads, straw wattles, and plastic sheeting. Clean up shall be accomplished with plastic pails, shovels, portable pumps, and vacuum trucks. ▪ A copy of the Streambed Alteration Agreement (SAA) shall be provided in the Plan. If the SAA also requires development of a similar plan to address HDD fluid management, that plan, as approved by CDFW, may be used to satisfy this measure provided it adequately addresses the requirements identified herein, as determined by the CPUC and BLM.		
Noise			
MM N-2	**Provide advance notification of construction noise.** Sixty days prior to construction, SCE shall prepare and submit a public notice mailer format to the CPUC for approval. The details of notification may be modified in consultation with CPUC as warranted by the circumstances. No less than 15 days prior to construction that would occur within 500 feet of residences, businesses, or other occupied structures, SCE shall distribute a public notice mailer. The notice shall state the type of construction activities that will be conducted, and the location and duration of construction. The notice shall identify, and SCE shall provide a public liaison person before and during construction to respond to concerns of residents about construction noise. SCE shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers. SCE shall address all complaints within one week of when the complaint is filed, and shall provide to the CPUC, within 15 days of the end of each month, a monthly report with records of all complaints and responses. SCE shall mail the notice to all residents or property owners within 500 feet of the right-of-way or within 1,000 feet of helicopter fly yards and flight paths.	60 days prior to construction, SCE shall submit public notice mailer format to the CPUC for approval. No less than 15 days prior to construction that would occur within 500 feet of residences, businesses, or other occupied structures, SCE shall distribute a public notice mailer.	

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Transportation			
MM T-1	**Prepare and implement a Construction Traffic Control Plan.** Prior to the start of construction of a project component that could affect traffic (e.g., OPGW reconductoring over public roadways), SCE shall submit a Construction Traffic Control Plan for review and approval by state and local agencies responsible for public roads that would be directly affected by the construction activities and/or would require permits and approvals. The Construction Traffic Control Plan shall include, but not be limited to: ▪ The locations and use of flaggers, warning signs, barricades, delineators, cones, arrow boards, etc. according to standard guidelines outlined in the Manual on Uniform Traffic Control Devices, the Standard Specifications for Public Works Construction, and/or the California Joint Utility Traffic Control Manual. ▪ The locations of all road or traffic lane segments that would need to be temporarily closed or disrupted due to construction activities. ▪ The locations where guard poles, netting, or similar means to protect transportation facilities for any construction work requiring the crossing of a local street, highway, or rail line are proposed. ▪ The use of continuous traffic breaks operated by the Highway Patrol on state highways (if necessary). ▪ Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by SCE of the proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle passage, or providing short detours, or developing alternate routes in conjunction with the public agencies.	Prior to construction, SCE shall submit a Construction Traffic Control Plan for review and approval by state and local agencies for application public roadways.	
MM T-2	**Repair roadways and transportation facilities damaged by construction activities.** If roadways, sidewalks, medians, curbs, shoulders, or other such transportation features are damaged by project construction activities, as determined by Caltrans or other public agency responsible for the transportation feature, such damage shall be repaired and restored to the pre-project condition by SCE. Prior to construction, SCE shall establish the pre-construction conditions of the roads within 500 feet in each direction of project access points (where heavy vehicles will leave public roads to reach unpaved access roads, yards, or other project sites) and confer with state and local agencies regarding roads in the agency's jurisdiction to be crossed by the project components. Establishment of existing conditions may include dated photographic or video documentation.	Prior to construction, SCE shall establish the pre-construction conditions of the roads within 500 feet in each direction of project access points and confer with State and local agencies.	
MM T-3	**Prepare and implement a final helicopter use plan.** SCE and its contractor shall prepare and obtain approval of a Final Helicopter Use Plan 30 days prior to using helicopters to transport personnel, materials, or equipment for the deconstruction of existing project facilities or	30 days prior to using helicopters, SCE shall submit	

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	construction of new or replacement project facilities. The plan shall identify the specific locations requiring deconstruction or construction work using helicopters. The Final Helicopter Use Plan shall draw upon protocols and methods used on previous transmission line projects and shall be submitted to CPUC and BLM for approval. The Federal Aviation Agency (FAA) has jurisdiction over U.S. airspace, aircraft, aircraft operations, airports, and pilots. To the extent that they do not conflict with any FAA requirements, the following shall apply to helicopter use and be incorporated in the Final Helicopter Use Plan. ▪ All aircraft and pilots shall be in full compliance with applicable FAA requirements and standards. ▪ On the day before a flight, helicopter flight information shall be provided by email to CPUC/BLM monitors regarding the specific sites to be used for helicopter retrieval of materials, equipment, or personnel and the destination of the materials, equipment, or personnel being transported. Information provided in the email shall include pilot name, contact number, aircraft type, aircraft registration number, aircraft color, work/flight area, anticipated beginning and completion times, and scope of work. ▪ The specific locations requiring deconstruction or construction work using helicopters shall be identified. ▪ Temporary staging of materials outside of approved yards or on access or spur roads shall not occur without prior approval of CPUC or BLM, as appropriate. ▪ The yards to and from which helicopters would fly (fly yards) shall be identified and shall be of sufficient size to ensure safe operations, given the other activities occurring at the yards and the vicinity. ▪ Fly yards shall be no closer than a horizontal distance of 475 feet from occupied residences to avoid unacceptable nuisances. ▪ Site-specific steps taken to avoid nuisances and ensure safe refueling shall be identified for each fly yard. ▪ Flight paths that minimize flights in wilderness areas and near schools, hospitals, nursing homes, and other sensitive group receptors shall be identified and followed. ▪ Except in an emergency, helicopters shall land or hover near the ground only in areas previously approved for landing, and all dust control and biological and cultural resource protection requirements shall apply. ▪ External loads will be secured by appropriate rigging, including boxing, netting, choking, and cabling, or other suitable means. Only qualified riggers shall prepare and attach external loads to helicopters, and rigging shall be appropriate to the nature of the load, including the use of devices as necessary to prevent materials being lost in flight. Where appropriate to reduce load in-flight spinning and movement, drag chutes will be attached to loads. The need for drag chutes will be determined by the pilot and rigging personnel,	Helicopter Use Plan to CPUC and BLM for approval. Once the Helicopter Use Plan is made final, SCE shall provide a copy as a courtesy to each jurisdiction through which the Project passes.	

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	where appropriate. At locations where rigging is to occur, a sufficient supply of appropriate rigging and containment materials in good repair shall be on hand at all times. ▪ All aircraft are to be configured with weight sensors such that, when preparing to haul external loads, the pilot is able to determine the weight of the load being lifted. ▪ Yards or landing zones shall have a designated qualified individual managing the movement of aircraft in and out of the yard or landing zone when flight activity is high. ▪ Appropriate protocols for communication among pilots and between pilots and the ground shall be developed and implemented. ▪ A GPS-based data system shall be installed in each aircraft. – The system shall identify for the pilot all project-approved project flight paths and those areas where overflights are restricted (such as seasonally restricted bird nesting areas and sensitive residential or institutional areas) and shall be updated as often as any flight restrictions are implemented or lifted. – The system shall automatically record and preserve flight data sufficient to identify the aircraft's flight path, including altitude above ground. The system shall be capable of providing the information required with regard to flight path and aircraft identifier and provide a location "ping" no less frequently the once every 3 seconds. These data shall be collected daily and maintained by SCE or its contractor for a period of no less than six months and made available to CPUC or BLM upon request. The Helicopter Use Plan shall be submitted to CPUC and BLM for review and approval at least 30 days prior to the use of helicopters on the project. Once the Helicopter Use Plan is made final, a copy shall be provided as a courtesy to each jurisdiction through which the Project passes.		
Tribal Cultural Resources			
APM-TCR-2	**Tribal Engagement Plan.** A tribal engagement plan shall be prepared, which will detail how Native American tribes will be engaged and informed throughout the proposed project. The tribal engagement plan will be included in the CRMP.	Include Tribal Engagement Plan within CRMP.	
Also see MMs CR-1 through CR-8 above, under Cultural Resources.			
Utilities and Service Systems			
MM UT-1	**Provide cathodic protection.** Prior to commencing construction or as soon as such data are available, if it is not available before construction, SCE shall determine and report to CPUC and BLM the location of adjacent utilities and other metallic or conducting objects susceptible to induced voltages and currents. The scope of SCE's report shall include the results of an alternating current interference study by SoCalGas on the natural gas pipelines that parallel or cross portions of the Lugo-Mohave 500 kV Transmission Line. ….. If SCE identifies other utilities near the 500 kV Transmission Lines that may be susceptible to increased risk of corrosion due to induced currents or voltages, SCE shall conduct or have	SCE shall provide CPUC and BLM utility / metallic object locations as soon as available and conduct alternating current interference study at required locations and submit to CPUC and BLM for review and approval at least 60 days	

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	conducted an alternating current interference study during construction of the ELM Project that evaluates the alternating current interference effects of the 500 kV transmission lines on such other utilities. The study shall include the development of a model using the maximum magnetic field levels for the transmission lines, including the conductor arrangement. For all utilities identified with a corrosion potential, SCE shall coordinate with the owner of the utility and use data gathered in the alternating current interference study to determine appropriate design measures to protect the utility from corrosion, such as ground mats or gradient control wires for cathodic protection of buried pipelines and other utilities. The study, summary of coordination with potentially affected utilities, and specifications of any design measures to be installed shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to initiation of installation of such protection.	prior to cathodic protection installation.	
MM UT-2	**Implement mitigation measures during pipeline protection work.** Any agreement between SCE on the one hand and any party undertaking installation of pipeline protection measures required as a result of the ELM Project on the other hand shall include a requirement that applicable mitigation measures required during construction of the ELM Project also apply to and be implemented during any required pipeline-related work. At a minimum, and to the extent that they apply in the geographic area of the pipeline work, these will include mitigation measures for impacts to biological resources, cultural and tribal cultural resources, and hazards and hazardous materials. The BLM and NPS may substitute equally effective mitigation measures or may require additional measures be implemented. A copy of the agreement between SCE and any other party for the pipeline work shall be provided to CPUC, BLM, and NPS. Business confidential information may be redacted, but the general nature of any redaction shall be identified. Absent a binding agreement between SCE and any other party to implement the required mitigation measures, or equally effective measures imposed by BLM and/or NPS, SCE will not be authorized to fund any of the required pipeline work.	A copy of the agreement between SCE and any other party for pipeline work shall be provided to CPUC, BLM, and NPS.	
MM UT-3	**Provide safety features for induced currents on adjacent metallic objects.** Prior to commencing construction or as soon as such data are available, if it is not available before construction, SCE shall determine and report to CPUC and BLM the location of metallic or conducting objects that may present a shock hazard to the public due to induced voltages or currents. SCE shall prepare an Induced Current Touch study that evaluates the conductive and inductive interference effects of the 500 kV transmission lines and new overhead distribution lines on the identified conductive objects. The Induced Current Touch study, including the criteria and approach that were used to determine what objects could present a shock and the details of the grounding or other measures to be installed, shall be submitted to the CPUC and BLM for review and approval. …..	SCE shall provide CPUC and BLM metallic object locations that may present a shock hazard as soon as available and prepare an Induced Current Touch Study for CPUC and BLM review and approval.	

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Wildfire			
MM WF-1	**Prepare and implement a Fire Management Plan.** A project-specific Fire Management Plan for construction of the ELM project shall be prepared by SCE and submitted for review and approval by the CPUC prior to initiation of construction. The draft copy of the Plan must also be provided to each responsible fire agency at least 90 days before the start of construction activities in areas designated as Very High or High Fire Hazard Severity Zones with a request for comments on the Plan's adequacy within 30 days. Plan reviewers shall include CPUC, BLM, CAL FIRE, and San Bernardino County. Comments received on the draft Plan shall be provided to SCE from all other reviewers, and SCE shall resolve each comment in consultation with the commenting agency. CPUC shall approve the final Plan, which shall be provided to the Plan reviewing agencies at least 30 days prior to the initiation of construction activities in the Fire Hazard Severity Zones. SCE shall fully implement the Plan during all construction activities. A qualified project Fire Marshal or person of similar title and experience shall be established by SCE to implement and enforce all provisions of the approved Fire Management Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. The Fire Marshal shall monitor construction activities to ensure implementation and effectiveness of the plan. The Plan shall cover: ▪ The purpose and applicability of the plan; ▪ Responsibilities and duties; ▪ Preparedness training and drills; ▪ Procedures for fire reporting, response, and prevention that include: – identification of daily site-specific risk conditions, – the appropriate tools and equipment needed on vehicles and to be on hand at sites, – reiteration of fire prevention and safety considerations during tailboard meetings, and – daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity; ▪ Coordination procedures with BLM and San Bernardino County fire officials; ▪ Crew training, including fire safety practices and restrictions; and ▪ Methods for verification that Plan protocols and requirements are being followed.	Prior to construction, SCE to submit Fire Management Plan to CPUC for review and approval.	

ATTACHMENT C

During Construction Mitigation Measures and APMs

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Aesthetics			
MM AES-1	**Minimize visual contrast in project design**. Requirements of the Design and Surface Treatment Plan shall be implemented during construction.	CPUC EM to verify implementation of Plan requirements.	
MM AES-2	**Screen construction activities from view**. To reduce significant impacts associated with construction yards, staging areas, and material and equipment storage areas shall be visually screened using temporary screening fencing, with the exception of construction yards, staging areas, and material and equipment storage areas on existing substation properties. Fencing will be of an appropriate structure, material, and color for each specific location. This requirement shall not apply if SCE can demonstrate that construction yards are located away from areas of high public visibility including public roads, residential areas, and public recreational facilities or the yards are in areas where high winds pose a risk of the screening detaching and creating a hazard. For any site that SCE proposes to exempt from the screening requirement, SCE shall define the site on a detailed map demonstrating its visibility from nearby roads, residences, or recreational facilities to the agency having jurisdiction over the land (CPUC, BLM, or NPS) for review and approval at least 60 days prior to the start of construction at that site.	For exempt yards and other project areas, request to be submitted 60 days prior to construction at that site. Prior to and during use of yards and other project areas, visual screening shall be installed and maintained.	
MM AES-3	**Minimize vegetation removal and ground disturbance.** Only the minimum amount of vegetation necessary for the construction of structures and facilities shall be removed during construction. In particular, vegetation within the ROW and ground clearing at the foot of each tower and between towers shall be limited to the clearing necessary to comply with requirements of CPUC General Order 95 and other regulatory requirements. Scars from temporary work areas and access road may be highly visible when located on hill slopes and along ridges, or when visible from elevated vantage points. In order to reduce visual impacts, the boundaries of all areas to be disturbed shall be delineated consistent with the requirements of Biological Resources Mitigation Measure BR-3. Staking, flagging, or other appropriate means shall define construction work areas, such as capacitor site grading areas, staging yards, and pulling sites. Stakes and flagging shall be installed before construction and in consultation with the Project Biologist and the agency's Environmental Monitor or Visual Specialist. Areas staked or flagged shall be as small as possible in order to minimize the visibility of ground disturbance from sensitive viewing locations such as roads, trails, residences, and recreation facilities and areas. Parking areas and staging and disposal site locations shall be similarly located in areas approved by the Project Biologist and the agency's Environmental Monitor or Visual Specialist prior to the start of construction. All disturbances by Proposed Project vehicles and equipment shall be confined to the staked and flagged areas.	Minimization of vegetation removal and ground disturbance during construction. CPUC EM to validate construction area staking.	

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MM AES-4	**Minimize night lighting at new project facilities.** At the project's new in-line series capacitors and fiber optic repeater facilities, SCE shall avoid night lighting where possible and minimize its use under all circumstances. To ensure this, SCE shall implement the following general principles and specifications: ▪ When used, portable truck-mounted lighting shall point away from roads and from residences within 1,000 feet. ▪ White lighting (metal halide & LED) (a) shall only be used when necessitated by specific work tasks; and (b) shall be less than 5000 Kelvin color temperature. ▪ All lamp locations, orientations, and intensities shall be the minimum needed for safety and security. ▪ Light fixtures that could be visible from beyond project facility boundaries shall have cutoff angles sufficient to prevent lamps and reflectors from being visible beyond the project facility boundary, including security lighting. ▪ If security lighting is installed, motion sensors are to be used to activate the security lighting; lights shall operate continuously only when the area is occupied. ▪ All temporary construction lighting, including at yards, and all permanent exterior lighting shall include: (a) lamps and reflectors that are not visible from beyond the construction site or facility including any off-site security buffer areas; (b) lighting that does not cause excessive reflected glare; and (c) directed lighting that does not illuminate the nighttime sky, except for required FAA aircraft safety lighting, if required. ▪ Lighted nighttime maintenance is to be minimized or avoided as a routine practice and should occur only during emergencies.	CPUC EM to validate that light minimization measures have been incorporated.	
Air Quality			
APM AIR-01	**Fugitive Dust.** During construction, fugitive dust would be controlled by implementing the following measures: ▪ Surfaces disturbed by construction activities would be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance. ▪ Inactive disturbed (e.g., excavated or graded areas) soil and soil piles would be sufficiently watered or sprayed with a soil stabilizer to create a surface crust or would be covered. ▪ Drop heights from excavators and loaders would be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material would be covered with tarps or maintain at least 6 inches of freeboard. ▪ Within Nevada, vehicle speeds on unpaved traffic and parking areas would be restricted to 15 miles per hour. In California, vehicle speeds on unpaved roadways would adhere to all posted speed limits. ▪ Within Nevada, unpaved non-public traffic and parking areas designated for utilization during Proposed Project construction would be effectively stabilized to control dust	CPUC EM to validate implementation of dust control measures.	

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	emissions (e.g., using water or chemical stabilizer/suppressant). In California, unpaved non-public traffic and parking areas designated for utilization during Proposed Project construction would be effectively stabilized to control dust emissions with a chemical stabilizer/suppressant.		
MM AQ-1 (supplements APM AIR-01)	**Prepare and implement a Dust Control Plan.** SCE shall Implement Dust Control Plan requirements during construction.	CPUC EM to validate Plan implementation.	
APM AIR-02	**Tier 4 Engines.** Off-road diesel construction equipment with a rating between 100 and 750 horsepower would be required to use engines compliant with the U.S. Environmental Protection Agency's final Tier 4 non-road engine standards. In the event that a Tier 4 engine is not available, the equipment would be equipped with a Tier 3 engine and documentation would be provided from a local rental company stating that the rental company does not currently have the required diesel-fueled, off-road construction equipment, or that the vehicle is specialized and is not available to rent. Similarly, if a Tier 3 engine is not available, that equipment would be equipped with a Tier 2 or 1 engine, and documentation of unavailability would be provided.	CPUC EM to confirm Tier 4 engines in use. If Tier 4 is not available, SCE to provide documentation prior to mobilizing equipment on site.	
APM AIR-03	**Idling.** Equipment would not be left idling in excess of five minutes, except when idling is required for the equipment to perform its task or has a California clean-idle sticker.	CPUC EM to validate APM implementation.	
APM AIR-04	**Equipment Maintenance.** Diesel engines would be maintained in good working order and according to manufacturer's specifications to reduce emissions.	CPUC EM to review maintenance records.	
APM AIR-05	**Ridesharing.** Workers would be encouraged to carpool to work sites, and/or utilize public transportation for employee commutes.	SCE to encourage carpooling.	
Biological Resources			
MM BR-1	**Conduct biological monitoring and reporting.** The following provisions shall apply to the approved project during the construction and post-construction restoration phases. **Lead biologist:** SCE shall propose one or more lead biologist(s) and submit their resume(s) to the CPUC and BLM for concurrence, no less than 60 days prior to the start of any ground-disturbing activities, including those occurring prior to site mobilization (including, but not limited to geotechnical borings or hazardous waste evaluations). At minimum the lead biologist will hold a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; have at least three years of experience in field biology and at least one year of direct field experience with biological resources found in or near the project area, *OR* relevant education and experience that demonstrates the ability to carry out the tasks required of a lead biologist. The resume(s) shall demonstrate to the satisfaction of the CPUC and BLM the appropriate education and experience to accomplish the assigned biological resources tasks. The lead biologist will be SCE's primary point of contact to CPUC, BLM, NPS, CDFW, and USFWS regarding any biological resource issues and implementation of related	SCE to submit resumes for Lead Biologist and Biological Monitors for concurrence by the CPUC and BLM, at least 10 working days prior to commencing field duties. SCE shall provide training to biological monitors, in addition to WEAP, on bio resources, MM requirements, etc., prior to the monitor commencing field duties. Biological monitors, knowledgeable of potential bio resources, shall be on	

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	mitigation measures and permit conditions throughout project construction and post-construction restoration work. In addition, the lead biologist will oversee supervision and training of biological monitors (below) and preparation and submission of all monitoring reports and notifications (below). If the lead biologist is replaced, the specified information of the proposed replacement must be submitted to the CPUC and BLM at least ten working days prior to the termination or release of the preceding lead biologist. In an emergency, SCE shall immediately notify the CPUC and BLM to discuss the qualifications and approval of a short-term replacement while a permanent lead biologist is proposed for consideration. **Biological monitors:** SCE shall assign qualified biological monitors to the project to monitor all work activities with the potential to impact special status species or their habitat during the construction phase. Work sites or activities considered to have no potential to impact special-status species or habitats will be subject to review and approval by CPUC in coordination with CDFW, USFWS, and BLM. Monitors are responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, and sensitive or unique biological resources are avoided or minimized to the fullest extent safely possible. Monitors are also responsible to ensure that work activities are conducted in compliance with the retained APMs, mitigation measures, permit conditions, and other project requirements. Resumes of all biological monitors, including specialty monitors (including but not limited to bat, nesting bird, and special-status species monitors), shall be provided for concurrence by the CPUC and BLM, at least 10 working days prior to the monitor commencing field duties. The resumes shall demonstrate, to the satisfaction of the CPUC and BLM, the appropriate education and experience to accomplish the assigned biological resources tasks. SCE shall provide training to biological monitors, in addition to WEAP (see Mitigation Measure BR-2) and prior to the monitor commencing field duties, on biological resources present or potentially present on the Proposed Project, as well as mitigation measures, permit requirements, project protocols, and the duties and responsibilities of a biological monitor. Biological monitors shall inform construction crews daily of any environmentally sensitive areas (ESAs), nest buffers, or other resource issues or restrictions that affect the work sites for that day. Biological monitors shall communicate with construction supervisors and crews as needed (e.g., at daily tailgate safety meetings (“tailboards”), by telephone, text message, or email) to provide guidance to maintain compliance with mitigation measures and permit conditions. SCE shall ensure that adequate numbers of monitors are assigned to effectively monitor work activities and that communications from biological monitors are promptly directed to crews at each work site for incorporation into daily work activities. If biological monitors are unavailable for a tailboard meeting, the construction supervisors shall communicate all ESA, nest buffers,	site at all times when project activities are occurring in any area where there is a potential to impact sensitive biological resources or jurisdictional waters, and conduct daily sweeps. Biological monitors shall inform construction crews daily of any environmentally sensitive areas (ESAs), nest buffers, or other resource issues or restrictions that affect the work sites for that day. SCE shall ensure that biological monitors are provided with up-to-date biological resource maps and construction maps and schedules, which shall also be provided to CPUC/BLM monitors. SCE shall prepare and submit daily, weekly, and annual monitoring reports to the CPUC and BLM.	

