Notice to Proceed Request (NTPR) #1

AGENCY:	California Public Utilities Commission
PROJECT:	Eldorado-Lugo-Mohave Series Capacitor Project
COMPONENTS:	Lugo Substation, Ludlow Series Capacitor, Barstow Repeater and Associated Distribution, Telecommunication, and Staging Yard Improvements
CPUC SUBMITTAL DATE:	September 22, 2020

1 Project Introduction

The Proposed Project is located in San Bernardino County, California, and Clark County, Nevada, and would occur mostly within existing Southern California Edison (SCE) 500-kilovolt (kV) transmission line rights-of-way (ROW) and at existing substations. At some new facility locations, additional ROWs would be required. The project would increase the amount of power delivered on the existing Eldorado-Lugo and Lugo-Mohave 500 kV transmission lines, address line clearance discrepancies, facilitate communications between substations, and modify substations to accommodate the Proposed Project.

1.1 Permits and Approvals

On April 19, 2019, SCE a regulated California utility, filed an amended application with the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity (CPCN) for the Eldorado-Lugo-Mohave (ELM) Series Capacitor Project (Proposed Project).

The CPUC has exclusive authority over SCE's application for a CPCN for the project; likewise, permits and approvals shall be obtained by SCE from the CPUC to execute project construction, for project components within the CPUC's jurisdiction. However, separate various permits and approvals from other agencies shall be obtained by SCE to execute project components on lands under those jurisdictional agencies.

This notice to proceed (NTP) has been developed to request an NTP for project components or portions of the project components that are located within the CPUC's jurisdiction.

2 Notice to Proceed Request Summary

SCE is requesting notice to proceed from the CPUC with improvements to the following components:

- Substation Modifications at the Lugo Substation
- Mid-Line Series Capacitor Construction at Ludlow Series Capacitor 5 (SC5)
- Distribution and Telecommunications Construction for Mid-Line Series Capacitors and the Barstow Repeater
- Staging Yard construction at the Ludlow Series Capacitor Yard

These activities are described in the Final Mitigated Negative Declaration (dated November 2019) developed by the CPUC and are consistent with the proposed work to be performed at the upgrade locations of the project. The locations of these project components are shown in the Project Overview map in Figure 1.