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	or other resource restrictions to crews during the meeting. SCE shall ensure that biological monitors are provided with an accurate daily construction work schedule as well as updated information on any alterations to the daily construction work schedule. This information shall also be provided to CPUC/BLM monitors. SCE shall ensure that biological monitors are provided with up-to-date biological resource maps and construction maps in hardcopy or digital format. These maps shall also be provided to CPUC/BLM monitors. Monitors shall be familiar with the biological resources present or potentially present, ESAs, nest buffers, and any other resource issues at the site(s) they are monitoring, as well as the applicable mitigation measures and permit requirements. Monitors shall exhibit diligence in their monitoring duties and refrain from any conduct or potential conflict of interest that may compromise their ability to effectively carry out their monitoring duties. **Biological monitor duties and responsibilities:** Throughout the duration of construction, SCE shall conduct biological monitoring and have biological monitors on site at all times when project activities are occurring in any area where there is a potential to impact sensitive biological resources or jurisdictional waters, including but not limited to vegetation removal/trimming/disturbance, all ground-disturbing work activities, and initial "drive and crush" in the project area, including work sites, yards, staging areas, access roads, and any area subject to project disturbance. Pre-construction activities (e.g., for geotechnical borings, hazardous waste evaluations, etc.) and post-construction restoration shall also be monitored by a biological monitor during all such activities. Each day, prior to work activities at each site requiring monitoring, a biological monitor shall conduct clearance surveys ("sweeps") for sensitive plant or wildlife resources that may be located within or adjacent to the construction areas. If sensitive resources are found, the biological monitor shall take appropriate action as defined in all adopted mitigation measures, retained APMs, and permit conditions. Work activities shall not commence at any work site until the clearance survey has been completed and the biological monitor communicates to the contractor that work may begin. Biological monitors shall clearly mark sensitive biological resource areas with staking, flagging, or other appropriate materials that are readily visible and durable. The monitors will inform work crews of these areas and the requirements for avoidance and will inspect these areas at appropriate intervals for compliance with regulatory terms and conditions. The biological monitors shall ensure that work activities are contained within approved disturbance area boundaries at all times. Biological monitors shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, retained APMs, permit conditions, or other project requirements, or will have an unauthorized adverse effect on biological resources.		

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	Handling, relocation, release from entrapment, or other interaction with wildlife shall be performed consistent with mitigation measures, safety protocols, permits (including CDFW and USFWS permits), and other project requirements. Biological monitors shall, to the extent safe, practicable, and consistent with mitigation measures and permit conditions, actively or passively relocate wildlife out of harm's way. On a daily basis, biological monitors shall inspect construction areas where animals may have become trapped, including equipment covered with bird exclusion netting, and release any trapped animals. Daily inspections shall also include areas with high vehicle activity (e.g., yards, staging areas), to locate animals in harm's way and relocate them if necessary. If safety or other considerations prevent biological monitors from aiding trapped wildlife or wildlife in harm's way, SCE shall consult with the construction contractor, CDFW, wildlife rehabilitator, or other appropriate party to obtain aid for the animal, consistent with Mitigation Measure BR-7 (Ensure wildlife impact avoidance and minimization). At the end of each work day, biological monitors shall verify that excavations, open tanks, and trenches have been covered or have ramps installed to prevent wildlife entrapment and communicate with work crews to ensure these structures are installed and functioning properly. Biological monitors shall regularly inspect any wildlife exclusion fencing daily to ensure that it remains intact and functional. Any need for repairs to exclusion fencing shall be immediately communicated to the responsible party, and repairs shall be carried out in a timely manner, generally within one work day. **Reporting:** SCE shall prepare and implement a procedure for communication among biological monitors and construction crews, to ensure timely notification (i.e., daily or sooner, as needed) to crews of any resource issues or restrictions. SCE will notify the CPUC and BLM of the procedure and will maintain records of daily communication. SCE will provide CPUC and BLM on-line access to project resource management maps and GIS data. Monitoring activities shall be thoroughly and accurately documented on a daily basis. SCE shall prepare and submit daily, weekly, annual, and final monitoring reports to the CPUC and BLM. …..		
MM BR-2	**Prepare and implement a Worker Environmental Awareness Program (WEAP).** SCE shall prepare and implement a project-specific Worker Environmental Awareness Program (WEAP) to educate on-site workers about the Proposed Project's sensitive environmental issues. The WEAP shall be presented by the lead biologist or a biological monitor to all personnel on-site during the construction phase, including but not limited to surveyors, engineers, inspectors, contractors, subcontractors, supervisors, employees, monitors, visitors, and delivery drivers. If the WEAP presentation is recorded on video, it may be presented by any competent project personnel. Throughout the duration of construction, SCE shall be responsible for ensuring that all	Throughout the duration of construction, SCE shall be responsible for ensuring that all on-site project personnel receive WEAP training prior to beginning work. WEAP training ("WEAP lite") may be used for individuals	

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	on-site project personnel receive this training prior to beginning work. A construction worker may work in the field along with a WEAP-trained crew for up to 5 days prior to attending the WEAP training. SCE shall maintain a list of all personnel who have completed the WEAP training. This list shall be provided to the CPUC and BLM upon request. ….. **WEAP Lite.** An abbreviated version of WEAP training ("WEAP lite") may be used for individuals who are exclusively delivery drivers, concrete truck drivers, or visitors to the project site, and will be provided by a qualified project biologist, biological monitor, or environmental field staff prior to those individuals entering or working on the project. Short-term visitors (total of 5 days or less per year) to the project site who will be riding with and in the company of WEAP-trained project personnel for the entire duration of their visit(s) are not required to attend WEAP or WEAP lite training. WEAP lite presentations shall be tailored to delivery/concrete truck drivers and visitors as well as the situation and emphasize project requirements that are relevant to those individuals and that situation. **WEAP Refreshers.** Biological monitors or environmental field staff will periodically present brief WEAP refresher presentations at tailboards to help construction crews and other personnel maintain awareness of environmental sensitivities and requirements. A 5- to 10-minute informal talk will be presented at each of the project's main contractor/ subcontractor tailboards at least once a week. When a contractor or subcontractor resumes work after a long break, a biological monitor or environmental field staff will provide an extended WEAP refresher presentation (10-20 minutes) at each of the contractor/subcontractor tailboards on the first day back to work.	who are exclusively delivery drivers, concrete truck drivers, or visitors to the project site, prior to those individuals entering or working on the project. Periodic brief WEAP refresher presentations shall be presented at tailboards to help construction crews and other personnel maintain awareness of environmental sensitivities and requirements.	
MM BR-3	**Minimize native vegetation and habitat loss.** Final engineering of the project shall minimize the extent of disturbance and removal of native vegetation and habitat, to the extent safely possible. Work activities and roadways will avoid or minimize direct or indirect effects to sensitive habitat types or jurisdictional waters and provide buffer areas to minimize disturbance. Project access will utilize existing routes or bridges over jurisdictional waters wherever possible. Consistent with project safety and security protocols, landowner preferences, and any other applicable regulations or requirements, existing gates on project access roads will be closed and secured when project personnel enter or leave an area. ….. To the extent feasible and safe, vegetation removal within work areas will be minimized and construction activities will implement drive and crush access and site preparation rather than grading. Stockpiling of spoils and salvaged topsoil will be located in previously disturbed areas and/or will avoid native habitat areas.	Vegetation removal within work areas will be minimized and work areas will be marked with staking or flagging to identify the limits of work, and validated by the CPUC EM. Construction activities will implement drive and crush access and site preparation rather than grading. Stockpiling of spoils and salvaged topsoil will be located in previously disturbed areas and/or will avoid native habitat areas.	

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	Prior to any construction, equipment or crew mobilization at each work site, work areas will be marked with staking or flagging to identify the limits of work and will be verified by project environmental staff and CPUC Environmental Monitor. Staking and flagging will clearly indicate the work area boundaries. Where staking cannot be used, traffic cones, traffic delineators, or other markers shall be used. Staking and flagging or other markers shall be in place during construction activities at each work site and refreshed as needed. Coded flagging colors or color combinations will be consistent and uniform across the project. All work activities, vehicles, and equipment will be confined to approved roads and staked and flagged or marked work areas.		
MM BR-4 [Supersedes APM BIO-01]	**Restore or revegetate temporary disturbance areas.** …. SCE will restore and revegetate temporary disturbance areas in accordance with the Habitat Restoration and Revegetation Plan (HRRP). …. All temporarily disturbed areas will be subject to revegetation and site management activities and success criteria of the Proposed Project's SWPPP/Erosion Control Plan (HWQ-1) and the Integrated Weed Management Plan (BR-5) to ensure soil stabilization, vegetation cover, and weed prevention. ….. For all restoration areas, if a fire, flood, or other disturbance beyond the control of SCE, CPUC, and BLM damages the area within the monitoring period, SCE shall be responsible for a one-time replacement. If a second event occurs, no replacement is required. ….. Monitoring of the restoration sites will continue annually for up to 5 years or until the defined success criteria in the HRRP are achieved. SCE will be responsible for implementing remediation measures as needed. Following remediation work, each site will still be subject to the success criteria required for the initial restoration. The monitoring period for remediation work will be concurrent with the monitoring period required for the initial restoration. **Reporting.** For all restoration areas, SCE will provide annual reports to the CPUC and BLM verifying the total vegetation acreage subject to temporary and permanent disturbance, identifying which items of the HRRP have been completed, and which items are still outstanding. The annual reports will also include a summary of the restoration activities for the year, a discussion of whether success criteria were met, any remedial actions conducted and recommendations for remedial action, if warranted, that are planned for the upcoming year. Each annual report will be submitted within 90 days after completion of each year of restoration work.	SCE to implement, HRRP, SWPPP/Erosion Control Plan, and Integrated Weed Management Plan. SCE to monitor restoration sites annually for up to 5 years or until the defined success criteria in the HRRP are achieved and provide annual reporting, and provide annual reports to CPUC and BLM.	
MM BR-5 [Supersedes APM BIO-03]	**Prepare and Implement an Integrated Weed Management Plan.** SCE shall implement an Integrated Weed Management Plan (IWMP) describing the proposed methods of preventing or controlling project-related spread or introduction of weeds.	Implement IWMP during construction, including reporting.	

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MM BR-6 [Supersedes APM BIO-02]	**Minimize and mitigate impacts to special-status plants.** **Pre-construction survey.** SCE shall conduct focused pre-construction surveys for federal- and state-listed and other special-status plants within suitable habitat. All special-status plant species (including listed threatened or endangered species, and CNPS California Rare Plant Rank (CRPR) 1 and 2 ranked species likely to be impacted by project activities shall be documented in pre-construction survey reports. Surveys shall be conducted by a qualified botanist during the appropriate season in all suitable habitat within 50 feet of disturbance areas. The field surveys and reporting must conform to current CDFW botanical field survey protocol (CDFG, 2018). Where any special-status plants may be discovered, the survey area will extend beyond the ROW to determine the extent of the local occurrence, to evaluate the significance of any project impacts. The reports will describe any conditions that may have prevented target species from being located or identified, even if they are present as dormant seed or below-ground rootstock. If pre-construction survey areas conducted in years of poor rainfall or following other extreme events (e.g., recent intense overgrazing or wildfire), then the project shall use data from 2016/2017 and 2019 surveys to define population area and maximum number of individuals (Note, the unusually high rainfall in 2017 and 2019 are likely to better define rare plant locations and have more accurate results than subsequent years with lower rainfall). For species not previously detected on surveys but for which have a high potential to occur, reference populations will be used to determine if the species is detectable for pre-construction surveys conducted in suitable habitat. Prior to initial ground disturbance at individual construction work areas, SCE shall submit pre-construction field survey reports along with maps showing locations of survey areas and special-status plants to the CPUC and BLM for review and approval in coordination with CDFW. **Native cactus and *Yucca*.** …. SCE will implement a cacti and yucca salvage plan. **Mitigation.** SCE shall mitigate impacts to any state or federally listed plants or CRPR 1 or Nevada ranked S1, S2, or S3 species that may be located on the project disturbance areas or surrounding buffer areas through one or a combination of the following strategies. Additionally, impacts to CRPR 2 ranked plants occurring in California will be similarly mitigated. Avoidance of special-status plants will be the preferred strategy wherever feasible. Where avoidance is not feasible, and the project would directly or indirectly affect more than 10 percent of a local occurrence,[1] by either number of plants (shrubs and trees) or extent of occupied habitat (annuals or perennial herbs), SCE shall prepare and implement a mitigation plan to consist of off-site compensation, salvage, horticultural propagation / off-site introduction, or a combination of these.	SCE shall conduct focused pre-construction surveys for federal- and state-listed and other special-status plants within suitable habitat prior to construction at individual work sites. SCE shall implement a cacti and yucca salvage plan. Avoidance of special-status plants will be the preferred strategy wherever feasible. Where avoidance is not feasible, and the project would directly or indirectly affect more than 10 percent of a local occurrence, SCE shall implement a mitigation plan to consist of off-site compensation, salvage, horticultural propagation / off-site introduction, or a combination of these. Annual monitoring reports shall be submitted to CPUC and BLM for five years or until the relocation effort is deemed successful on agreement of SCE and the CPUC.	

[1] An occurrence for a plant is defined as any population or group of nearby populations located more than 0.25 miles from any other population (CDFW, 2009).

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	▪ **Avoidance.** Work areas shall be located to avoid or minimize impacts to special-status plants to the greatest extent possible. Effective avoidance through project design shall include a buffer area surrounding each avoided occurrence, where no project activities will take place. The buffer area will be clearly staked, flagged, and signed for avoidance prior to the beginning of ground-disturbing activities, and maintained throughout the construction phase. At minimum, the buffer for shrub species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems. The buffer for herbaceous species shall be a minimum of 50 feet from the perimeter of the occupied habitat or the individual(s). However, for locations in the mountains, a larger buffer may need to be applied to shrub and herbaceous species if the construction monitors determine there is a risk of indirect effects from erosion or inundation. If a smaller buffer is necessary due to other project constraints, SCE will develop and implement site-specific monitoring and put other measures in place to avoid the take of the species, with the approval of the CPUC and BLM, in coordination with CDFW. ▪ **Off-site compensation.** SCE shall provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plant populations at a 1:1 ratio of acreage and number of plants for any occupied habitat directly impacted (whether temporary or permanent) by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence and a surrounding 50-foot buffer area. If compensation is selected as a means of mitigating special-status plant impacts, it may be accomplished by purchasing credit in an established mitigation bank, acquiring conservation easements, or direct purchase and preservation of compensation lands. Compensation for these impacts may be "nested" or "layered" with compensation for habitat loss described in Mitigation Measure BR-8. ▪ **Salvage.** SCE shall consult with a qualified restoration ecologist or horticulturist regarding the feasibility and likely success of salvage efforts for each species. If salvage is deemed to be feasible, based on prior success with similar species, then SCE shall prepare and implement a Special-status Plant Salvage and Relocation Plan, to be reviewed and approved by the CPUC and BLM, in consultation with CDFW and USFWS, prior to direct or indirect disturbance of any occupied habitat. For special-status plants, excluding cacti and Yuccas (see above), the goal shall be to improve existing populations or establish new populations. For cacti and yuccas, the goal shall be maximum practicable survivorship of salvaged plants. The Plan will include at minimum: (a) species and locations of plants identified for salvage; (b) criteria for determining whether an individual plant is appropriate for salvage; (c) the appropriate season for salvage; (d) equipment and methods for collection, transport, and re-planting plants or seed banks, to retain intact soil conditions and maximize success; (e) for shrubs, cacti, and yucca, a requirement to mark each plant to identify the north-facing side prior to transport, and replant it in the same orientation; (f) details		

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	regarding storage of plants or seed banks for each species; (g) location of the proposed recipient site, and detailed site preparation and plant introduction techniques for top soil storage, as applicable; (h) a description of the irrigation, weed control, and other maintenance activities; (i) success criteria, including specific timeframe for survivorship and reproduction of each species; and (j) a detailed monitoring program, commensurate with the Plan's goals. Annual monitoring reports shall be submitted to CPUC and BLM for five years or until the relocation effort is deemed successful on agreement of SCE and the CPUC. Reports shall include, but not be limited to, details of plants salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of transplantation. ▪ **Horticultural propagation and off-site introduction.** If salvage and relocation is not believed feasible for special-status plants, then SCE shall consult with a qualified entity to develop an appropriate experimental propagation and relocation strategy, based on the life history of the species affected. The Plan will include at minimum: (a) collection and salvage measures for plant materials (e.g., cuttings), seed, or seed banks, to maximize success likelihood; (b) details regarding storage of plant, plant materials, or seed banks; (c) location of the proposed propagation facility, and proposed methods; (d); time of year that the salvage and other practices will occur; (e) success criteria; and (f) a detailed monitoring program, commensurate with the Plan's goals.		
MM BR-7	**Ensure wildlife impact avoidance and minimization.** SCE shall undertake the following measures during the construction and revegetation phases to avoid or minimize impacts to wildlife resources. ▪ **Minimize traffic impacts.** SCE will specify and enforce a maximum 15 mile per hour vehicle speed limit on access roads within the ROW and project vicinity. No project-related pedestrian or vehicle traffic will be permitted outside defined work site or access route boundaries. ▪ **Minimize lighting impacts.** Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light towards surrounding fish or wildlife habitat. ▪ **Avoid use of toxic substances.** Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to wildlife and plants. ▪ **Minimize noise and vibration impacts.** To minimize disturbance to wildlife nesting or breeding activities in surrounding habitat, project-related helicopter use shall be avoided or managed to the extent feasible from January 1 to August 31. Unnecessary noise (e.g., blaring radios) shall be avoided. ▪ **Water.** Potable and non-potable water sources such as tanks, ponds, and pipes shall be covered or otherwise secured to prevent animals (including birds) from entering.	Implement measures during construction to avoid or minimize impacts to wildlife, including proper handling by biological monitors.	

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	Prevention methods may include storing all water within closed tanks, covering open storage ponds or tanks with 2-centimeter netting, or other means as applicable. Water applied to roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards. Water sources (e.g., hydrants, tanks, etc.) shall be checked periodically by biological monitors to ensure they are not creating open water sources by leaking or consistently overfilling trucks. ▪ **Worker guidelines.** All trash and food-related waste shall be contained in vehicles or covered trash containers and removed from the site regularly. Workers shall not feed wildlife or bring animals or pets to the project site with the exception of ADA-compliant service animals. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons. ▪ **Wildlife netting or exclusion fencing.** SCE may install temporary netting or permanent screening or fencing around equipment, work areas, or project facilities to prevent wildlife exposure to hazards such as toxic materials or vehicle strikes or prevent birds from nesting on equipment or facilities. Bird deterrent netting will be maintained free of holes and will be deployed and secured on the equipment in a manner that prevents wildlife from becoming trapped inside the netted area or within the excess netting. The biological monitor will inspect netting (if installed) twice daily, at the beginning and close of each work day, with the exception of netting installed in established material yards, which will be inspected at least once daily. The biological monitor will inspect exclusion fence (if installed) weekly and will inform SCE of any needed repairs; SCE shall promptly repair any damage to the exclusion fencing. Temporary netting shall be removed and properly disposed of following the completion of project activities. ▪ **Wildlife entrapment.** Project-related excavations shall be secured to prevent wildlife entry and entrapment. Holes and trenches shall be backfilled, securely covered, or fenced. Excavations that cannot be fully secured shall incorporate appropriate wildlife ramp(s) at a slope of no more than a 3:1 ratio, or other means to allow trapped animals to escape. Biological monitors shall provide guidance to construction crews to ensure that wildlife ramps or other means are sufficient to allow trapped animals to escape. At the end of each work day, a biological monitor shall ensure that excavations have been secured or provided with appropriate means for wildlife escape. All pipes or other construction materials or supplies that CPUC monitors determine to present a risk to wildlife will be covered or capped in storage or laydown areas. No pipes or tubing of the size and nature that may entrap wildlife will be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials will be inspected for wildlife before it is moved, buried, or capped. ▪ **Dead animals.** Dead animals (of non-special-status species) large enough to subsidize ravens found on unpaved project roads, work areas, or the ROW shall be reported to		

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	the appropriate local animal control agency within 24 hours, to minimize raven subsidies. A biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found on unpaved project roads, work areas, or the ROW shall be reported to CDFW within one work day and the carcass handled as directed by CDFW. ▪ **Injured special-status wildlife.** SCE shall create and implement guidelines for dealing with injured or entrapped special-status wildlife found on or near project roads, work areas, or the ROW, and provide these guidelines to all biological monitors. If an animal is entrapped, a qualified biological monitor shall free the animal if feasible, or work with construction crews to free the animal, in compliance with applicable safety regulations and project requirements. If biological monitors cannot free the animal or the animal is too large or dangerous for monitors to handle, SCE shall contact and work with animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. SCE shall ensure that one or more qualified biological monitors receive training in the safe and proper handling and transport of injured wildlife and are provided with the appropriate equipment. These trained and equipped monitors shall be available to capture and transport injured wildlife to a local wildlife rehabilitator or veterinarian as needed. If the injured animal is too large or dangerous for monitors to handle, or a trained and equipped monitor is not available, SCE shall contact and work with a local wildlife rehabilitator, animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. A list of qualified wildlife rehabilitators, veterinarians, and animal control agencies will be maintained to ensure a timely response to requests for support. SCE shall bear the costs of veterinary treatment and rehabilitation for any wildlife injured by project-related activities and any injured wildlife found on or near project roads, work areas, or the ROW, unless the injuries are clearly not project-related, as determined by a qualified biologist. Additionally, any entrapped or injured special-status species found on project roads (with the exception of public roads), work areas, or the ROW shall be reported to the appropriate resource agency within one work day.		
MM BR-9 [Supersedes APM BIO-04]	**Conduct surveys and avoidance for special-status reptiles.** Pre-activity Surveys: No more than seven days prior to the onset of ground-disturbing activities, an agency-approved biologist — with experience monitoring and handling desert tortoise — will conduct a pre-activity survey in all work areas within potential desert tortoise, banded Gila monster, desert rosy boa, or Mojave fringe-toed lizard habitat, plus an approximately 300-foot buffer. If potentially suitable burrows, sand fields, or rock piles are found, they shall be checked for occupancy. All desert tortoise burrows within the pre-activity survey area (including desert tortoise pallets) must be flagged or marked using an alternate method with minimal potential risk of cuing predators, to be developed in coordination with CDFW so that they may be avoided during work activities. Proposed actions will avoid disturbing desert tortoise burrows to the extent	No more than 7 days prior to ground-disturbance, conduct survey in all work areas within potential desert tortoise, banded Gila monster, desert rosy boa, or Mojave fringe-toed lizard habitat, plus an approximately 300-foot buffer.	

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	possible. However, burrows may be excavated if they can't be avoided and would be impacted by construction activities. If a tortoise must be handled or a potential tortoise burrow must be excavated, the biologist shall proceed according to the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) or any requirements of the USFWS and CDFW incidental take authorizations. No desert tortoise may be handled except under explicit authorization from USFWS and CDFW. ▪ Monitoring: The approved tortoise biologist shall be available on site to monitor any work areas for desert tortoise, banded Gila monster, desert rosy boa, and Mojave fringe-toed lizard as needed. The approved tortoise biologist shall also be responsible for performing surveys prior to Proposed Project activities in suitable habitat for all three species. The approved tortoise biologist will have the authority to halt all non-emergency actions (as soon as safely possible) that may result in harm to desert tortoise, and will assist in the overall implementation of all adopted protection measures for special-status reptiles. As an alternative to full-time on-site monitoring, selected work areas (e.g., the series capacitors) may be enclosed by desert tortoise exclusion fencing and then covered by two complete 100 percent coverage clearance surveys. If exclusion fencing is installed, the agency-approved tortoise biologist shall monitor installation. ▪ Desert Tortoise in Work Area: In the event that a desert tortoise is encountered in the work area, all work shall cease and the approved biologist must be contacted. Work shall not recommence until the animal has voluntarily moved to a safe distance away from the work area unless incidental take permits have been obtained to allow handling. Desert tortoises may be moved by an agency-approved biologist as authorized by state and federal incidental take permits if necessary to move them out of harm's way. Encounters with special-status herpetofauna will be reported to an approved biologist. Encounters with desert tortoise will be documented and provided to the California Department of Fish and Wildlife (CDFW), BLM, and U.S. Fish and Wildlife Service (USFWS). In the event that a dead or injured desert tortoise is observed, the approved biologist shall notify SCE's herpetologist and report the incident to the CDFW, BLM, and USFWS. ▪ Under Vehicle Checks: Desert tortoises and other wildlife commonly seek shade during the hottest times of the day. All employees shall be required to check under their equipment or vehicles before they are moved. If special-status wildlife is encountered, the vehicle shall not be moved until the animal(s) have voluntarily moved to a safe distance away from the parked vehicle. Desert tortoises and special-status species may be moved by the approved biologist, if necessary, to move them out of harm's way. ▪ Handling Desert Tortoise: Only an agency-approved biologist may move or handle desert tortoises as authorized by state and federal incidental take permits. When a desert tortoise is moved, the approved biologist will be responsible for taking appropriate measures to ensure that the animal is not exposed to harmful	If potentially suitable burrows, sand fields, or rock piles are found, they shall be checked for occupancy and flagged. SCE shall implement Raven Management Plan. Approved tortoise biologist on site to monitor for DETO presence and train crews on avoidance measures. If DETO encountered, relocation shall be per this MM.	

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	temperature extremes. The approved biologist shall follow the appropriate protocols outlined in the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) when handling desert tortoises or excavating their burrows as described in the state and federal take authorizations. ▪ Excavation of Desert Tortoise Burrows: Should it prove necessary to excavate a desert tortoise from its burrow to move it out of harm's way, excavation shall be done using hand tools, either by or under the direct supervision of an approved biologist. Excavation of desert tortoise burrows will occur no more than seven days before the onset of construction activities at any given site. All desert tortoises removed from burrows must be placed in an unoccupied burrow that is approximately the same size as the one from which it was removed. If an existing burrow is unavailable, the approved biologist shall construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original burrow following guidelines in the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009). To ensure their safety, desert tortoises moved during inactive periods must be monitored for at least two days after placement in the new burrows or until the end of the construction activity. If desert tortoises need to be moved at a time of day when ambient temperatures could harm them (i.e., at temperatures lower than 40 degrees Fahrenheit (°F) or higher than 90°F), they must be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of the approved biologist under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes shall be appropriately discarded after one use. ▪ Vehicle Travel: Motor vehicles shall be limited to maintained roads and designated routes. If additional routes are needed, they must first be surveyed and approved by the approved biologist. ▪ Raven Management: SCE shall implement a Raven Management Plan (RMP) to minimize avian predation of desert tortoise for the Proposed Project. ….		

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MM BR-10 [Supersedes APM BIO-06]	**Prepare and implement a Nesting Bird Management Plan.** SCE shall implement a Nesting Bird Management Plan (NBMP). …. At the end of each year's nest season, SCE will submit an annual NBMP report to the CPUC, BLM, CDFW, and USFWS. Specific contents and format of the annual report will be reviewed and approved by the CPUC and BLM in consultation with CDFW and USFWS.	SCE shall implement NBMP, including reporting any nest locations, project activities in the vicinity of nests (including helicopter traces), any adjustments to buffer areas, and use of nest deterrents to CPUC EMs on a daily and weekly basis. At the end of each year's nest season, SCE will submit an annual NBMP report to the CPUC, BLM, CDFW, and USFWS.	
MM BR-11 [Supersedes APM BIO-07]	**Conduct surveys and avoidance for burrowing owl.** Burrowing owl surveys shall be conducted in accordance with the most current CDFW guidelines in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFG, 2012; or updated guidelines as they become available) in all potential habitat, regardless whether or not the previous assessment identified burrows. SCE shall take measures to avoid impacts to any active burrowing owl burrow within or adjacent to a work area. The default buffer for a burrowing owl burrow is 300 feet for ground construction, and 300 feet horizontal and 200 feet vertical for helicopter construction. Effectiveness of the buffer area will be monitored, and adjustments will be made if necessary. The Nesting Bird Management Plan (Mitigation Measure BR-10) will specify a procedure for adjusting this buffer, if needed. Binocular surveys may be substituted for protocol field surveys on private lands adjacent to the project site only when SCE has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission. If active burrowing owl burrows are located within project work areas, SCE may passively relocate the owls by implementing a Burrowing Owl Passive Relocation Plan. ……	Prior to construction at a project site, conduct burrowing owl surveys. Implement required buffers during construction per this MM and NBMP. Implement Burrowing Owl Passive Relocation Plan; no active relocation permitted. Provide weekly monitoring reports.	
MM BR-12	**Conduct surveys and avoidance for bats.** SCE shall conduct surveys for roosting bats within 200 feet of project work areas within 14 days prior to any grading of rocky outcrops or removal of large trees (12 inches in diameter or greater at 4.5 feet above grade) with loose bark or other cavities, foliage, and palm fronds. Surveys shall be conducted during the breeding season (1 March to 31 July) and the non-breeding season. Surveys shall be performed by a qualified bat biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding or equivalent agreement with CDFW allowing the biologist to handle bats). The resume of the biologist shall be provided to the CPUC and BLM for concurrence in consultation with CDFW and USFWS	Conduct pre-construction surveys within 200 feet or bat habitat and submit to CPUC and BLM for review and approval. An exclusion area will be established 165 feet from any active roost, and these areas will be avoided during construction activities.	

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	prior to the biologist beginning field duties on the project. Surveys shall include a minimum of one day and one evening. Any active bat roosts, including occupied day roosts, maternity roosts, and hibernacula, must be identified and clearly marked. An exclusion area will be established 165 feet from any active roost, and these areas will be avoided during construction activities. Ingress and egress along established routes will be permitted in those areas, and additional buffer reductions may be considered in coordination with the qualified bat biologist, CPUC, and CDFW. If active roosts are found, then SCE will either (1) delay construction activities at these sites until the roost is no longer active, or (2) conduct follow-up focused surveys to determine if the sites support special-status bat species. If the roost is occupied by common species, then work activities may proceed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the special-status bats is completed. SCE shall consult with CDFW regarding eviction of non-breeding bats. SCE shall submit documentation providing pre-construction survey results and any avoidance of roosting and nursery sites to the CPUC and BLM for review and approval.		
MM BR-13	**Conduct surveys and avoidance for American badger, ringtail, and desert kit fox.** SCE shall conduct pre-construction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of construction activities. Surveys shall be conducted in areas that contain habitat for this these species and shall include project disturbance areas and access roads plus a 200-foot buffer surrounding these areas. SCE shall submit documentation providing pre-construction survey results to the CPUC and BLM for review and approval. If dens are detected, each den shall be classified as inactive, potentially active, active non-natal, or active natal. Inactive dens located in project disturbance areas may be excavated by hand and backfilled to prevent reuse, only upon confirmation that they are inactive. Active or potentially active dens shall be flagged and project activities, with exceptions as listed below, within 100 feet (non-natal dens) or 200 feet (natal dens, or any active den during the breeding season) shall be avoided. Ingress/egress of construction vehicles and equipment through buffers and low intensity activities such as inspections and BMP maintenance within buffers is allowed, provided a qualified biologist determines that these activities will not impact dens or denning animals. Buffers may be modified with concurrence of CPUC and BLM, in consultation with CDFW and USFWS. If active dens are found within project disturbance areas and avoidance is not possible, SCE shall take action as specified below, after notifying and obtaining concurrence from CPUC, BLM, and CDFW. **Active and potentially active non-natal dens.** Outside the breeding season, any potentially active dens that would be directly impacted by construction activities shall be monitored by a qualified mammologist or biologist for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) or infrared camera stations	SCE shall conduct pre-construction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of construction activities and submit to CPUC and BLM for review and approval. Active or potentially active dens shall be flagged and project activities shall be avoided, unless otherwise specified. All den monitoring and excavation activities and passive relocations shall be documented and reported to the CDFW, BLM, and CPUC in weekly monitoring reports, and a written summary will be included in each annual monitoring report.	

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	at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den may be excavated and backfilled by hand. If tracks are observed, the den may be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage continued use. After verification that the den is no longer active, the den may be excavated and backfilled by hand. **Active natal dens.** Active natal dens (any den with cubs or pups) or any den active during the breeding season will not be excavated or passively relocated. The cub or pup-rearing season is generally from January 15 through mid-September. A 200-foot no-disturbance buffer shall be maintained around all active natal dens. Discovery of an active natal den that could be impacted by the project shall be reported to the CPUC, BLM, and CDFW within 24 hours of the discovery along with a map of the den location and a copy of the survey results. A qualified biologist shall monitor the natal den until he or she determines that the pups have dispersed. Any disturbance to denning animals or activities that might disturb denning activities shall be prohibited within the buffer zone. Once the pups have dispersed, methods listed above for non-natal dens may be used to discourage den reuse. After verification that the den is unoccupied, it shall then be excavated by hand and backfilled to ensure that no animals are trapped in the den. If canine distemper is reported in desert kit fox on the site or surrounding areas, then SCE shall coordinate with CPUC, BLM, and CDFW to identify appropriate actions prior to continuing implementation of this mitigation measure in respect to desert kit fox. Any observations of a kit fox that appears sick or any kit fox mortality shall be reported to CPUC, CDFW, and BLM within one work day. In the event that passive relocation techniques fail, SCE shall contact the CPUC, BLM, and CDFW to explore other relocation options. All den monitoring and excavation activities and passive relocations shall be documented and reported to the CDFW, BLM, and CPUC in weekly monitoring reports, and a written summary will be included in each annual monitoring report.		
Cultural Resources			
APM-CUL-02	**Cultural Resources Survey.** SCE would perform surveys prior to construction for any Proposed Project areas not yet surveyed (e.g., new or modified staging areas, pull sites, or other work areas).	SCE to submit survey results to CPUC and BLM.	
MM CR-1	**Retain a Cultural Resources Specialist.** The project Cultural Resources Specialist shall use the services of Cultural Resources Monitors, tribal monitors and Field Crew as needed, to assist in mitigation, monitoring, and curation activities, as outlined in the CRMP. A copy of all proposed cultural staff qualifications shall be provided to the CPUC for review and approval prior to beginning work.	CPUC EMs to confirm appropriate cultural and tribal monitors are present.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
MM CR-2	**Cultural resources environmental awareness training.** Project personnel, including cultural resources monitors and tribal monitors, shall receive training that includes sensitivity training provided through participating tribes in video format regarding the appropriate work practices necessary to effectively implement the APMs and mitigation measures related to cultural resources and tribal cultural resources, including human remains. Training shall be required for all personnel before they begin work on a project site and repeated as needed for all new personnel before they begin work on the Project. ….. Documentation of the training will be provided to the BLM and CPUC. The CPUC will provide documentation to the consulting tribes.	Training shall be required for all personnel before they begin work on a project site.	
MM CR-3	**Prepare and implement a Cultural Resources Management Plan.** ….. The CRMP shall be implemented under the direction of the SCE and the project Cultural Resources Specialist.	CPUC EMs to validate implement of CRMP during construction.	
MM CR-4	**Inadvertent discovery of cultural or tribal cultural resources.** If previously undiscovered resources are identified during project activities all activities within 100 feet (30 meters) of the resource shall halt. The onsite construction supervisor and SCE shall be notified. SCE will notify the CPUC and BLM of the discovery. The monitoring team shall flag-off the area. SCE and its cultural resource specialist will coordinate with the CPUC, BLM, NPS and tribal representatives as appropriate, on avoidance measures. If the resource cannot be avoided, methods of resource evaluation, and methods of mitigation will be discussed with all appropriate parties. Work may be temporarily diverted to activities that are outside of 100 feet (30 meters) of the discovered or suspected resource. The resource shall be evaluated to determine whether it is eligible for the NRHP, CRHR, a unique archaeological resource, a tribal cultural resource, or part of a larger culturally sensitive landscape area or traditional cultural property. If the resource is determined not to be significant, work may recommence in the area. If the resource is determined significant work shall remain halted within 100 feet (30 meters) of the area of the find, SCE shall consult with the BLM, CPUC, and representatives of the consulting tribes as appropriate regarding methods to ensure that no adverse effect and no substantial adverse change would occur to the significance of the resource. Preservation in place (i.e., avoidance) is the preferred method of mitigation for impacts to cultural resources. Other methods of mitigation, described below, shall only be used if it is determined the method would provide equivalent or superior mitigation of the impacts to the resource. The alternative methods of mitigation may include data recovery and documentation of the information contained in the resource to answer questions about local prehistory or history. The methods and results of the evaluation or data recovery work at an archaeological find shall be documented in a professional-level technical report to be filed with the California Historical Resources Information System (CHRIS). Work in the area may commence upon completion of treatment, as approved by the BLM and CPUC. If data recovery of resources is necessary, additional archaeologists shall perform the excavation while the monitoring team(s) continues to monitor construction.	If previously undiscovered resources are identified during project activities all activities within 100 feet (30 meters) of the resource shall halt and SCE and its cultural resource specialist will coordinate with the CPUC, BLM, NPS and tribal representatives as appropriate, on avoidance measures and resource evaluation and data recovery, if necessary.	

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	Additionally, the tribes shall be offered the opportunity to monitor data recovery efforts at prehistoric sites in addition to construction efforts, under the same contract terms. This opportunity shall be additionally be extended to tribes that consulted on this project, but for which a tribal monitor was not provided for construction efforts.		
MM CR-5	**Avoidance of cultural and tribal cultural resources.** When project work is planned within 100 feet of a known prehistoric-era cultural resource or a tribal cultural resource, or any resources that are eligible for the CRHR and/or NRHP, avoidance areas shall be established and monitors shall be present as outlined in the CRMP. ESAs shall be established with a 50 foot buffer around each resource prior to project activities, except where the 50-foot buffer would encroach on a work area, in which event the ESA buffer shall be the near edge of the identified work area. Monitoring teams shall include one qualified cultural resources monitor and one Native American monitor at prehistoric sites. ESAs shall be established by a qualified cultural resources monitor. The timing and intensity of the monitoring may vary according to the type of resource and the nature of the work planned and shall be determined in consultation with consulting tribes, as appropriate.	Cultural and NA monitoring for construction near known resources in accordance with the CRMP.	
MM CR-7	**Inadvertent discovery of human remains on state owned land or private property.** In the event that human remains or suspected human remains are identified, SCE shall comply with California law (Health and Safety Code Section 7050.5; PRC Sections 5097.94, 5097.98, and 5097.99). The area shall be flagged off and all project activities within 200 feet (60 meters) of the find shall immediately cease. The CPUC-approved Cultural Resources Specialist and SCE shall be immediately notified. SCE shall immediately contact the Medical Examiner at the County Coroner's office, BLM, CPUC as well as representatives of consulting tribes. The CSLC will be notified if the remains are identified on state land. The Medical Examiner has two (2) working days to examine the remains. If the Medical Examiner believes the remains are Native American, they shall notify the California Native American Heritage Commission (NAHC) within 24 hours. If the remains are not believed to be Native American, the appropriate local law enforcement agency will be notified. The NAHC will immediately notify the person or tribe it believes to be the most likely descendant (MLD) of the remains, and the MLD has 48 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the human remains and any associated grave goods. If the MLD does not make recommendations within 48 hours, the remains shall be reinterred in the location they were discovered and the area of the property shall be secured from further disturbance. If there are disputes between the landowner and the MLD, the NAHC shall mediate the dispute and attempt to find a solution. If the mediation fails to provide measures acceptable to the landowner, the landowner or their representative shall reinter the remains and associated grave goods and funerary objects in an area of the property secure from further disturbance. The location of any reburial of Native American human remains shall not be disclosed to the public and shall not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code§ 6250 et seq., unless otherwise required by law. The Medical Examiner shall withhold public disclosure of	If human remains or suspected human remains are identified, SCE shall comply with California law, including ceasing construction within 200 feet of the find.	