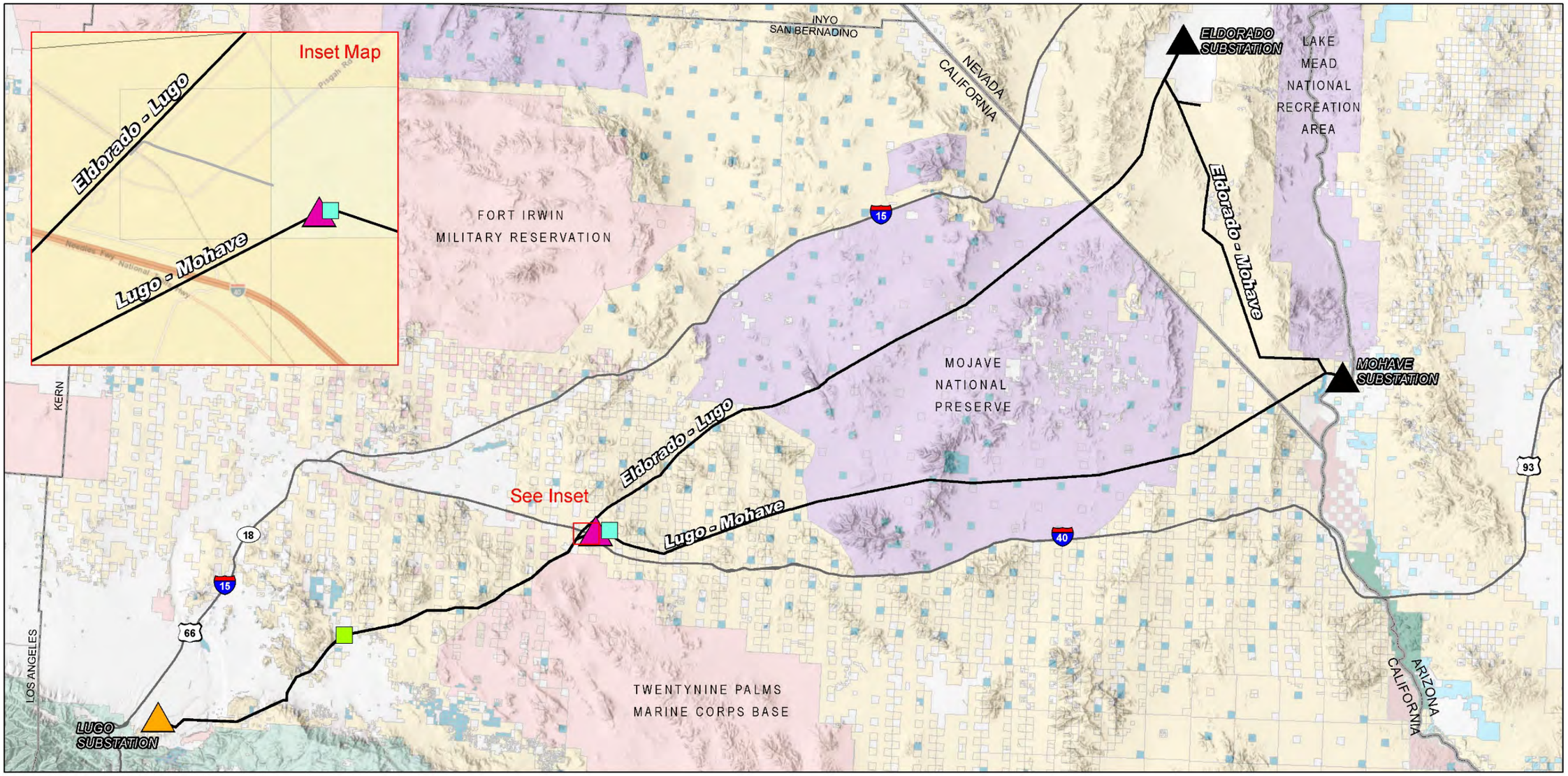

FIGURE 1
PROJECT OVERVIEW

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

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3 Substation Modifications

This CPUC NTPR includes modifications to the existing Lugo Substation. Construction activities to be performed at Lugo Substation are as follows:

- Reconfigure two existing 500 kV positions:
  - Remove the Eldorado 500 kV Transmission Line from the dead-end connection at the switch rack and retaining all equipment for a breaker-and-a-half position
  - Remove the Mohave 500 kV Transmission Line from the dead-end connection at the switch rack; demolishing the east circuit breaker and associated line disconnect switches; and configuring switch rack for a double-bus, double-breaker position
- Relocate the Eldorado and Mohave 500 kV transmission lines to two new positions equipped for 4,000 amps with 4,000-amp circuit breakers and 4,000-amp vertical break disconnect switches
- Remove two existing 500 kV TSP structures and foundations to an approximate depth of 3 feet and installing two new 500 kV TSP structures to support the relocation of the Eldorado and Mohave 500 kV transmission lines to their new positions
- Extend the existing 500 kV switch rack by four positions
- Install shield wire to connect to the extended switch racks and TSPs with 7 No. 6 Alumoweld wire
- Conductor the line positions with new two-bundled 2,156 kcmil 84/19 stranded “BLUEBIRD” ACSR per phase
- Install new foundations, steel structures, grounding, and conduits for the new equipment
- Remove power line carrier protection equipment on the Eldorado 500 kV Transmission Line and Mohave 500 kV Transmission Line and install new protective relays with digital communication in the existing Mechanical Electrical Equipment Room (MEER) for line and series capacitor protection
- Remove the obsolete equipment for the series capacitor
- Upgrade existing 500 kV Eldorado series capacitor bank (SC1) and Mohave series capacitor bank (SC4) to 3,300-amp, including required conductors, buses, and/or cable interconnections
- Update the substation database at the Regional Control Center Energy Management System
- Install a new Remote Terminal Unit (RTU) or adding a card to the existing RTU as required
- Install additional telecommunications equipment — including channel equipment, light wave equipment, and fiber tie cables between buildings and existing MEER where required — to provide two communication paths
- Install communications and related equipment in the Administration Building and relocate the existing Human Machine Interface from the MEER to the Administration Building
- Route new fiber optic cable from the MEER to the Administration Building in existing underground conduit and install new underground conduit, if needed
- Provide miscellaneous electrical equipment required to compete the substation work.
- Relocate an existing spare transformer bank pad

- Relocate existing 20 ft driveway north of the new 500 kV switch rack positions.
- Relocate existing fenced Lugo Substation II laydown yard including the staging area for 500 kV spare transformers.

  Use existing disturbed Lugo Substation IV laydown yard.

3.1 Site Locations and Conditions

The Lugo Substation is located in Hesperia, California and is an interconnection point of several overhead transmission lines, including the Lugo-Mohave 500 kV transmission line and the Eldorado-Lugo 500 kV transmission line. Work will be performed at this existing facility within the previously disturbed footprint.

Lugo Substation – Hesperia, California				
Construction Location	**Site Conditions**	**Approximate Disturbed Acres**	**Vegetation Impacts**	
			Vegetation Type	**Acres**
No Impacts				
Existing Substation	Existing developed substation site	58.84	Developed	58.84
Lugo Staging Yard IV	Existing staging yard actively used for staging of equipment and materials.	12.39	Developed	12.39

See Figure 2 for the location of the Substation Modifications.

3.2 Project Activity Schedule

Construction will be completed sporadically over the course of several months, based on many construction outages that will occur throughout the duration of the Project.

Project Component	Construction Start Date	Operation Start Date
Lugo Substation	January 2021	March 2022