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	information related to such reburial pursuant to the specific exemption set forth in California Government Code Section 6254(r).		
MM CR-8	**Inadvertent discovery of human remains on federal land.** If potential human remains are discovered during any Project activity on lands administered by federal agencies, all activities within 200 feet that will cease immediately. SCE will take appropriate steps to secure and protect human remains and any funerary objects from further disturbance. SCE will notify the BLM and the County Coroner (California Health and Safety Code 7050.5(b)) immediately. If the remains are determined to be Native American or if Native American cultural items pursuant to the Native American Graves Protection and Repatriation Act (NAGPRA) are uncovered, the remains shall be treated in accordance with the provisions of NAGPRA (43 CFR 10) and the Archaeological Resources Protection Act (43 CFR 7). SCE shall assist and support the federal agency, as appropriate, in all required NAGPRA and Section 106 actions, government to-government and consultations with Native Americans, agencies, and consulting parties as requested by the federal agency. SCE shall comply with and implement all required actions and studies that result from such consultations.	If potential human remains are discovered during any Project activity on federal land, all activities within 200 feet that will cease immediately, and SCE will notify the BLM and the County Coroner.	
Geology and Soils			
MM PAL-1	**Retain qualified paleontological staff.** …. Additional Paleontological Staff – The Project Paleontologist may obtain the services of Paleontological Field Agents, Field Monitors, and Field Assistants, if needed, to assist in mitigation, monitoring, and curation activities. These individuals must meet the qualifications described in BLM IM 2009-011.	Additional paleontological staff must meet the qualifications described in BLM IM 2009-011.	
MM PAL-2	**Provide paleontological environmental awareness training.** SCE will provide worker's environmental awareness training on paleontological resources protection as part of its WEAP required under Mitigation Measure BR-2, Prepare and implement a Worker Environmental Awareness Program. This training may be administered by the project paleontologist as a stand-alone training or included as part of the overall worker's environmental awareness training. At a minimum, the training would include the following: ▪ the types of fossils that could occur at the project site; ▪ the types of lithologies in which the fossils could be preserved; ▪ the procedures that should be followed in the event of a fossil discovery; and ▪ penalties for disturbing paleontological resources.	Prior to working on the project, as part of the WEAP, each crew member shall be trained in paleontological resources protection**.**	
MM PAL-3 [Supersedes APM CUL-04]	**Prepare and implement a Paleontological Resource Mitigation and Monitoring Plan (PRMMP). ….** The PRMMP shall be implemented under the direction of the Project Paleontologist	CPUC EMs to validate implementation of PRMMP during construction.	
MM PAL-4	**Conduct monitoring for paleontological resources.** The applicant shall continuously comply with the following during all ground disturbing activities during the project: ▪ All ground disturbing activity in Proposed Project work areas identified with unknown, high, or very high paleontological sensitivity (PFYC U, PFYC 4, or PFYC 5) should be	Monitor for compliance with PRMMP during construction.	

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	monitored on a full-time basis by a BLM- approved Paleontological Field Agent who will work under the supervision of the BLM- permitted paleontologist and principal investigator. ▪ Ground disturbing activity that exceeds 5 feet in depth in work areas underlain by Holocene units shall be monitored part time. Spot-checking shall take place at least once a day and be conducted by a Qualified Paleontologist. ▪ The level of effort and intensity for monitoring shall be modified as needed by a Qualified Paleontologist, in consultation with the appropriate agency personnel, based on the sediment types, depths, and distributions observed during monitoring throughout the life of the project. ▪ Project activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Project Paleontologist. Monitoring shall be conducted as follows: – Monitoring of ground disturbance shall consist of the surface collection of visible vertebrate and significant invertebrate fossils within the project site. Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be halted and diverted and the Project Paleontologist shall be notified. Once the find has been inspected and a preliminary assessment has been made, the Project Paleontologist will notify SCE. SCE will notify the CPUC, BLM, and MNP of the discovery within 24 hours. If recovery of a large or unusually productive fossil occurrence is warranted, earth-moving activities shall be diverted temporarily around the fossil locality, and a recovery crew shall be mobilized to remove the material as quickly as possible. The monitor shall be permitted to photograph and/or draw stratigraphic profiles of cut surfaces and take samples for analysis of microfossils, dating, or other specified purposes in accordance with the PMMP. – Recovered specimens shall be prepared to a point of identification, including washing of sediments to recover smaller fossil remains. Once excavation has reached specified depths, salvage of fossil material from the sidewalls of the cut shall resume. Specimens shall be identified and curated into a repository with retrievable storage. ▪ All significant fossil specimens recovered from the project site as a result of the paleontological monitoring and mitigation program shall be treated (prepared, identified, curated, and catalogued) in accordance with the designated repository requirements. Samples shall be submitted to a laboratory, acceptable to the designated repository, for identification, dating, and microfossil and pollen analysis.		

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Hazards and Hazardous Materials			
MM HH-1	**Prepare and implement a Hazardous Materials and Waste Management Plan.** SCE shall implement a Project-specific Hazardous Materials and Waste Management Plan pursuant to Title 24, Part 9 of the California Code of Regulations (CCR) that identifies hazardous materials to be transported, used, and stored on site for the proposed construction activities — as well as hazardous wastes generated onsite as a result of the proposed construction activities — and appropriate management procedures ….	CPUC EM to validate Implementation Project-specific Hazardous Materials and Waste Management Plan during construction.	
MM HH-2	**Manage discovery of unanticipated contamination.** In the event that contaminated media are encountered during construction requiring excavation, SCE shall stop work, contact SCE's Safety and Environmental Specialist (SES), request a site assessment, and notify the proper authorities. The potentially contaminated soil should first be segregated into lined stockpiles, dump trucks, or roll-off containers. Samples are to be collected and analyzed to determine the appropriate handling, treatment, and disposal options. If the analytical results indicate that the soils are hazardous, the affected soils would be properly managed on location and transported to a Class I Landfill or other appropriate soil treatment or recycling facility using a Uniform Hazardous Waste Manifest. Work at the affected site would continue at that location only when given clearance by the SES.	CPUC EMs to validate management of unanticipated contamination in accordance with mitigation measure requirements, and applicable laws and regulations.	
Hydrology and Water Quality			
MM HWQ-1	**Implement an Erosion Control Plan.** ….. The Erosion Control Plan may be part of the Stormwater Pollution Prevention Plan (SWPPP) and kept onsite and readily available on request. Soil disturbance at structures and access roads is to be minimized and designed to prevent long-term erosion. ….. Locations requiring erosion control/SWPPP corrective actions/repairs shall be tracked, including dates of completion, and documented during inspections. Inspections and monitoring shall be performed in compliance with the Federal and California Construction General Permits. The inspection reports shall be maintained and kept with their respective SWPPP, kept on site as required by the Federal and State Construction General Permits, and made available upon request to the RWQCB, CPUC, BLM, and representatives of the traversed counties and cities. Additionally, an Annual Report shall be filed for each reporting period in compliance with Federal and California Construction General Permit reporting requirements.	CPUC EMs to validate implementation of Erosion Control Plan during construction, including provision of inspection and annual reports to applicable agencies.	
MM HWQ-2	**Prepare and implement an HDD Fluid Management Plan.** If Horizontal Directional Drilling (HDD) is required, an HHD Fluid Management Plan shall be implemented. …..	CPUC EM to validate Implementation of HHD Fluid Mgmt Plan during construction.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Noise			
APM NOI-01	**Duration of Helicopter Use.** Active helicopter operation at landing zones within 700 feet of occupied residences would be limited to 2 hours per day. Helicopter use may be extended if required to ensure that electrical service is maintained for customers or for safety reasons.	CPUC EM to review helicopter logs (see MM T-3).	
APM NOI-02	**Helicopter Use in Residential Areas.** Helicopters would be required to maintain a height of at least 500 feet when passing over residential areas, except at temporary construction areas or when actively assisting with conductor stringing. All helicopters would be required to maintain a lateral distance of at least 500 feet from all schools.	CPUC EM to review helicopter flight track data (see MM T-3).	
MM N-1	**Limit construction noise levels.** SCE shall ensure that all construction activities occur within the following hours, during which construction noise would be exempt from local ordinances: in San Bernardino County and City of Hesperia, between 7:00 a.m. to 7:00 p.m. Monday through Saturday, except Federal holidays, unless an alternate schedule is coordinated with the applicable local jurisdiction. Additionally, SCE shall implement the following construction noise reduction methods as precautionary measures, as identified in the Noise Technical Report (Appendix K to SCE's PEA (Eilar, 2017)): ▪ Turn off equipment when not in use. ▪ Limit the use of enunciators or public address systems, except for emergency notifications. ▪ Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured, to prevent rattling and banging. ▪ Schedule work to avoid simultaneous construction activities that both generate high noise levels. ▪ Use equipment with effective mufflers. ▪ Minimize the use of backup alarms.	Construction activities shall occur during work hours allowed by respective noise ordinances and implement noise reduction measures.	
MM N-2	**Provide advance notification of construction noise.** ….. No less than 15 days prior to construction that would occur within 500 feet of residences, businesses, or other occupied structures, SCE shall distribute a public notice mailer. The notice shall state the type of construction activities that will be conducted, and the location and duration of construction. The notice shall identify, and SCE shall provide a public liaison person before and during construction to respond to concerns of residents about construction noise. SCE shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers. SCE shall address all complaints within one week of when the complaint is filed, and shall provide to the CPUC, within 15 days of the end of each month, a monthly report with records of all complaints and responses. SCE shall mail the notice to all residents or property owners within 500 feet of the right-of-way or within 1,000 feet of helicopter fly yards and flight paths.	No less than 15 days prior to construction that would occur within 500 feet of residences, businesses, or other occupied structures, SCE shall distribute a public notice mailer. Provide monthly report with records of all complaints and responses.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Transportation			
MM T-1	**Prepare and implement a Construction Traffic Control Plan.** Implement Construction Traffic Control Plans as required by state and local agencies responsible for public roads that would be directly affected by the construction activities and/or would require permits and approvals.	CPUC EMs to validate implementation of Traffic Control Plan(s) during construction.	
MM T-3 (supplements APM NOI-1 and NOI-2)	**Prepare and implement a final helicopter use plan.** SCE and its contractor shall implement the Final Helicopter Use Plan On the day before a flight, helicopter flight information shall be provided by email to CPUC/BLM monitors regarding the specific sites to be used for helicopter retrieval of materials, equipment, or personnel and the destination of the materials, equipment, or personnel being transported. Information provided in the email shall include pilot name, contact number, aircraft type, aircraft registration number, aircraft color, work/flight area, anticipated beginning and completion times, and scope of work. ▪ The specific locations requiring deconstruction or construction work using helicopters shall be identified. ▪ Temporary staging of materials outside of approved yards or on access or spur roads shall not occur without prior approval of CPUC or BLM, as appropriate. ▪ The yards to and from which helicopters would fly (fly yards) shall be identified and shall be of sufficient size to ensure safe operations, given the other activities occurring at the yards and the vicinity. ▪ Fly yards shall be no closer than a horizontal distance of 475 feet from occupied residences to avoid unacceptable nuisances. ▪ Site-specific steps taken to avoid nuisances and ensure safe refueling shall be identified for each fly yard. ▪ Flight paths that minimize flights in wilderness areas and near schools, hospitals, nursing homes, and other sensitive group receptors shall be identified and followed. ▪ Except in an emergency, helicopters shall land or hover near the ground only in areas previously approved for landing, and all dust control and biological and cultural resource protection requirements shall apply. ▪ External loads will be secured by appropriate rigging, including boxing, netting, choking, and cabling, or other suitable means. Only qualified riggers shall prepare and attach external loads to helicopters, and rigging shall be appropriate to the nature of the load, including the use of devices as necessary to prevent materials being lost in flight. Where appropriate to reduce load in-flight spinning and movement, drag chutes will be attached to loads. The need for drag chutes will be determined by the pilot and rigging personnel, where appropriate. At locations where rigging is to occur, a sufficient supply of appropriate rigging and containment materials in good repair shall be on hand at all times.	CPUC EMs to validate implementation of Helicopter Use Plan during construction, including review of GPS tracking data.	

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	▪ All aircraft are to be configured with weight sensors such that, when preparing to haul external loads, the pilot is able to determine the weight of the load being lifted. ▪ Yards or landing zones shall have a designated qualified individual managing the movement of aircraft in and out of the yard or landing zone when flight activity is high. ▪ Appropriate protocols for communication among pilots and between pilots and the ground shall be developed and implemented. ▪ A GPS-based data system shall be installed in each aircraft. – The system shall identify for the pilot all project-approved project flight paths and those areas where overflights are restricted (such as seasonally restricted bird nesting areas and sensitive residential or institutional areas) and shall be updated as often as any flight restrictions are implemented or lifted. – The system shall automatically record and preserve flight data sufficient to identify the aircraft's flight path, including altitude above ground. The system shall be capable of providing the information required with regard to flight path and aircraft identifier and provide a location "ping" no less frequently the once every 3 seconds. These data shall be collected daily and maintained by SCE or its contractor for a period of no less than six months and made available to CPUC or BLM upon request.		
Tribal Cultural Resources			
APM-TCR-1	**Tribal Monitoring.** An archaeological monitor, and tribal monitor that is culturally affiliated with the project area, may be present for all ground-disturbing activities within or directly adjacent to previously identified TCR(s) and prehistoric resources as outlined in the CRMP. The archaeological and tribal monitors will consult the CRMP to determine when to increase or decrease the monitoring effort should the monitoring results indicate a change is warranted. Monitoring reports shall be prepared and submitted to the BLM and CPUC on a monthly basis.	Tribal monitor shall be present during construction in accordance with the CRMP. Monitoring reports shall be prepared and submitted to the BLM and CPUC on a monthly basis.	
APM-TCR-2	**Tribal Engagement Plan.** A tribal engagement plan shall be prepared, which will detail how Native American tribes will be engaged and informed throughout the proposed project. The tribal engagement plan will be included in the CRMP.	Implement CRMP during construction, including tribal engagement plan.	
Also see MMs CR-1 through CR-8 above, under Cultural Resources.			
Utilities and Service Systems			
MM UT-1	**Provide cathodic protection.** Prior to commencing construction or as soon as such data are available, if it is not available before construction, SCE shall determine and report to CPUC and BLM the location of adjacent utilities and other metallic or conducting objects susceptible to induced voltages and currents. The scope of SCE's report shall include the results of an alternating current interference study by SoCalGas on the natural gas	SCE shall provide CPUC and BLM utility / metallic object locations as soon as available and conduct alternating current interference study at	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	pipelines that parallel or cross portions of the Lugo-Mohave 500 kV Transmission Line. Prior to the in-service date of the Proposed Project series capacitors, SCE shall ensure that the necessary grounding or other appropriate measures to provide appropriate cathodic protection has been installed and shall confirm this to the CPUC and BLM. If SCE identifies other utilities near the 500 kV Transmission Lines that may be susceptible to increased risk of corrosion due to induced currents or voltages, SCE shall conduct or have conducted an alternating current interference study during construction of the ELM Project that evaluates the alternating current interference effects of the 500 kV transmission lines on such other utilities. The study shall include the development of a model using the maximum magnetic field levels for the transmission lines, including the conductor arrangement. For all utilities identified with a corrosion potential, SCE shall coordinate with the owner of the utility and use data gathered in the alternating current interference study to determine appropriate design measures to protect the utility from corrosion, such as ground mats or gradient control wires for cathodic protection of buried pipelines and other utilities. The study, summary of coordination with potentially affected utilities, and specifications of any design measures to be installed shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to initiation of installation of such protection. All required protective and grounding work shall be completed prior to the in-service date of the Proposed Project series capacitors.	required locations and submit to CPUC and BLM for review and approval at least 60 days prior to cathodic protection installation. Prior to the in-service date of the series capacitors, SCE shall demonstrate to CPUC and BLM that appropriate cathodic protection measures have been installed.	
MM UT-2	**Implement mitigation measures during pipeline protection work.** In accordance with the agreement(s) between SCE and any party undertaking installation of pipeline protection measures required as a result of the ELM Project, applicable mitigation measures required during construction of the ELM Project shall also apply to and be implemented during any required pipeline-related work.	CPUC EM to validate implementation of mitigation requirements during pipeline construction per the agreement.	
MM UT-3	**Provide safety features for induced currents on adjacent metallic objects.** Prior to commencing construction or as soon as such data are available, if it is not available before construction, SCE shall determine and report to CPUC and BLM the location of metallic or conducting objects that may present a shock hazard to the public due to induced voltages or currents. SCE shall prepare an Induced Current Touch study that evaluates the conductive and inductive interference effects of the 500 kV transmission lines and new overhead distribution lines on the identified conductive objects. The Induced Current Touch study, including the criteria and approach that were used to determine what objects could present a shock and the details of the grounding or other measures to be installed, shall be submitted to the CPUC and BLM for review and approval. Prior to the in-service date of the Proposed Project series capacitors, SCE shall install the necessary grounding or other appropriate measures to protect the public from hazardous shocks or arcing.	SCE shall provide CPUC and BLM metallic object locations that may present a shock hazard as soon as available and prepare an Induced Current Touch Study for CPUC and BLM review and approval. Prior to the in-service date of the series capacitors, SCE shall install the necessary measures to protect the public from hazardous shocks.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Wildfire			
MM WF-1	**Prepare and implement a Fire Management Plan.** …. SCE shall fully implement the Fire Management Plan during all construction activities. A qualified project Fire Marshal or person of similar title and experience shall be established by SCE to implement and enforce all provisions of the approved Fire Management Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. The Fire Marshal shall monitor construction activities to ensure implementation and effectiveness of the plan. ….	A qualified Fire Marshal shall be established by SCE to implement and enforce all provisions of the approved Fire Management Plan, as validated by the CPUC EM.	

ATTACHMENT D

Post-Construction Mitigation Measures and APMs

ATTACHMENT D: POST-CONSTRUCTION / REVEGETATION MITIGATION MEASURES AND APMs

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Aesthetics			
Air Quality			
MM AQ-1	**Prepare and implement a Dust Control Plan.** SCE shall Implement Dust Control Plan requirements during construction.	CPUC EM to validate Plan implementation.	
Biological Resources			
MM BR-1	**Conduct biological monitoring and reporting.** The following provisions shall apply to the approved project during the construction and post-construction restoration phases. **Lead biologist:** SCE shall propose one or more lead biologist(s) and submit their resume(s) to the CPUC and BLM for concurrence, no less than 60 days prior to the start of any ground-disturbing activities, including those occurring prior to site mobilization (including, but not limited to geotechnical borings or hazardous waste evaluations). At minimum the lead biologist will hold a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; have at least three years of experience in field biology and at least one year of direct field experience with biological resources found in or near the project area, *OR* relevant education and experience that demonstrates the ability to carry out the tasks required of a lead biologist. The resume(s) shall demonstrate to the satisfaction of the CPUC and BLM the appropriate education and experience to accomplish the assigned biological resources tasks. The lead biologist will be SCE's primary point of contact to CPUC, BLM, NPS, CDFW, and USFWS regarding any biological resource issues and implementation of related mitigation measures and permit conditions throughout project construction and post-construction restoration work. In addition, the lead biologist will oversee supervision and training of biological monitors (below) and preparation and submission of all monitoring reports and notifications (below). If the lead biologist is replaced, the specified information of the proposed replacement must be submitted to the CPUC and BLM at least ten working days prior to the termination or release of the preceding lead biologist. In an emergency, SCE shall immediately notify the CPUC and BLM to discuss the qualifications and approval of a short-term replacement while a permanent lead biologist is proposed for consideration. **Biological monitors:** SCE shall assign qualified biological monitors to the project to monitor all work activities with the potential to impact special status species or their habitat during the construction phase. Work sites or activities considered to have no potential to impact special-status species or habitats will be subject to review and approval by CPUC in coordination with CDFW, USFWS, and BLM. Monitors are responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, and sensitive or unique biological resources are avoided or minimized to the fullest extent safely possible. Monitors are also responsible to ensure	SCE to submit resumes for Lead Biologist and Biological Monitors for concurrence by the CPUC and BLM, at least 10 working days prior to commencing field duties. SCE shall provide training to biological monitors, in addition to WEAP, on bio resources, MM requirements, etc., prior to the monitor commencing field duties. Biological monitors, knowledgeable of potential bio resources, shall be on site at all times when project activities are occurring in any area where there is a potential to impact sensitive biological resources or jurisdictional waters, and conduct daily sweeps. Biological monitors shall inform construction crews daily of any environmentally sensitive areas (ESAs), nest buffers, or other resource issues or restrictions that affect the work sites for that day. SCE shall ensure that biological monitors are provided with up-to-date biological resource maps and	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	that work activities are conducted in compliance with the retained APMs, mitigation measures, permit conditions, and other project requirements. Resumes of all biological monitors, including specialty monitors (including but not limited to bat, nesting bird, and special-status species monitors), shall be provided for concurrence by the CPUC and BLM, at least 10 working days prior to the monitor commencing field duties. The resumes shall demonstrate, to the satisfaction of the CPUC and BLM, the appropriate education and experience to accomplish the assigned biological resources tasks. SCE shall provide training to biological monitors, in addition to WEAP (see Mitigation Measure BR-2) and prior to the monitor commencing field duties, on biological resources present or potentially present on the Proposed Project, as well as mitigation measures, permit requirements, project protocols, and the duties and responsibilities of a biological monitor. Biological monitors shall inform construction crews daily of any environmentally sensitive areas (ESAs), nest buffers, or other resource issues or restrictions that affect the work sites for that day. Biological monitors shall communicate with construction supervisors and crews as needed (e.g., at daily tailgate safety meetings ("tailboards"), by telephone, text message, or email) to provide guidance to maintain compliance with mitigation measures and permit conditions. SCE shall ensure that adequate numbers of monitors are assigned to effectively monitor work activities and that communications from biological monitors are promptly directed to crews at each work site for incorporation into daily work activities. If biological monitors are unavailable for a tailboard meeting, the construction supervisors shall communicate all ESA, nest buffers, or other resource restrictions to crews during the meeting. SCE shall ensure that biological monitors are provided with an accurate daily construction work schedule as well as updated information on any alterations to the daily construction work schedule. This information shall also be provided to CPUC/BLM monitors. SCE shall ensure that biological monitors are provided with up-to-date biological resource maps and construction maps in hardcopy or digital format. These maps shall also be provided to CPUC/BLM monitors. Monitors shall be familiar with the biological resources present or potentially present, ESAs, nest buffers, and any other resource issues at the site(s) they are monitoring, as well as the applicable mitigation measures and permit requirements. Monitors shall exhibit diligence in their monitoring duties and refrain from any conduct or potential conflict of interest that may compromise their ability to effectively carry out their monitoring duties. **Biological monitor duties and responsibilities:** Throughout the duration of construction, SCE shall conduct biological monitoring and have biological monitors on site at all times when project activities are occurring in any area where there is a potential to impact sensitive biological resources or jurisdictional waters, including but not limited to vegetation removal/trimming/disturbance, all ground-disturbing work activities, and	construction maps, which shall also be provided to CPUC/BLM monitors. SCE shall prepare and submit daily, weekly, and annual monitoring reports to the CPUC and BLM.	

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	initial "drive and crush" in the project area, including work sites, yards, staging areas, access roads, and any area subject to project disturbance. Pre-construction activities (e.g., for geotechnical borings, hazardous waste evaluations, etc.) and post-construction restoration shall also be monitored by a biological monitor during all such activities. Each day, prior to work activities at each site requiring monitoring, a biological monitor shall conduct clearance surveys ("sweeps") for sensitive plant or wildlife resources that may be located within or adjacent to the construction areas. If sensitive resources are found, the biological monitor shall take appropriate action as defined in all adopted mitigation measures, retained APMs, and permit conditions. Work activities shall not commence at any work site until the clearance survey has been completed and the biological monitor communicates to the contractor that work may begin. Biological monitors shall clearly mark sensitive biological resource areas with staking, flagging, or other appropriate materials that are readily visible and durable. The monitors will inform work crews of these areas and the requirements for avoidance and will inspect these areas at appropriate intervals for compliance with regulatory terms and conditions. The biological monitors shall ensure that work activities are contained within approved disturbance area boundaries at all times. Biological monitors shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, retained APMs, permit conditions, or other project requirements, or will have an unauthorized adverse effect on biological resources. Handling, relocation, release from entrapment, or other interaction with wildlife shall be performed consistent with mitigation measures, safety protocols, permits (including CDFW and USFWS permits), and other project requirements. Biological monitors shall, to the extent safe, practicable, and consistent with mitigation measures and permit conditions, actively or passively relocate wildlife out of harm's way. On a daily basis, biological monitors shall inspect construction areas where animals may have become trapped, including equipment covered with bird exclusion netting, and release any trapped animals. Daily inspections shall also include areas with high vehicle activity (e.g., yards, staging areas), to locate animals in harm's way and relocate them if necessary. If safety or other considerations prevent biological monitors from aiding trapped wildlife or wildlife in harm's way, SCE shall consult with the construction contractor, CDFW, wildlife rehabilitator, or other appropriate party to obtain aid for the animal, consistent with Mitigation Measure BR-7 (Ensure wildlife impact avoidance and minimization). At the end of each work day, biological monitors shall verify that excavations, open tanks, and trenches have been covered or have ramps installed to prevent wildlife entrapment and communicate with work crews to ensure these structures are installed and functioning properly.		

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	Biological monitors shall regularly inspect any wildlife exclusion fencing daily to ensure that it remains intact and functional. Any need for repairs to exclusion fencing shall be immediately communicated to the responsible party, and repairs shall be carried out in a timely manner, generally within one work day. **Reporting:** SCE shall prepare and implement a procedure for communication among biological monitors and construction crews, to ensure timely notification (i.e., daily or sooner, as needed) to crews of any resource issues or restrictions. SCE will notify the CPUC and BLM of the procedure and will maintain records of daily communication. SCE will provide CPUC and BLM on-line access to project resource management maps and GIS data. Monitoring activities shall be thoroughly and accurately documented on a daily basis. SCE shall prepare and submit daily, weekly, annual, and final monitoring reports to the CPUC and BLM. …..		
MM BR-2	**Prepare and implement a Worker Environmental Awareness Program (WEAP).** SCE shall prepare and implement a project-specific Worker Environmental Awareness Program (WEAP) to educate on-site workers about the Proposed Project's sensitive environmental issues. The WEAP shall be presented by the lead biologist or a biological monitor to all personnel on-site during the construction phase, including but not limited to surveyors, engineers, inspectors, contractors, subcontractors, supervisors, employees, monitors, visitors, and delivery drivers. If the WEAP presentation is recorded on video, it may be presented by any competent project personnel. Throughout the duration of construction, SCE shall be responsible for ensuring that all on-site project personnel receive this training prior to beginning work. A construction worker may work in the field along with a WEAP-trained crew for up to 5 days prior to attending the WEAP training. SCE shall maintain a list of all personnel who have completed the WEAP training. This list shall be provided to the CPUC and BLM upon request. ….. **WEAP Lite.** An abbreviated version of WEAP training ("WEAP lite") may be used for individuals who are exclusively delivery drivers, concrete truck drivers, or visitors to the project site, and will be provided by a qualified project biologist, biological monitor, or environmental field staff prior to those individuals entering or working on the project. Short-term visitors (total of 5 days or less per year) to the project site who will be riding with and in the company of WEAP-trained project personnel for the entire duration of their visit(s) are not required to attend WEAP or WEAP lite training. WEAP lite presentations shall be tailored to delivery/concrete truck drivers and visitors as well as the situation and emphasize project requirements that are relevant to those individuals and that situation. **WEAP Refreshers.** Biological monitors or environmental field staff will periodically present brief WEAP refresher presentations at tailboards to help construction crews and other personnel maintain awareness of environmental sensitivities and	Throughout the duration of post-construction/ revegetation activities, SCE shall be responsible for ensuring that all on-site project personnel receive WEAP training prior to beginning work. WEAP training ("WEAP lite") may be used for individuals who are exclusively delivery drivers, concrete truck drivers, or visitors to the project site, prior to those individuals entering or working on the project. Periodic brief WEAP refresher presentations shall be presented at tailboards to help construction crews and other personnel maintain awareness of environmental sensitivities and requirements.	

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	requirements. A 5- to 10-minute informal talk will be presented at each of the project's main contractor/subcontractor tailboards at least once a week. When a contractor or subcontractor resumes work after a long break, a biological monitor or environmental field staff will provide an extended WEAP refresher presentation (10-20 minutes) at each of the contractor/subcontractor tailboards on the first day back to work.		
MM BR-3	**Minimize native vegetation and habitat loss.** …. On completion of project construction, SCE shall provide CPUC and BLM with GIS shapefiles of all actual temporary and permanent disturbance areas, and summary data of all discrepancies between final engineering and "as-built" conditions for each vegetation or habitat type.	SCE shall submit post-construction actual disturbance data.	
MM BR-4 [Supersedes APM BIO-01]	**Restore or revegetate temporary disturbance areas.** …. SCE will restore and revegetate temporary disturbance areas in accordance with the Habitat Restoration and Revegetation Plan (HRRP). …. All temporarily disturbed areas will be subject to revegetation and site management activities and success criteria of the Proposed Project's SWPPP/Erosion Control Plan (HWQ-1) and the Integrated Weed Management Plan (BR-5) to ensure soil stabilization, vegetation cover, and weed prevention. ….. For all restoration areas, if a fire, flood, or other disturbance beyond the control of SCE, CPUC, and BLM damages the area within the monitoring period, SCE shall be responsible for a one-time replacement. If a second event occurs, no replacement is required. ….. Monitoring of the restoration sites will continue annually for up to 5 years or until the defined success criteria in the HRRP are achieved. SCE will be responsible for implementing remediation measures as needed. Following remediation work, each site will still be subject to the success criteria required for the initial restoration. The monitoring period for remediation work will be concurrent with the monitoring period required for the initial restoration. **Reporting.** For all restoration areas, SCE will provide annual reports to the CPUC and BLM verifying the total vegetation acreage subject to temporary and permanent disturbance, identifying which items of the HRRP have been completed, and which items are still outstanding. The annual reports will also include a summary of the restoration activities for the year, a discussion of whether success criteria were met, any remedial actions conducted and recommendations for remedial action, if warranted, that are planned for the upcoming year. Each annual report will be submitted within 90 days after completion of each year of restoration work.	SCE to implement, HRRP, SWPPP/Erosion Control Plan, and Integrated Weed Management Plan. SCE to monitor restoration sites annually for up to 5 years or until the defined success criteria in the HRRP are achieved and provide annual reporting, and provide annual reports to CPUC and BLM.	

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MM BR-5 [Supersedes APM BIO-03]	**Prepare and Implement an Integrated Weed Management Plan.** SCE shall implement an Integrated Weed Management Plan (IWMP) describing the proposed methods of preventing or controlling project-related spread or introduction of weeds.	Implement IWMP during post-construction/ revegetation activities, including reporting.	
MM BR-6 [Supersedes APM BIO-02]	**Minimize and mitigate impacts to special-status plants. ….** SCE shall implement a cacti and yucca salvage plan. …. For special-status plants that couldn't be avoided, and where the project directly or indirectly affect more than 10 percent of a local occurrence, SCE shall implement a mitigation plan to consist of off-site compensation, salvage, horticultural propagation / off-site introduction, or a combination of these. …. Annual monitoring reports shall be submitted to CPUC and BLM for five years or until the relocation effort is deemed successful on agreement of SCE and the CPUC. Reports shall include, but not be limited to, details of plants salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of transplantation.	SCE shall implement cacti and yucca salvage plan. As required by this mitigation, SCE shall implement a mitigation plan to consist of off-site compensation, salvage, horticultural propagation / off-site introduction, or a combination of these. Annual monitoring reports shall be submitted to CPUC and BLM for five years or until the relocation effort is deemed successful on agreement of SCE and the CPUC	
MM BR-7	**Ensure wildlife impact avoidance and minimization.** SCE shall undertake the following measures during the construction and revegetation phases to avoid or minimize impacts to wildlife resources. ▪ **Minimize traffic impacts.** SCE will specify and enforce a maximum 15 mile per hour vehicle speed limit on access roads within the ROW and project vicinity. No project-related pedestrian or vehicle traffic will be permitted outside defined work site or access route boundaries. ▪ **Minimize lighting impacts.** Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light towards surrounding fish or wildlife habitat. ▪ **Avoid use of toxic substances.** Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to wildlife and plants. ▪ **Minimize noise and vibration impacts.** To minimize disturbance to wildlife nesting or breeding activities in surrounding habitat, project-related helicopter use shall be avoided or managed to the extent feasible from January 1 to August 31. Unnecessary noise (e.g., blaring radios) shall be avoided. ▪ **Water.** Potable and non-potable water sources such as tanks, ponds, and pipes shall be covered or otherwise secured to prevent animals (including birds) from entering.	Implement measures during post-construction/ revegetation activities to avoid or minimize impacts to wildlife, including proper handling by biological monitors.	

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	Prevention methods may include storing all water within closed tanks, covering open storage ponds or tanks with 2-centimeter netting, or other means as applicable. Water applied to roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards. Water sources (e.g., hydrants, tanks, etc.) shall be checked periodically by biological monitors to ensure they are not creating open water sources by leaking or consistently overfilling trucks. ▪ **Worker guidelines.** All trash and food-related waste shall be contained in vehicles or covered trash containers and removed from the site regularly. Workers shall not feed wildlife or bring animals or pets to the project site with the exception of ADA-compliant service animals. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons. ▪ **Wildlife netting or exclusion fencing.** SCE may install temporary netting or permanent screening or fencing around equipment, work areas, or project facilities to prevent wildlife exposure to hazards such as toxic materials or vehicle strikes or prevent birds from nesting on equipment or facilities. Bird deterrent netting will be maintained free of holes and will be deployed and secured on the equipment in a manner that prevents wildlife from becoming trapped inside the netted area or within the excess netting. The biological monitor will inspect netting (if installed) twice daily, at the beginning and close of each work day, with the exception of netting installed in established material yards, which will be inspected at least once daily. The biological monitor will inspect exclusion fence (if installed) weekly and will inform SCE of any needed repairs; SCE shall promptly repair any damage to the exclusion fencing. Temporary netting shall be removed and properly disposed of following the completion of project activities. ▪ **Wildlife entrapment.** Project-related excavations shall be secured to prevent wildlife entry and entrapment. Holes and trenches shall be backfilled, securely covered, or fenced. Excavations that cannot be fully secured shall incorporate appropriate wildlife ramp(s) at a slope of no more than a 3:1 ratio, or other means to allow trapped animals to escape. Biological monitors shall provide guidance to construction crews to ensure that wildlife ramps or other means are sufficient to allow trapped animals to escape. At the end of each work day, a biological monitor shall ensure that excavations have been secured or provided with appropriate means for wildlife escape. All pipes or other construction materials or supplies that CPUC monitors determine to present a risk to wildlife will be covered or capped in storage or laydown areas. No pipes or tubing of the size and nature that may entrap wildlife will be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials will be inspected for wildlife before it is moved, buried, or capped.		

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	▪ **Dead animals.** Dead animals (of non-special-status species) large enough to subsidize ravens found on unpaved project roads, work areas, or the ROW shall be reported to the appropriate local animal control agency within 24 hours, to minimize raven subsidies. A biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found on unpaved project roads, work areas, or the ROW shall be reported to CDFW within one work day and the carcass handled as directed by CDFW. ▪ **Injured special-status wildlife.** SCE shall create and implement guidelines for dealing with injured or entrapped special-status wildlife found on or near project roads, work areas, or the ROW, and provide these guidelines to all biological monitors. If an animal is entrapped, a qualified biological monitor shall free the animal if feasible, or work with construction crews to free the animal, in compliance with applicable safety regulations and project requirements. If biological monitors cannot free the animal or the animal is too large or dangerous for monitors to handle, SCE shall contact and work with animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. SCE shall ensure that one or more qualified biological monitors receive training in the safe and proper handling and transport of injured wildlife and are provided with the appropriate equipment. These trained and equipped monitors shall be available to capture and transport injured wildlife to a local wildlife rehabilitator or veterinarian as needed. If the injured animal is too large or dangerous for monitors to handle, or a trained and equipped monitor is not available, SCE shall contact and work with a local wildlife rehabilitator, animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. A list of qualified wildlife rehabilitators, veterinarians, and animal control agencies will be maintained to ensure a timely response to requests for support. SCE shall bear the costs of veterinary treatment and rehabilitation for any wildlife injured by project-related activities and any injured wildlife found on or near project roads, work areas, or the ROW, unless the injuries are clearly not project-related, as determined by a qualified biologist. Additionally, any entrapped or injured special-status species found on project roads (with the exception of public roads), work areas, or the ROW shall be reported to the appropriate resource agency within one work day.		
MM BR-9 [Supersedes APM BIO-04]	**Conduct surveys and avoidance for special-status reptiles.** Pre-activity Surveys: No more than seven days prior to the onset of ground-disturbing activities, an agency-approved biologist — with experience monitoring and handling desert tortoise — will conduct a pre-activity survey in all work areas within potential desert tortoise, banded Gila monster, desert rosy boa, or Mojave fringe-toed lizard habitat, plus an approximately 300-foot buffer. If potentially suitable burrows, sand fields, or rock piles are found, they shall be checked for occupancy. All desert tortoise burrows within the pre-activity survey area (including desert tortoise pallets) must be flagged or marked using an alternate method with minimal potential risk of cuing predators, to be developed in	No more than 7 days prior to ground-disturbance, conduct survey in all work areas within potential desert tortoise, banded Gila monster, desert rosy boa, or Mojave fringe-toed lizard habitat, plus an approximately 300-foot buffer.	

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	coordination with CDFW so that they may be avoided during work activities. Proposed actions will avoid disturbing desert tortoise burrows to the extent possible. However, burrows may be excavated if they can't be avoided and would be impacted by construction activities. If a tortoise must be handled or a potential tortoise burrow must be excavated, the biologist shall proceed according to the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) or any requirements of the USFWS and CDFW incidental take authorizations. No desert tortoise may be handled except under explicit authorization from USFWS and CDFW. ▪ Monitoring: The approved tortoise biologist shall be available on site to monitor any work areas for desert tortoise, banded Gila monster, desert rosy boa, and Mojave fringe-toed lizard as needed. The approved tortoise biologist shall also be responsible for performing surveys prior to Proposed Project activities in suitable habitat for all three species. The approved tortoise biologist will have the authority to halt all non-emergency actions (as soon as safely possible) that may result in harm to desert tortoise, and will assist in the overall implementation of all adopted protection measures for special-status reptiles. As an alternative to full-time on-site monitoring, selected work areas (e.g., the series capacitors) may be enclosed by desert tortoise exclusion fencing and then covered by two complete 100 percent coverage clearance surveys. If exclusion fencing is installed, the agency-approved tortoise biologist shall monitor installation. ▪ Desert Tortoise in Work Area: In the event that a desert tortoise is encountered in the work area, all work shall cease and the approved biologist must be contacted. Work shall not recommence until the animal has voluntarily moved to a safe distance away from the work area unless incidental take permits have been obtained to allow handling. Desert tortoises may be moved by an agency-approved biologist as authorized by state and federal incidental take permits if necessary to move them out of harm's way. Encounters with special-status herpetofauna will be reported to an approved biologist. Encounters with desert tortoise will be documented and provided to the California Department of Fish and Wildlife (CDFW), BLM, and U.S. Fish and Wildlife Service (USFWS). In the event that a dead or injured desert tortoise is observed, the approved biologist shall notify SCE's herpetologist and report the incident to the CDFW, BLM, and USFWS. ▪ Under Vehicle Checks: Desert tortoises and other wildlife commonly seek shade during the hottest times of the day. All employees shall be required to check under their equipment or vehicles before they are moved. If special-status wildlife is encountered, the vehicle shall not be moved until the animal(s) have voluntarily moved to a safe distance away from the parked vehicle. Desert tortoises and special-status species may be moved by the approved biologist, if necessary, to move them out of harm's way. ▪ Handling Desert Tortoise: Only an agency-approved biologist may move or handle desert tortoises as authorized by state and federal incidental take permits. When a	If potentially suitable burrows, sand fields, or rock piles are found, they shall be checked for occupancy and flagged. SCE shall implement Raven Management Plan. Approved tortoise biologist on site to monitor for DETO presence and train crews on avoidance measures. If DETO encountered, relocation shall be per this MM.	

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	desert tortoise is moved, the approved biologist will be responsible for taking appropriate measures to ensure that the animal is not exposed to harmful temperature extremes. The approved biologist shall follow the appropriate protocols outlined in the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) when handling desert tortoises or excavating their burrows as described in the state and federal take authorizations. ▪ Excavation of Desert Tortoise Burrows: Should it prove necessary to excavate a desert tortoise from its burrow to move it out of harm's way, excavation shall be done using hand tools, either by or under the direct supervision of an approved biologist. Excavation of desert tortoise burrows will occur no more than seven days before the onset of construction activities at any given site. All desert tortoises removed from burrows must be placed in an unoccupied burrow that is approximately the same size as the one from which it was removed. If an existing burrow is unavailable, the approved biologist shall construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original burrow following guidelines in the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009). To ensure their safety, desert tortoises moved during inactive periods must be monitored for at least two days after placement in the new burrows or until the end of the construction activity. If desert tortoises need to be moved at a time of day when ambient temperatures could harm them (i.e., at temperatures lower than 40 degrees Fahrenheit (°F) or higher than 90°F), they must be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of the approved biologist under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes shall be appropriately discarded after one use. ▪ Vehicle Travel: Motor vehicles shall be limited to maintained roads and designated routes. If additional routes are needed, they must first be surveyed and approved by the approved biologist. Raven Management: SCE shall implement a Raven Management Plan (RMP) to minimize avian predation of desert tortoise for the Proposed Project. ….		
MM BR-10 [Supersedes APM BIO-06]	**Prepare and implement a Nesting Bird Management Plan.** SCE shall implement a Nesting Bird Management Plan (NBMP). …. At the end of each year's nest season, SCE will submit an annual NBMP report to the CPUC, BLM, CDFW, and USFWS. Specific contents and format of the annual report will be reviewed and approved by the CPUC and BLM in consultation with CDFW and USFWS.	SCE shall implement NBMP, including reporting any nest locations, project activities in the vicinity of nests, any adjustments to buffer areas, and use of nest deterrents to CPUC EMs on a daily and weekly basis. At the end of each year's nest season, SCE will submit an	

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		annual NBMP report to the CPUC, BLM, CDFW, and USFWS.	
MM BR-11 [Supersedes APM BIO-07]	**Conduct surveys and avoidance for burrowing owl.** Burrowing owl surveys shall be conducted in accordance with the most current CDFW guidelines in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFG, 2012; or updated guidelines as they become available) in all potential habitat, regardless whether or not the previous assessment identified burrows. SCE shall take measures to avoid impacts to any active burrowing owl burrow within or adjacent to a work area. The default buffer for a burrowing owl burrow is 300 feet for ground construction, and 300 feet horizontal and 200 feet vertical for helicopter construction. Effectiveness of the buffer area will be monitored, and adjustments will be made if necessary. The Nesting Bird Management Plan (Mitigation Measure BR-10) will specify a procedure for adjusting this buffer, if needed. Binocular surveys may be substituted for protocol field surveys on private lands adjacent to the project site only when SCE has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission. ▪ If active burrowing owl burrows are located within project work areas, SCE may passively relocate the owls by implementing a Burrowing Owl Passive Relocation Plan. ……	Prior to post-construction/ revegetation at a project site, conduct burrowing owl surveys. Implement required buffers per this MM and NBMP. Implement Burrowing Owl Passive Relocation Plan; no active relocation permitted. Provide weekly monitoring reports.	
MM BR-12	**Conduct surveys and avoidance for bats.** SCE shall conduct surveys for roosting bats within 200 feet of project work areas within 14 days prior to any grading of rocky outcrops or removal of large trees (12 inches in diameter or greater at 4.5 feet above grade) with loose bark or other cavities, foliage, and palm fronds. Surveys shall be conducted during the breeding season (1 March to 31 July) and the non-breeding season. Surveys shall be performed by a qualified bat biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding or equivalent agreement with CDFW allowing the biologist to handle bats). The resume of the biologist shall be provided to the CPUC and BLM for concurrence in consultation with CDFW and USFWS prior to the biologist beginning field duties on the project. Surveys shall include a minimum of one day and one evening. Any active bat roosts, including occupied day roosts, maternity roosts, and hibernacula, must be identified and clearly marked. An exclusion area will be established 165 feet from any active roost, and these areas will be avoided during construction activities. Ingress and egress along established routes will be permitted in those areas, and additional buffer reductions may be considered in coordination with the qualified bat biologist, CPUC, and CDFW. If active roosts are found, then SCE will either (1) delay construction activities at these sites until the roost is no longer active, or (2) conduct follow-up focused surveys to determine if the sites support special-status bat species. If the roost is occupied by common species, then work activities may proceed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the	Conduct pre-construction surveys within 200 feet or bat habitat and submit to CPUC and BLM for review and approval. An exclusion area will be established 165 feet from any active roost, and these areas will be avoided during post-construction/ revegetation activities.	

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	special-status bats is completed. SCE shall consult with CDFW regarding eviction of non-breeding bats. SCE shall submit documentation providing pre-construction survey results and any avoidance of roosting and nursery sites to the CPUC and BLM for review and approval.		
MM BR-13	**Conduct surveys and avoidance for American badger, ringtail, and desert kit fox.** SCE shall conduct pre-construction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of construction activities. Surveys shall be conducted in areas that contain habitat for this these species and shall include project disturbance areas and access roads plus a 200-foot buffer surrounding these areas. SCE shall submit documentation providing pre-construction survey results to the CPUC and BLM for review and approval. If dens are detected, each den shall be classified as inactive, potentially active, active non-natal, or active natal. Inactive dens located in project disturbance areas may be excavated by hand and backfilled to prevent reuse, only upon confirmation that they are inactive. Active or potentially active dens shall be flagged and project activities, with exceptions as listed below, within 100 feet (non-natal dens) or 200 feet (natal dens, or any active den during the breeding season) shall be avoided. Ingress/egress of construction vehicles and equipment through buffers and low intensity activities such as inspections and BMP maintenance within buffers is allowed, provided a qualified biologist determines that these activities will not impact dens or denning animals. Buffers may be modified with concurrence of CPUC and BLM, in consultation with CDFW and USFWS. If active dens are found within project disturbance areas and avoidance is not possible, SCE shall take action as specified below, after notifying and obtaining concurrence from CPUC, BLM, and CDFW. **Active and potentially active non-natal dens.** Outside the breeding season, any potentially active dens that would be directly impacted by construction activities shall be monitored by a qualified mammologist or biologist for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) 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, the den may be excavated and backfilled by hand. If tracks are observed, the den may be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage continued use. After verification that the den is no longer active, the den may be excavated and backfilled by hand. **Active natal dens.** Active natal dens (any den with cubs or pups) or any den active during the breeding season will not be excavated or passively relocated. The cub or pup-rearing season is generally from January 15 through mid-September. A 200-foot no-disturbance buffer shall be maintained around all active natal dens. Discovery of an active natal den that could be impacted by the project shall be reported to the CPUC, BLM, and CDFW within 24 hours of the discovery along with a map of the den location	SCE shall conduct pre-construction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of post-construction/ revegetation activities and submit to CPUC and BLM for review and approval. Active or potentially active dens shall be flagged and project activities shall be avoided, unless otherwise specified. All den monitoring and excavation activities and passive relocations shall be documented and reported to the CDFW, BLM, and CPUC in weekly monitoring reports, and a written summary will be included in each annual monitoring report.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	and a copy of the survey results. A qualified biologist shall monitor the natal den until he or she determines that the pups have dispersed. Any disturbance to denning animals or activities that might disturb denning activities shall be prohibited within the buffer zone. Once the pups have dispersed, methods listed above for non-natal dens may be used to discourage den reuse. After verification that the den is unoccupied, it shall then be excavated by hand and backfilled to ensure that no animals are trapped in the den. If canine distemper is reported in desert kit fox on the site or surrounding areas, then SCE shall coordinate with CPUC, BLM, and CDFW to identify appropriate actions prior to continuing implementation of this mitigation measure in respect to desert kit fox. Any observations of a kit fox that appears sick or any kit fox mortality shall be reported to CPUC, CDFW, and BLM within one work day. In the event that passive relocation techniques fail, SCE shall contact the CPUC, BLM, and CDFW to explore other relocation options. All den monitoring and excavation activities and passive relocations shall be documented and reported to the CDFW, BLM, and CPUC in weekly monitoring reports, and a written summary will be included in each annual monitoring report.		
Cultural Resources			
APM-CUL-02	**Cultural Resources Survey.** SCE would perform surveys prior to construction for any Proposed Project areas not yet surveyed (e.g., new or modified staging areas, pull sites, or other work areas).	SCE to submit survey results to CPUC and BLM.	
MM CR-1	**Retain a Cultural Resources Specialist.** The project Cultural Resources Specialist shall use the services of Cultural Resources Monitors, tribal monitors and Field Crew as needed, to assist in mitigation, monitoring, and curation activities, as outlined in the CRMP. A copy of all proposed cultural staff qualifications shall be provided to the CPUC for review and approval prior to beginning work.	CPUC EMs to confirm appropriate cultural and tribal monitors are present.	
MM CR-2	**Cultural resources environmental awareness training.** Project personnel, including cultural resources monitors and tribal monitors, shall receive training that includes sensitivity training provided through participating tribes in video format regarding the appropriate work practices necessary to effectively implement the APMs and mitigation measures related to cultural resources and tribal cultural resources, including human remains. Training shall be required for all personnel before they begin work on a project site and repeated as needed for all new personnel before they begin work on the Project. ….. Documentation of the training will be provided to the BLM and CPUC. The CPUC will provide documentation to the consulting tribes.	Training shall be required for all personnel before they begin work on a project site.	
MM CR-3	**Prepare and implement a Cultural Resources Management Plan.** ….. The CRMP shall be implemented under the direction of the SCE and the project Cultural Resources Specialist.	CPUC EMs to validate implement of CRMP during construction.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
MM CR-4	**Inadvertent discovery of cultural or tribal cultural resources.** If previously undiscovered resources are identified during project activities all activities within 100 feet (30 meters) of the resource shall halt. The onsite construction supervisor and SCE shall be notified. SCE will notify the CPUC and BLM of the discovery. The monitoring team shall flag-off the area. SCE and its cultural resource specialist will coordinate with the CPUC, BLM, NPS and tribal representatives as appropriate, on avoidance measures. If the resource cannot be avoided, methods of resource evaluation, and methods of mitigation will be discussed with all appropriate parties. Work may be temporarily diverted to activities that are outside of 100 feet (30 meters) of the discovered or suspected resource. The resource shall be evaluated to determine whether it is eligible for the NRHP, CRHR, a unique archaeological resource, a tribal cultural resource, or part of a larger culturally sensitive landscape area or traditional cultural property. If the resource is determined not to be significant, work may recommence in the area. If the resource is determined significant work shall remain halted within 100 feet (30 meters) of the area of the find, SCE shall consult with the BLM, CPUC, and representatives of the consulting tribes as appropriate regarding methods to ensure that no adverse effect and no substantial adverse change would occur to the significance of the resource. Preservation in place (i.e., avoidance) is the preferred method of mitigation for impacts to cultural resources. Other methods of mitigation, described below, shall only be used if it is determined the method would provide equivalent or superior mitigation of the impacts to the resource. The alternative methods of mitigation may include data recovery and documentation of the information contained in the resource to answer questions about local prehistory or history. The methods and results of the evaluation or data recovery work at an archaeological find shall be documented in a professional-level technical report to be filed with the California Historical Resources Information System (CHRIS). Work in the area may commence upon completion of treatment, as approved by the BLM and CPUC. If data recovery of resources is necessary, additional archaeologists shall perform the excavation while the monitoring team(s) continues to monitor construction. Additionally, the tribes shall be offered the opportunity to monitor data recovery efforts at prehistoric sites in addition to construction efforts, under the same contract terms. This opportunity shall be additionally be extended to tribes that consulted on this project, but for which a tribal monitor was not provided for construction efforts.	If previously undiscovered resources are identified during project activities all activities within 100 feet (30 meters) of the resource shall halt and SCE and its cultural resource specialist will coordinate with the CPUC, BLM, NPS and tribal representatives as appropriate, on avoidance measures and resource evaluation and data recovery, if necessary.	
MM CR-5	**Avoidance of cultural and tribal cultural resources.** When project work is planned within 100 feet of a known prehistoric-era cultural resource or a tribal cultural resource, or any resources that are eligible for the CRHR and/or NRHP, avoidance areas shall be established and monitors shall be present as outlined in the CRMP. ESAs shall be established with a 50 foot buffer around each resource prior to project activities, except where the 50-foot buffer would encroach on a work area, in which event the ESA buffer shall be the near edge of the identified work area. Monitoring teams shall include one qualified cultural resources monitor and one Native American monitor at	Cultural and NA monitoring for post-construction/ revegetation activities near known resources in accordance with the CRMP.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	prehistoric sites. ESAs shall be established by a qualified cultural resources monitor. The timing and intensity of the monitoring may vary according to the type of resource and the nature of the work planned and shall be determined in consultation with consulting tribes, as appropriate.		
MM CR-6	**Prepare monitoring reports.** Upon completion of cultural resources and tribal cultural resources monitoring, SCE shall prepare a single report that summarize the monitoring efforts and the results, analyses, and conclusions of the monitoring program. Individual volumes per land ownership will be included and provide additional details. Copies of the report shall be submitted to both the CPUC and BLM within 60 days of the close of construction. Thereafter, consistent with individual agency policy, each agency will disseminate to the consulting tribes the report applicable to land under that agency's jurisdiction. Draft reports under CPUC jurisdiction will be submitted to consulting tribes for a 30-day review and comment period concurrent with agency review. If no new resources were discovered during construction, a letter report shall be submitted to the CPUC and BLM summarizing monitoring efforts. If resources were identified during construction, the reports shall be consistent with the California Archaeological Resources Management Reports (ARMR) and commensurate with the nature and significance of the identified resource(s). If artifacts are collected, they shall be curated at a recognized curation facility unless consulting tribes request that the Native American artifacts be reburied on site. Documentation associated with any newly identified resources shall be filled with the CHRIS, if appropriate.	SCE shall prepare a single report that summarize the monitoring efforts and the results, analyses, and conclusions of the monitoring program.	
MM CR-7	**Inadvertent discovery of human remains on state owned land or private property.** In the event that human remains or suspected human remains are identified, SCE shall comply with California law (Health and Safety Code Section 7050.5; PRC Sections 5097.94, 5097.98, and 5097.99). The area shall be flagged off and all project activities within 200 feet (60 meters) of the find shall immediately cease. The CPUC-approved Cultural Resources Specialist and SCE shall be immediately notified. SCE shall immediately contact the Medical Examiner at the County Coroner's office, BLM, CPUC as well as representatives of consulting tribes. The CSLC will be notified if the remains are identified on state land. The Medical Examiner has two (2) working days to examine the remains. If the Medical Examiner believes the remains are Native American, they shall notify the California Native American Heritage Commission (NAHC) within 24 hours. If the remains are not believed to be Native American, the appropriate local law enforcement agency will be notified. The NAHC will immediately notify the person or tribe it believes to be the most likely descendant (MLD) of the remains, and the MLD has 48 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the human remains and any associated grave goods. If the MLD does not make recommendations within 48 hours, the remains shall be reinterred in the location they were discovered and the area of the property shall be secured from further disturbance. If there are disputes between the landowner and the MLD, the NAHC shall	If human remains or suspected human remains are identified, SCE shall comply with California law, including ceasing construction within 200 feet of the find.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	mediate the dispute and attempt to find a solution. If the mediation fails to provide measures acceptable to the landowner, the landowner or their representative shall reinter the remains and associated grave goods and funerary objects in an area of the property secure from further disturbance. The location of any reburial of Native American human remains shall not be disclosed to the public and shall not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code§ 6250 et seq., unless otherwise required by law. The Medical Examiner shall withhold public disclosure of information related to such reburial pursuant to the specific exemption set forth in California Government Code Section 6254(r).		
MM CR-8	**Inadvertent discovery of human remains on federal land.** If potential human remains are discovered during any Project activity on lands administered by federal agencies, all activities within 200 feet that will cease immediately. SCE will take appropriate steps to secure and protect human remains and any funerary objects from further disturbance. SCE will notify the BLM and the County Coroner (California Health and Safety Code 7050.5(b)) immediately. If the remains are determined to be Native American or if Native American cultural items pursuant to the Native American Graves Protection and Repatriation Act (NAGPRA) are uncovered, the remains shall be treated in accordance with the provisions of NAGPRA (43 CFR 10) and the Archaeological Resources Protection Act (43 CFR 7). SCE shall assist and support the federal agency, as appropriate, in all required NAGPRA and Section 106 actions, government to-government and consultations with Native Americans, agencies, and consulting parties as requested by the federal agency. SCE shall comply with and implement all required actions and studies that result from such consultations.	If potential human remains are discovered during any Project activity on federal land, all activities within 200 feet that will cease immediately, and SCE will notify the BLM and the County Coroner.	
Geology and Soils			
MM PAL-1	**Retain qualified paleontological staff.** …. Additional Paleontological Staff – The Project Paleontologist may obtain the services of Paleontological Field Agents, Field Monitors, and Field Assistants, if needed, to assist in mitigation, monitoring, and curation activities. These individuals must meet the qualifications described in BLM IM 2009-011.	Additional paleontological staff must meet the qualifications described in BLM IM 2009-011.	
MM PAL-2	**Provide paleontological environmental awareness training.** SCE will provide worker's environmental awareness training on paleontological resources protection as part of its WEAP required under Mitigation Measure BR-2, Prepare and implement a Worker Environmental Awareness Program. This training may be administered by the project paleontologist as a stand-alone training or included as part of the overall worker's environmental awareness training. At a minimum, the training would include the following: ▪ the types of fossils that could occur at the project site; ▪ the types of lithologies in which the fossils could be preserved; ▪ the procedures that should be followed in the event of a fossil discovery; and ▪ penalties for disturbing paleontological resources.	Prior to working on the project, as part of the WEAP, each crew member shall be trained in paleontological resources protection**.**	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
MM PAL-3 [Supersedes APM CUL-04]	**Prepare and implement a Paleontological Resource Mitigation and Monitoring Plan (PRMMP). ….** The PRMMP shall be implemented under the direction of the Project Paleontologist	CPUC EMs to validate implementation of PRMMP during construction.	
MM PAL-4	**Conduct monitoring for paleontological resources.** The applicant shall continuously comply with the following during all ground disturbing activities during the project: ▪ All ground disturbing activity in Proposed Project work areas identified with unknown, high, or very high paleontological sensitivity (PFYC U, PFYC 4, or PFYC 5) should be monitored on a full-time basis by a BLM- approved Paleontological Field Agent who will work under the supervision of the BLM- permitted paleontologist and principal investigator. ▪ Ground disturbing activity that exceeds 5 feet in depth in work areas underlain by Holocene units shall be monitored part time. Spot-checking shall take place at least once a day and be conducted by a Qualified Paleontologist. ▪ The level of effort and intensity for monitoring shall be modified as needed by a Qualified Paleontologist, in consultation with the appropriate agency personnel, based on the sediment types, depths, and distributions observed during monitoring throughout the life of the project. ▪ Project activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Project Paleontologist. Monitoring shall be conducted as follows: – Monitoring of ground disturbance shall consist of the surface collection of visible vertebrate and significant invertebrate fossils within the project site. Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be halted and diverted and the Project Paleontologist shall be notified. Once the find has been inspected and a preliminary assessment has been made, the Project Paleontologist will notify SCE. SCE will notify the CPUC, BLM, and MNP of the discovery within 24 hours. If recovery of a large or unusually productive fossil occurrence is warranted, earth-moving activities shall be diverted temporarily around the fossil locality, and a recovery crew shall be mobilized to remove the material as quickly as possible. The monitor shall be permitted to photograph and/or draw stratigraphic profiles of cut surfaces and take samples for analysis of microfossils, dating, or other specified purposes in accordance with the PMMP. – Recovered specimens shall be prepared to a point of identification, including washing of sediments to recover smaller fossil remains. Once excavation has reached specified depths, salvage of fossil material from the sidewalls of the cut shall resume. Specimens shall be identified and curated into a repository with retrievable storage. ▪ All significant fossil specimens recovered from the project site as a result of the paleontological monitoring and mitigation program shall be treated (prepared,	Monitor for compliance with PRMMP during post-construction/ revegetation activities.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
	identified, curated, and catalogued) in accordance with the designated repository requirements. Samples shall be submitted to a laboratory, acceptable to the designated repository, for identification, dating, and microfossil and pollen analysis.		
Hazards and Hazardous Materials			
MM HH-1	**Prepare and implement a Hazardous Materials and Waste Management Plan.** SCE shall implement a Project-specific Hazardous Materials and Waste Management Plan pursuant to Title 24, Part 9 of the California Code of Regulations (CCR) that identifies hazardous materials to be transported, used, and stored on site for the proposed construction activities — as well as hazardous wastes generated onsite as a result of the proposed construction activities — and appropriate management procedures ….	Implement Project-specific Hazardous Materials and Waste Management Plan during post-construction / revegetation activities.	
MM HH-2	**Manage discovery of unanticipated contamination.** In the event that contaminated media are encountered during construction requiring excavation, SCE shall stop work, contact SCE's Safety and Environmental Specialist (SES), request a site assessment, and notify the proper authorities. The potentially contaminated soil should first be segregated into lined stockpiles, dump trucks, or roll-off containers. Samples are to be collected and analyzed to determine the appropriate handling, treatment, and disposal options. If the analytical results indicate that the soils are hazardous, the affected soils would be properly managed on location and transported to a Class I Landfill or other appropriate soil treatment or recycling facility using a Uniform Hazardous Waste Manifest. Work at the affected site would continue at that location only when given clearance by the SES.	Manage unanticipated contamination in accordance with mitigation measure requirements, and applicable laws and regulations.	
Hydrology and Water Quality			
MM HWQ-1	**Implement an Erosion Control Plan.** ….. The Erosion Control Plan may be part of the Stormwater Pollution Prevention Plan (SWPPP) and kept onsite and readily available on request. Soil disturbance at structures and access roads is to be minimized and designed to prevent long-term erosion. ….. Locations requiring erosion control/SWPPP corrective actions/repairs shall be tracked, including dates of completion, and documented during inspections. Inspections and monitoring shall be performed in compliance with the Federal and California Construction General Permits. The inspection reports shall be maintained and kept with their respective SWPPP, kept on site as required by the Federal and State Construction General Permits, and made available upon request to the RWQCB, CPUC, BLM, and representatives of the traversed counties and cities. Additionally, an Annual Report shall be filed for each reporting period in compliance with Federal and California Construction General Permit reporting requirements.	CPUC EMs to validate implementation of Erosion Control Plan during post-construction/ revegetation activities, including provision of inspection and annual reports to applicable agencies.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
Noise			
MM N-1	**Limit construction noise levels.** SCE shall ensure that all construction activities occur within the following hours, during which construction noise would be exempt from local ordinances: in San Bernardino County and City of Hesperia, between 7:00 a.m. to 7:00 p.m. Monday through Saturday, except Federal holidays, unless an alternate schedule is coordinated with the applicable local jurisdiction. Additionally, SCE shall implement the following construction noise reduction methods as precautionary measures, as identified in the Noise Technical Report (Appendix K to SCE's PEA (Eilar, 2017)): ▪ Turn off equipment when not in use. ▪ Limit the use of enunciators or public address systems, except for emergency notifications. ▪ Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured, to prevent rattling and banging. ▪ Schedule work to avoid simultaneous construction activities that both generate high noise levels. ▪ Use equipment with effective mufflers. ▪ Minimize the use of backup alarms.	Post-construction/ revegetation activities shall occur during work hours allowed by respective noise ordinances and implement noise reduction measures.	
MM N-2	**Provide advance notification of construction noise.** ….. No less than 15 days prior to construction that would occur within 500 feet of residences, businesses, or other occupied structures, SCE shall distribute a public notice mailer. The notice shall state the type of construction activities that will be conducted, and the location and duration of construction. The notice shall identify, and SCE shall provide a public liaison person before and during construction to respond to concerns of residents about construction noise. SCE shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers. SCE shall address all complaints within one week of when the complaint is filed, and shall provide to the CPUC, within 15 days of the end of each month, a monthly report with records of all complaints and responses. SCE shall mail the notice to all residents or property owners within 500 feet of the right-of-way or within 1,000 feet of helicopter fly yards and flight paths.	No less than 15 days prior to post-construction/ revegetation activities that would occur within 500 feet of residences, businesses, or other occupied structures, SCE shall distribute a public notice mailer. Provide monthly report with records of all complaints and responses.	
Transportation			
MM T-1	**Prepare and implement a Construction Traffic Control Plan.** Implement Construction Traffic Control Plans as required by state and local agencies responsible for public roads that would be directly affected by the construction activities and/or would require permits and approvals.	CPUC EMs to validate implementation of Traffic Control Plan(s) during post-construction/ revegetation activities.	

APM/MM	Eldorado-Lugo-Mohave Series Capacitor Project APM/MM Requirements	Monitoring Requirement	Status
MM T-2	**Repair roadways and transportation facilities damaged by construction activities.** …. At the end of major construction, SCE shall coordinate with each affected jurisdiction to confirm what repairs are required. Any damage demonstrable to the project is to be repaired to the pre-construction condition within 60 days from the end of all construction, or on a schedule mutually agreed to by SCE and the affected jurisdiction. If multiple projects or users access the same transportation features, SCE will pay its fair share of the required repairs. SCE shall provide CPUC and affected jurisdictions (as applicable) proof when any necessary repairs have been completed.	At the end of major construction, SCE shall coordinate with each affected jurisdiction to confirm what repairs are required.	
Tribal Cultural Resources			
APM-TCR-1	**Tribal Monitoring.** An archaeological monitor, and tribal monitor that is culturally affiliated with the project area, may be present for all ground-disturbing activities within or directly adjacent to previously identified TCR(s) and prehistoric resources as outlined in the CRMP. The archaeological and tribal monitors will consult the CRMP to determine when to increase or decrease the monitoring effort should the monitoring results indicate a change is warranted. Monitoring reports shall be prepared and submitted to the BLM and CPUC on a monthly basis.	Tribal monitor shall be present during post-construction/revegetation activities in accordance with the CRMP. Monitoring reports shall be prepared and submitted to the BLM and CPUC on a monthly basis.	
APM-TCR-2	**Tribal Engagement Plan.** A tribal engagement plan shall be prepared, which will detail how Native American tribes will be engaged and informed throughout the proposed project. The tribal engagement plan will be included in the CRMP.	Implement CRMP during post-construction/ revegetation activities, including tribal engagement plan.	
Also see MMs CR-1 through CR-8 above, under Cultural Resources.			
Utilities and Service Systems			
MM UT-2	**Implement mitigation measures during pipeline protection work.** In accordance with the agreement(s) between SCE and any party undertaking installation of pipeline protection measures required as a result of the ELM Project, applicable mitigation measures required during construction of the ELM Project shall also apply to and be implemented during any required pipeline-related work.	CPUC EM to validate implementation of mitigation requirements during pipeline post-construction/ revegetation activities per the agreement.	
Wildfire			
MM WF-1	**Prepare and implement a Fire Management Plan.** …. SCE shall fully implement the Fire Management Plan during all construction activities. A qualified project Fire Marshal or person of similar title and experience shall be established by SCE to implement and enforce all provisions of the approved Fire Management Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. The Fire Marshal shall monitor construction activities to ensure implementation and effectiveness of the plan. ….	A qualified Fire Marshal shall be established by SCE to implement and enforce all provisions of the approved Fire Management Plan, as validated by the CPUC EM.	

ATTACHMENT E

Organization Charts and Project Contacts List (Confidential)

The Project Contact List is an internal document.

ATTACHMENT F

Example Weekly Compliance Report

5020 Chesebro Road, Suite 200, Agoura Hills, CA 91301-2285
Tel. 818-597-3407 • Fax 818-597-8001 • www.aspeneg.com

PROJECT MEMORANDUM
SCE WEST OF DEVERS UPGRADE PROJECT

To: John Forsythe, Project Manager, CPUC
From: Vida Strong, Aspen Project Manager
Date: April 2, 2020
Subject: Monitoring Report #105: March 23 to March 29, 2020

Introduction

This report provides a summary of the construction and compliance activities associated with Southern California Edison's (SCE) West of Devers (WOD) Upgrade Project. SCE self-performed work (NTPs #2 and #3) is essentially complete with the exception of substation equipment upgrades and minor tie-ins. 220 kV work (NTPs #4 and #5) is approximately 54% complete.

CPUC Environmental Monitor (EM): CPUC EM, Jamie Miner, was onsite March 23, and 25 through 27, 2020.

CPUC Notices to Proceed (NTPs)

Table 1 summarizes the NTPs with construction for the WOD Upgrade Project. No additional NTPs are required.

Table 1 - NTPs

NTP #	Date Requested	Date Issued	Phase	Description
NTP #1	04/04/17	06/29/17	Material Yards	Construction or use of 10 Material Yards
NTP #2	05/18/17	06/29/17	Substation Upgrades	Upgrades to 5 existing Substations
NTP #3	06/05/17	08/10/17	Distribution, Subtransmission, and Telecom	Construction of the Distribution, Subtransmission, and Telecommunication portions of the Project
NTP #4	07/13/17	09/05/17	Transmission	Transmission Line Construction on private lands
NTP #5	08/07/17	03/29/18	Construction on BLM lands	Transmission Line construction on BLM lands

Construction & Compliance

A summary of construction and compliance activities is provided below by NTP.

Material Yards (NTP #1)

As defined in NTP #1, Project material yards (MY) include:

- Mountain View #1 MY
- Lugonia MY (not being used)
- Grand Terrace MY
- Poultry MY

- San Timoteo MY (not being used)
- Beaumont #1 MY (not being used)
- Beaumont #2 MY
- Matich MY
- Hathaway #2 MY (not being used)
- Devers MY

To date, all material yard pre-compliance materials associated with NTP #1 that have been submitted have been approved.

Summary of Construction Activity

1. For the currently approved MYs, all activities are being performed by the contractor operating out of each respective yard.
2. The Poultry MY is being utilized by Barnard Construction and Power Grade Incorporated as their primary base of operations and material/equipment storage location. Work associated with the Poultry MY included material/equipment deliveries and general yard maintenance throughout the monitoring period. Helicopter operations occurred out of the Poultry MY during the subject monitoring period.
3. The Matich MY is being utilized by Barnard Construction primarily for tubular steel pole (TSP) storage and by Wilson as their primary base of operations and material/equipment storage location. Work associated with the Matich MY included material/equipment deliveries throughout the monitoring period. Helicopter operations occurred out of the Matich MY during the subject monitoring period.
4. The Mountain View #1 MY is being utilized by Abercrombie Services as their primary base of operations for materials/equipment storage, mobilization, and maintenance.
5. The Beaumont #2 MY is being utilized by CJ/Aldridge Drilling as their primary base of operations for material/equipment storage, mobilization, and maintenance.
6. The Grand Terrace MY is being used primarily as a show-up location for project construction crews.
7. The Devers MY is being utilized by CJ/Aldridge, Abercrombie Services, and Power Grade for construction activities on Segment 6 for material/equipment deliveries.

Environmental Compliance

1. There were no SCE self-reported and no CPUC incidents documented for construction activities associated with NTP #1 throughout the monitoring period.
2. There were no SWPPP maintenance item and no corrective actions associated with NTP #1 recorded during the monitoring period. To date, there are no open SWPPP maintenance or corrective actions associated with NTP #1.
3. There were no reportable (> 1 gallon) or non-reportable (< 1 gallon) spills associated with NTP #1 identified during the monitoring period.
4. As of the end of the monitoring period, there are no active nests at locations associated with NTP #1 during the monitoring period. If required, nest management, including establishment of buffers and the removal of inactive non-special-status bird species' nests, is being implemented per the requirements of the Project Nesting Bird Management Plan (NBMP). No nests were removed during the subject reporting period.
5. No special-status species were observed or identified at locations associated with NTP #1 during the monitoring period.

Substations (NTP #2)

Five substations are identified for improvements in NTP #2. These include:

- Etiwanda Substation
- San Bernardino Substation
- Vista Substation
- El Casco Substation
- Devers Substation

To date, all pre-compliance materials associated with NTP #2 that have been submitted have been approved.

Summary of Construction Activity

1. For the currently approved substation components, all work is being managed by Circle Wood Services with construction support from TTR Substations, Roberson Waite, Cunningham-Davis, and SCE crews. Wire stringing connections and wreck-out activities between the project alignment and locations within the substations are being performed by Abercrombie Services.

2. Construction activities at the San Bernardino Substation included removing temporary grounding, labeling secondary conductor, installing primary conductor from line disconnects to drops, installing new MBB switch, and cutting and removing Circuit Breaker 512.

3. Construction activities at the Devers Substation included conductor pre-fabrication, disconnect pre-assembly, pre-wiring new Circuit Breaker 6082, CCVT pull box pre-fabrication, verifying related cables, foundation demolition, core drilling at circuit breaker pad, layout and installation of new foundations, and installing below ground conduit/ grounds (see Photo 1).

4. No construction activities occurred at the El Casco substation. Construction activities at the Etiwanda and Vista substations are complete.

Environmental Compliance

1. There were no SCE self-reported and no CPUC incidents documented for construction activities associated with NTP #2 throughout the monitoring period.

2. There were no SWPPP maintenance items or corrective actions associated with NTP #2 recorded during the monitoring period. To date, there are no open SWPPP maintenance or corrective actions associated with NTP #2.

3. There were no reportable (>1 gallon) or non-reportable (<1 gallon) spills associated with NTP #2 identified during the monitoring period.

4. As of the end of the monitoring period, there are five active nests located within work areas associated with NTP #2. These include red-tailed hawk, common raven, and great horned owl. If required, nest management, including establishment of buffers and the removal of inactive non-special-status bird species' nests, is being implemented per the requirements of the Project NBMP. There is one nest buffer reductions associated with NTP#2 during the subject reporting period for a red-tailed hawk nest. No nests were removed during the subject reporting period.

5. No new special status species were observed or identified at locations associated with NTP #2 during the monitoring period.

Distribution, Subtransmission, and Telecommunication Work (NTP #3)

NTP #3 included distribution, subtransmission, and telecommunication improvements as presented below. These construction activities have been essentially completed, with minor follow up required in response to Project activities.

Distribution improvements included the following:

- Dental 12-kV Distribution Circuit (Dental Circuit)
- Intern 12-kV Distribution Circuit Underbuild (Intern Circuit)
- Reconductor on Juanita Street (Juanita Reconductor)

Subtransmission improvements included the following:

- Removal of San Bernardino–Redlands-Timoteo and the San Bernardino–Redlands-Tennessee 66-kV Lines (Timoteo-Tennessee Removal)
- Relocation of San Bernardino–Redlands-Timoteo 66-kV Lines (Timoteo Relocation)
- Relocation of San Bernardino–Redlands-Tennessee 66-kV Lines (Tennessee Relocation)

Telecommunication improvements included the following:

- San Bernardino Substation Connection to Redlands Inland Empire District Office (San Bernardino Connection)
- Timoteo-Redlands District Office Fiber Optic Cable Connection (Timoteo-Redlands Connection)
- El Casco Substation Connection to Vista Moreno OPGW (El Casco Connection), Segment 3
- Maraschino Substation Connection to Devers-Valley OPGW (Maraschino Connection)
- El Casco–Banning Connection to Devers-Vista Skywrap (El Casco–Banning Connection), Segment 4
- Banning Substation Connection to Devers-Valley OPGW (Banning Connection), Segment 6

Summary of Construction Activity

1. For the currently approved subtransmission and distribution components, construction activities are being performed by Abercrombie Services and SCE crews. No construction activities associated with NTP #3 occurred during the monitoring period.
2. As summarized below, construction of the NTP #3 primary components is essentially complete with the exception of minor tie-ins.
    - For distribution components, all 19 12-kV poles have been framed, all 12 12-kV underground vaults have been installed, and 7,430 feet of 7,430 feet of 12-kV duct bank (conduit) and 10,760 feet of 10,760 feet of 12-kV conductor wire has been installed.
    - For subtransmission components, 119 of 119 66-kV light weight TSPs have been erected, 19 of 19 TSPs have been erected, and 25,610 feet of 25,610 feet of 66-kV wire has been installed. Both the Timoteo and Tennessee circuits have been energized. Wreck-out of the existing subtransmission infrastructure has been completed.

Environmental Compliance

1. There were no SCE self-reported or CPUC incidents documented for construction activities associated with NTP #3 throughout the monitoring period.

2. There were no SWPPP maintenance items or corrective actions associated with NTP #3 recorded during the monitoring period. To date, there are no open SWPPP maintenance items or corrective actions associated with NTP #3.

3. There were no reportable (>1 gallon) or non-reportable (<1 gallon) spills associated with NTP #3 identified during the monitoring period.

4. As of the end of the monitoring period, there is one active nest (golden eagle) nest located within work areas associated with NTP #3 for which the required buffer has been established; however, no work is planned for the area. If required, nest management, including establishment of buffers and the removal of inactive non-special-status bird species' nests is being implemented per the requirements of the Project NBMP. No nests were removed during the subject reporting period.

5. No special-status species were observed or identified at locations associated with NTP #3 during the monitoring period.

Transmission Work (NTP #4)

NTP #4 includes six transmission line segments, identified as Segments 1 through 6, generally moving from west to east.

To date, pre-compliance materials associated with NTP #4, Segments 1 through 6, have been submitted and approved.

Summary of Construction Activity

1. For the currently approved transmission components, Power Grade Incorporated is conducting access road maintenance/stabilization, BMP installation, vegetation removal, and site grading. CJ/Aldridge Drilling is performing foundation work. Abercrombie Services is assembling and erecting new towers, and conducting wire operations with support from Summit Helicopters. Wilson Construction is conducting wire removal operations. Cunningham Davis Corporation is removing existing towers and foundations. Ancillary telecommunication work approved in NTP #4 is being performed by SCE crews.

2. Work activities associated with Segment 1 included: Wire wreck-out activities (ground and helicopter) at Construction Area WSS-3-SBD-2; tower wreck-out at Construction Areas 1X12 through 1X26 (see Photo 2); foundation wreck-out activities at Construction Areas 1X03, 1X10, 1X11, 1X18, and 1X26; tower assembly at Construction Areas 1X04, 1X05, 1X10, 1X11, 1X15, and 1X18; and BMP maintenance at Construction Areas 1X04 through 1X25.

3. Work activities associated with Segment 2 included: Installing MAC drains at Construction Areas 2N16 through 2N18 and 2N20; staging, grading, and wall preparation activities at Construction Areas 2X10, 2X11, and WS-2-PradoLn-MPR-27; fence repair activities at Construction Areas 2N32 through 2N34; and access road maintenance and slope repair activities from Prado Lane to Construction Area 2N18, 2N22 through 2N26, and 2N32.

4. Work activities associated with Segment 3 included: Wire wreck-out activities (ground and helicopter) at Construction Areas 3X65 and WSS-3-SBD-2; foundation activities at Construction Area 3S02 and 3S03; installing anchors at 3X65; restoration grading at Construction Areas 3X60 and 3X62; and access road maintenance from the El Casco Substation to Construction Area 3S03, 3X48, 3X50, 3X51, 3X63 through 3X64, and from Refuse Road and Boy Scout Road.

5. Work associated with Segment 4 included: Grading at Construction Area 4X50 and 4X52; wire wreck-out activities (ground and helicopter) at Construction Areas 4X01 through 4X10, 4X12, 4X15, 4X17, 4X20, 4X21, 4X24 through 4X27, 4X29, 4X30, M23-T2, 4X36 through 4X39, and 4X50 through 4X55; foundation activities at Construction Areas 4X05 through 4X10, 4X47,and 4X53 through 4X55 (see

Photo 3); grounding clipped wire into the snub structures at Construction Areas WSS-4-4X44-1-MPR-32, 4X44, 4X44-1 and 4X45; install grounds at Construction Areas 4X34 and 4X36; reinforced concrete pipe installation at Construction Area 4X04-SE; setting guard structures at Construction Areas 4X01, WSS-4X01-4X02, and 4X05-4X06; addition of stabilized entrance to the entrance at Sunset Ave; recontouring access roads to Construction Area 4X04, between Sunset Ave and Bluff Ave, and between Construction Areas 4X06 and 4X07 (see Photo 4); access road maintenance at Palmer Ave through San Timoteo Canyon Road, 4X12 and 4X13; and BMP maintenance at Construction Areas 4X10, 4X42, and 4X43.

6. Work associated with Segment 5 (which includes sites within Morongo lands along Segment 5 as reported by SCE) included: Vegetation clearing and grading at Construction Area 5X08; wire wreck-out activities (ground and helicopter) at Construction Areas 5X01 through 5X11 and 5X14 to 5X18, 5X46, M76-T2, M76-T3, 5X46, M15-T4, SR-M75T4-M75T5, M15-T3, M15-T2, M75-T2, SR-M75T1-M75T2, M75-T1, WSS-M74-T4 (see Photo 5); tower assembly at Construction Areas 5X18 through 5X30; snub pole installation at Construction Area WSS-5X15-5X16; punch list items at Construction Areas 5X36 and 5X41 through 5X49; tower wreck-out at Construction Area 5X01, 5X03, 5X04, 5X08, 5X14, 5X19, M69-T2, 5X24, M13-T2, 5X29, M71-T3, and WSS-5X15-5X16; maintenance activities on soil salvage pile at Construction Area 5X23; and access road maintenance at Construction Areas M76-T4, WSS-5X52-E, 5X52, WSS-5X52-5X54, and 5X54.

7. Work associated with Segment 6 (non-BLM lands) included: Wire wreck-out at Construction Areas 6N27, and 6N42 through 6N48; snub installation at Construction Area 6X42; anchor installation at Construction Area 6X43 (see Photo 6); guard structure installation at Construction Areas 6N40 and 6N41; clean-up activities at Construction Area 6N32; and BMP maintenance at Construction Areas 6N39, 6S39, 6X40, through 6X42, and 6X46.

8. 220 kV construction updates from SCE are being provided on a bi-weekly basis. The next update will be provided on April 14. As of March 31, construction progress associated with NTP #4 is as follows:

    - Grading for foundation installation has been completed at 456 of 469 sites.
    - Foundations are completed for 359 of 386 lattice towers and 69 of 83 TSPs.
    - Erection of 174 of 386 lattice towers and 63 of 83 TSPs have been completed.
    - Erection of 60 of 94 temporary shoofly locations has been completed.
    - Stringing of approximately 3.7 of 8.0 circuit miles of shoofly conductor, 65.1 of 184.0 circuit miles of mainline conductor, and 31.67 of 99.0 circuit miles of OPGW fiber has been completed.
    - Demolition of 162 of 602 existing structures and 111 of 415 existing foundations has been completed.
    - Wire wreck-out has been completed along 48 circuit miles of 184.
    - 20 of 304 sites have been restored and hydroseeded.

9. The first required outages (Project Move 1 and Project Move 2) were completed in 2018. Project Moves 3 and 4 were completed in 2019. Move 5 in Segments 1, 2, 5, and 6 began on August 5, 2019 and was completed January 15, 2020. Move 6 in Segment 2 began on October 14, 2019 and was completed on February 14, 2020. Move 7 in Segment 1 began on February 24, 2020 and was completed on March 18, 2020. Move 8, in all segments except Segment 2, began on March 9, 2020 and is expected to be completed by August 14, 2020.

Environmental Compliance

1. There were no SCE self-reported incidents and two observations of non-project related construction activities and non-project related trash during the subject monitoring period.

2. There were eight SWPPP maintenance items associated with NTP #4 recorded during the monitoring period on Segments 1, 2, 4, and 6. Maintenance items included sediment build-up on shaker plates and prowattles, and additional silt fencing required. To date, there are no open SWPPP maintenance items or corrective actions associated with NTP #4. One ad-hoc report was uploaded to SMARTS for Construction Areas 2N32 on Segment 2 and 3X55 on Segment 3. The sites received runoff and had readings for turbidity above the Numeric Action Level.

3. There were no reportable (>1 gallon) or non-reportable (<1 gallon) spills associated with NTP #4 identified during the monitoring period.

4. Meetings to review helicopter flight tracks with SCE generally occur every two weeks. Flight tracks are reviewed to monitor compliance with local jurisdiction construction work hours and sensitive receptor avoidance, including residences, schools, and nesting bird avoidance areas. Tracks were reviewed for March 9 through March 14, 2020. There were 4 flights during the time period and no incursions. The next flight track review will take place on April 2, 2020.

5. As of the end of the monitoring period, there are 120 active nests associated with NTP #4 during the monitoring period. These nests include great horned owl, barn owl, burrowing owl, Anna's hummingbird, verdin, California thrasher, common raven, greater roadrunner, cactus wren, rock wren, northern mockingbird, Lawrence's goldfinch, lesser goldfinch, bushtit, wrentit, house finch, California Towhee, song sparrow, mourning dove, killdeer, loggerhead shrike, Cooper's hawk, white-tailed kite, red-shouldered hawk, and red-tailed hawk. Buffers have been established per the Project NBMP. If required, nest management, including establishment of buffers and the removal of inactive non-special-status bird species' nests is being implemented per the requirements of the Project NBMP. There are thirty-one nest buffer reductions associated with NTP #4 during the monitoring period for red-tailed hawk, greater roadrunner, cactus wren, verdin, common raven, burrowing owl, and great horned owl. No nests were removed during the subject reporting period.

6. There were two special-status species observed or identified at locations associated with NTP #4 during the monitoring period. These included loggerhead shrike and northern harrier.

7. There were two new woodrat middens identified on Segment 6. A 10-foot Environmentally Sensitive Area (ESA) avoidance buffer was staked per the Special-status Small Mammals Avoidance and Minimization Plan. There were no woodrat midden relocations documented during the monitoring period.

8. SCE provided documentation of FAA filings for the Project on September 17 and September 26, 2018; FAA concurrence will be required prior to tower installation where applicable. Additional information was provided February 11, 2019. FAA recommended marker balls have been installed on the shoofly spans near El Casco Substation; from Construction Area 2N01 to 2N04, and 2N12 to 2N14 on Segment 2; and from Construction Area 6S27 to 6S28 on Segment 6. FAA lighting was installed at Construction Area 2N02.

Transmission Work BLM Lands (NTP #5)

NTP #5 includes the portion of one transmission line segment, identified as Segment 6, which traverses properties managed by the Bureau of Land Management (BLM). NTP #5 was approved by BLM on March 29, 2018. The preconstruction compliance package for BLM lands was deemed acceptable by BLM on February 5, 2019.

Summary of Construction Activity

1. For the currently approved transmission components, Power Grade Incorporated is conducting access road maintenance/stabilization, BMP installation, vegetation removal, and site grading. CJ/Aldridge Drilling is performing foundation work. Abercrombie Services is assembling and erecting new towers, and conducting wire operations with support from Summit Helicopters. Wilson Construction is conducting wire wreck-out activities. Cunningham Davis Corporation is removing existing towers and foundations.

2. There were no work activities associated with Segment 6 (BLM lands) during the monitoring period.

Environmental Compliance

See NTP #4 discussion above for environmental compliance activities.

Temporary Extra Workspaces (TEWS) and Minor Project Refinements (MPRs)

One TEWS and no MPRs were approved during the subject monitoring period. Table 2 summarizes the TEWS and MPRs for the WOD Upgrade Project to date.

Table 2 – TEWS & MPRs
(Updated 04/02/20)

TEWS / MPR	Date Requested	Date Issued	Phase	Description
Temporary Extra Workspaces (TEWS)				
TEWS #1	10-12-17	10-19-17	Maraschino Connection	Access to Beaumont Cherry Valley District water hydrant meter located near the intersection of Highland Springs Avenue and Crooked Creek, Beaumont.
TEWS #2	11-13-17	11-21-17	El Casco–Banning Connection	Water source on Oak Valley Boulevard.
TEWS #3	12-15-17	12-15-17	Banning Connection	Access to existing poles off of Lincoln Street.
TEWS #4	12-18-17	12-18-17	Banning Connection	Access to existing poles off of Wesley Street.
TEWS #5	12-20-17	12-21-17	Banning Connection	Access to existing poles at intersection of Wesley Street and Old Idyllwild Road.
TEWS #6	6-13-18	6-13-18	Timoteo Relocation	Extra workspace to facilitate erection of TSP #4696058 at intersection of Redlands Boulevard and Bryn Mawr Street.
TEWS #7	7-27-18	7-30-18	Timoteo Relocation	Extra workspace to facilitate wire pulling activities along Research Drive and Almond Avenue.
TEWS #8	8-27-18	8-28-18	Dental/Intern Circuits	DENIED AND RESCINDED – Extra workspace to facilitate construction along Mission Road.
TEWS #9	10-18-18	10-19-18	Timoteo Relocation	Extra workspace for walking path at Bryn Mawr and I-10.
TEWS #10	11-05-18	11-05-18	Timoteo Relocation	Extra workspace along Barton and Mountain View Roads for cutover operations.
TEWS #11	01-30-19	01-31-19	Timoteo Relocation	Extra workspace to facilitate the removal of fiber optic cable from overhead poles north along Mountain View Avenue and east along Redlands Boulevard.
TEWS #12	02-06-19	02-07-19	Timoteo Relocation	Extra workspace along Mountain View Avenue for subtransmission pole removal.

TEWS / MPR	Date Requested	Date Issued	Phase	Description
TEWS #13	02-26-19	02-26-19	Segment 3	Temporary access road detour for vehicle and equipment travel to/from San Timoteo Canyon Road and Tower Site 3X41.
TEWS #14	05-13-19	05-14-19	Banning Connection	Extra workspace along the east side of south Alola Street, City of Banning.
TEWS #15	05-16-19	05-17-19	Segment 1	HLZ and temporary staging area for construction vehicles, materials, and equipment.
TEWS #16	07-24-19	07-24-19	Segment 2	Concrete V-ditch south of 3012 Prado Lane, accessible from approved access roads to Construction Area 2X18.
TEWS #17	08-07-19	08-07-19	Segment 6	Access road for guard pole installation near Construction Area 6S15.
TEWS #18	08-16-19	08-16-19	Segment 6	Helicopter landing zone and temporary staging area for construction vehicles, materials, and equipment.
TEWS #19	09-05-19	09-05-19	Segment 5	Mobile guard structure on an existing road to Construction Area SF501 for wire stringing activities.
TEWS #20	09-27-19	09-30-19	Segment 6	Mobile guard structure on existing access road to Construction Areas 6S20 and 6S21 for wire stringing activities.
TEWS #21	12-11-19	12-12-19	Etiwanda Substation	Extra workspace within the existing concrete switchrack trench inside the active substation.
TEWS #22	01-31-20	01-31-20	Segment 2	Extra workspace adjacent to Construction Area 2N35 for staging and operating a wire puller.
TEWS #23	03-11-20	03-12-20	Segment 6	Access road near 6N38 for guard structure.
TEWS #24	03-17-20	03-17-20	Segment 5	Extra workspace for staging wire stringing equipment.
Minor Project Refinements (MPRs)				
MPR #1	11-17-17	11-22-17	Maraschino Connection	Revisions to the amount of new underground telecom construction.
MPR #2	12-13-17	12-15-17	Maraschino Connection	Addition of two vault work areas on Highland Springs Road.
MPR #3	12-21-17	12-28-17	El Casco–Banning Connection	Adjustments to alignment along Oak Valley Parkway.
MPR #4	12-27-17	1-3-18	Maraschino/ El Casco–Banning Connections	Continued use of two fire hydrants previously approved as TEWS #1 and TEWS #2.
MPR #5	1-16-18	1-22-18	Banning Connection	Continued use of access routes described in TEWS #3, 4, and 5 and temporary access paths through private property along Coyote Trail.
MPR #6	2-8-18	2-12-18	Project-wide	Use of 10 water sources to support construction activities.
MPR #7	2-23-18	2-28-18	Poultry MY	Temporary water and electrical supply to yard.
MPR #8	2-27-18	3-2-18	El Casco Connection/ Segment 1	New telecom splice location and single new steel pole installation.
MPR #9	3-26-18	3-27-18	El Casco Connection	Telecom work areas along El Casco Substation access road.
MPR #10	4-6-18	4-9-18	Mountain View #1 MY/All subtrans	Additional workspaces at Mountain View #1 MY entry and at subtransmission improvements work areas.

TEWS / MPR	Date Requested	Date Issued	Phase	Description
MPR #11	5-4-18	5-8-18	Tennessee Relocation	Relocation of 5 subtransmission structures from the east side to the west side of Nevada Street.
MPR #12	5-14-18	5-16-18	Timoteo Relocation	Additional workspace for TSP erection at Bryn Mawr Avenue and Interstate 10.
MPR #13	5-23-18	5-25-18	Project-wide	Addition of encased fire hose to O'Grady Court water source and use of 17 water sources to support construction activities.
MPR #14	5-24-18	5-31-18	Timoteo/ Tennessee Relocations	Location shift of 3 TSPs and 1 vault location.
MPR #15	5-31-18	6-4-18	Poultry MY	Paving of access road and trailer complex area.
MPR #16	6-11-18	6-13-18	Banning Connection	Shift of horizontal directional drilling (HDD) alignment through Smith Creek and addition of walking paths along Coyote Trail.
MPR #17	6-20-18	6-22-18	Dental Circuit/ Tennessee Relocation	Additional workspace along Mission Road, Lugonia Avenue, and Nevada Street.
MPR #18	8-3-18	8-7-18	Timoteo Relocation/ Beaumont #2 MY	Expansion of vault installation work area off Mountain View Avenue and new water source near Beaumont #2 MY.
MPR #19	8-13-18	8-20-18	Segment 4	Additional workspace requests at Sites 4N58, 4N59, and 4N64.
MPR #20	8-21-18	8-27-18	Banning Connection	Use of unpaved access road west of Smith Creek.
MPR #21	10-4-18	10-10-18	Project-wide/ Segments 3&4	Use of 6 water sources, installation of water tank, use of access road, and expansion of WSS.
MPR #22	11-19-18	11-20-18	Subtrans and Telecom	Pole replacement, switch replacement, and shift in underground telecom route.
MPR #23	12-11-18	12-21-18	Transmission	Site 3N32 and Move 3 work areas.
MPR #24	01-15-19	01-28-19	Transmission	Additional Wire Stringing Site in Segment 1.
MPR #25	03-11-19	03-14-10	Transmission	Additional work area west of Supersite 3X55, Segment 3.
MPR #26	04-02-19	04-04-19	Transmission	Use of Prado Lane access road (Segment 2) and two existing hydrants (Segment 6).
MPR #27	04-30-10	05-01-19	Transmission	Use of two existing hydrants (Segment 1), water tank (Segment 2), and helicopter work area (Segment 3).
MPR #28	05-31-19	06-06-19	Transmission	Extra workspace areas, including helicopter landing zones and access roads, on Segments 1, 2, and 6.
MPR #29	06-27-19	07-03-19	Transmission	Extra workspace areas for equipment/material staging, wire stringing, and telecom work, on Segments 3, 4, and 6.
MPR #30	08-01-19	08-06-19	Subtrans and Telecom	Additional workspaces for Maraschino and Devers Telecom Cable Removals, Segments 4 and 6.
MPR #31	10-2-19	10-08-19	Transmission	Extra temporary work areas for wire stringing on Segment 2 and use of an existing access road on Segment 4.
MPR #32	11-18-19	12-03-19	Transmission	Additional work areas for Segments 4 and 6 construction activities.
MPR #33	01-08-20	01-09-20	Transmission	Installation of platform in existing tower to facilitate RTHA nest relocation.
MPR #34	02-19-20	03-02-20	Transmission	Additional Move 8 work areas and access road to the Matich MY.

CPUC Compliance Incidents, Project Memoranda (PMs) and Non-Compliance Reports (NCRs)

No Incidents, PMs, or NCRs were issued by the CPUC EMs during the subject reporting period. Table 3 summarizes the CPUC Incidents, PMs, and NCRs issued to date.

Table 3
CPUC Incidents, Project Memoranda, and Non-Compliance Reports
(Updated 04/02/20)

Incident/ PM/NCR	Regulatory Requirement	Date Issued	Phase	Description
Level 1 Incident	Traffic Control Plan	01-30-18	Banning Connection	Traffic control was set up in such a way that diverted flow into active work area and deviated from approved Traffic Control Plan.
Level 1 Incident	MM WIL-1b	04-19-18	Timoteo/ Tennessee Relocation	A portable water tank was observed uncovered for four consecutive days.
Level 1 Incident	MM VEG-1a	5-24-18	El Casco Substation	Equipment was staged outside of approved disturbance limits for at least 1-2 days.
Level 1 Incident	MM AQ-1a	8-15-18	Banning Connection	Fugitive dust observed from construction activities.
Level 1 Incident	MM WIL-1b	8-15-18	Banning Connection	Use of unapproved access road.
Level 1 Incident	MM WIL-1b	8-15-18	Banning Connection	Use of unapproved staging area.
Level 1 Incident	Fire Management Plan	9-18-18	Segment 4	Lack of adequate fire abatement equipment at 3 locations.
Level 1 Incident	Fire Management Plan	9-20-18	Segment 4	Lack of adequate fire abatement equipment
Level 1 Incident	HH-1a	10-17-18	Segment 4	Lack of proper secondary containment for 4 pieces of equipment.
Level 1 Incident	N-1a	10-17-18	Segment 4	Work outside of approved hours
Level 1 Incident	WIL-1b	10-18-18	Grand Terrace MY	Lack of proper covering for pipes between 1.5" to 4"
Level 1 Incident	N-1a	10-18-18	Segment 4	Work outside of approved hours
Level 1 Incident	AQ-1a	10-30-18	Grand Terrace MY	Fugitive Dust Emissions Outside of Property Boundaries at the Grand Terrace Yard.
Level 1 Incident	WIL-1b	01-24-19	Segment 3	Pipes/tubing left open at Sites 3X08 and 3X10.
Level 1 Incident	AQ-1a	02-13-19	Segment 3	Fugitive dust along Segment 3 access road to 3X06.
Level 2 Incident	VEG-3a	02-13-19	Segment 3	Offsite sediment discharge from access road into JD ID 3054.
Level 1 Incident	SWPPP	09-25-19	Segment 6	The disposal of slurry at tower sites in Segment 6.

Incident/ PM/NCR	Regulatory Requirement	Date Issued	Phase	Description
Level 1 Incident	SWPPP	10-22-19	Devers, Matich, and Poultry MY	Improper storage of treated wood poles.
Level 1 Incident	VEG-1c	12-06-19	Segment 2	Materials staged outside of approved work limits just north of M4-T3.
Level 1 Incident	MMCRP	03-16-20	Segment 5	Material and equipment staged outside of approved disturbance areas between Construction Areas 5X28 and 5X29.

PROJECT PHOTOGRAPHS

Photo 1 – Construction activities at Devers Substation (March 23, 2020)
(Photo courtesy of SCE).

Photo 2 – Tower wreck-out at Construction Area 1X26, Segment 1 (March 26, 2020).

Photo 3 – Foundation Activities at Construction Area 4X07, Segment 4 (March 25, 2020).

Photo 4 – Access road recontouring between Construction Areas 4X06 and 4X07, Segment 4 (March 24, 2020) (Photo courtesy of SCE).

Photo 5 – Wire wreck-out activities at Construction Area 5X01, Segment 5 (March 25, 2020).

Photo 6 – Anchor installation at Construction Area 6X43, Segment 5 (March 24, 2020) (Photo courtesy of SCE).

ATTACHMENT G

Minor Project Refinement Form

Environmental Minor Project Refinement Form

SOUTHERN CALIFORNIA EDISON

Project Name: _____ Request Prepared By: _____

Date Approval Required: _____ Variance Request No.: _____

Date Submitted: _____ Location: _____

Landowner: _____ Landowner Parcel Number: _____

Current Vegetative Cover/Land Use: _____

Existing Sensitive Resource? ☐ NO ☐ YES Specify: _____

Modifying (check as many as apply): ☐ MITIGATION MEASURE ☐ PLAN/PROCEDURE ☐ SPECIFICATION ☐ DRAWING ☐ PERMIT CONDITION ☐ OTHER

Specify Source (e.g., Mitigation Measure B.5): _____

Description of Change and Justification (Attach additional sheets if needed.)

Attachments:

☐ PHOTO CONSTRUCTION DRAWING ☐ ADDITIONAL ENVIRONMENTAL ANALYSIS ☐ CORRESPONDENCE ☐ OTHER: _____

Resources:

Biological ☐ NO SENSITIVE RESOURCES PRESENT ☐ SENSITIVE RESOURCES PRESENT ☐ N/A

New Survey Report Attached: ☐ YES ☐ NO

If No, Previous Biological Survey Reference: _____

Cultural ☐ NO RESOURCES PRESENT ☐ RESOURCES PRESENT WITH PROJECT APE: ☐ YES ☐ NO
☐ (PAVED/GRAVEL AREA AND NO GROUND DISTURBANCE)

If in APE, Previous Cultural Survey Reference: _____

If not in APE, attach new survey report.

Other Potential Impacts: (Check any potential changes to permitted impacts and provide details below. Attach additional sheets if needed.)

- ☐ AIR QUALITY
- ☐ BIOLOGICAL RESOURCES
- ☐ CONTAMINATED SOILS
- ☐ CULTURAL RESOURCES
- ☐ HAZARDOUS MATERIALS
- ☐ LAND USE
- ☐ NOISE
- ☐ PALEO RESOURCES
- ☐ SOCIOECONOMIC
- ☐ STORM WATER (SWPPP)
- ☐ TRAFFIC
- ☐ VISUAL
- ☐ WATER RESOURCES
- ☐ WETLANDS

CEQA and Permitting: (Provide details for any "Yes" answer and attach additional information if needed.)

1. Will modification involve substantial changes that will require major changes to the CEQA document?
   ☐ YES ☐ NO
2. Will modification result in new significant environmental effects or a substantial increase in the severity of previously identified impacts?
   ☐ YES ☐ NO
3. Additional agency notifications and/or permit modifications required? ☐ YES ☐ NO

Conditions of Approval or Reasons for Denial: (Attach additional information if needed.)

___ Required Signatures: (Attached email approvals may be used in lieu of signatures.)

___ SCE Construction Project Manager : ☐ VARIANCE MODIFICATION IS NEEDED FOR SAFE AND EFFICIENT CONSTRUCTION

Name: _____ Signature: _____ Date: _____

Environmental Compliance Lead : ☐ FIELD REVIEW COMPLETE

Name: _____ Signature: _____ Date: _____

___ SCE Land Agent: ☐ CONSISTENT WITH EXISTING RIGHTS ☐ NEW RIGHTS OBTAINED

Name: _____ Signature: _____ Date: _____

___ SCE Environmental Project Manager: ☐ APPROVED ☐ APPROVED WITH CONDITIONS (SEE CONDITIONS ABOVE) ☐ DENIED

Name: _____ Signature: _____ Date: _____

___ SCE Project Manager: ☐ APPROVED ☐ APPROVED WITH CONDITIONS (SEE CONDITIONS ABOVE) ☐ DENIED

Name: _____ Signature: _____ Date: _____

ATTACHMENT H

Temporary Extra Work Space Request

ATTACHMENT H
TEMPORARY EXTRA WORK SPACE (TEWS) REQUEST

Project Name

TEWS Location/Address City/County

Proposed Use of Site

Proposed Date(s) of Use Proposed Hours of Use

Adjacent Land Uses

SCE Environmental Compliance Lead (Prepared by) Date

Biological, Cultural and Paleontological reconnaissance surveys are mandatory for use of any areas containing vegetation, or exposed earth that have not been previously surveyed and fully described in project documents. Biological surveys are mandatory for all temporary extra work sites. Attach a diagram of the proposed area that identifies the location of the site and proximity to sensitive resources or receptors.

Complete the environmental checklist below. Note: **Yes** answers require additional clarification and should be submitted as an attachment to this form.

ATTACHMENT H
TEMPORARY EXTRA WORK SPACE (TEWS) REQUEST

Environmental Checklist	Yes*	No	CPUC Verified
Air Quality: Would equipment be on site or idled for more than 10 minutes? Would there be dust-producing activities?			
Biological Resources: Would use of the site result in potential impacts to sensitive biological resources? Would use of the site result in potential for the spread of noxious weeds?			
Cultural/Paleontological Resources: Would clearing or grading be required?			
Water Resources: Would runoff from the site flow into storm drains or a waterway? Would equipment refueling or maintenance be performed? Would materials block/impact storm drains or gutters?			
Land Use and Recreation: Would use of site block access to local land uses and recreational areas?			
Noise: Are noise-sensitive receptors adjacent to the site? (e.g., homes, schools, care facilities, hospitals, churches convalescent homes, parks, recreational areas)			
Socioeconomics: Would access to business be blocked? Would there be disruption of business operations?			
Traffic: Would parking be eliminated? Would increased construction traffic result in impacts? Is the site a residential area?			
Visual: Would lights at site create glare for adjacent land uses (including roadways)?			

Standard Conditions of Approval

- The CPUC, via its designated Environmental Monitor, will review and approve/deny the Temporary Extra Workspace Request (TEWS) request within four business days of receiving this completed form.
- Use of TEWS is limited to 60 days. First proposed date of use: _____
- Use of TEWS shall be in compliance with local ordinances (including traffic/noise) and mitigation measures.
- If any signs of cultural resources are identified, work shall cease immediately and the site shall be reevaluated.
- The proposed site shall not be used for storage of fuel or hazardous materials.
- All drips, leaks, and/or spills from vehicles and/or equipment shall be cleaned-up immediately and disposed of in appropriate, labeled containers.
- Adjacent streets shall be swept or cleaned with water at the end of each workday if visible soil material is carried on them.
- No parking or storage of vehicles (including personnel vehicles), equipment, pipe, or any other project-related item shall be allowed on adjacent roadways.
- If a complaint is received, it shall be forwarded to the SCE Environmental Compliance Lead and the CPUC Environmental Monitor for review.

The following signatures indicate that the proposed site is approved for TEWS. On a random basis, a CPUC Environmental Monitor will verify that use of the proposed site is in accordance with the conditions noted. This approval may be revoked at any time by any one of the approval team. Failure to comply with all conditions will result in immediate revocation of this TEWS approval.

Property Owner Date

SCE Construction Project Manager Date

SCE Environmental Project Manager Date

The above TEWS request and attached documentation have been reviewed and this request is ____ approved or ____denied (*X one*).

CPUC Environmental Monitor Date

Additional CPUC Conditions of Approval

(CPUC Monitor Initial _____)

REASON(S) FOR DENIAL: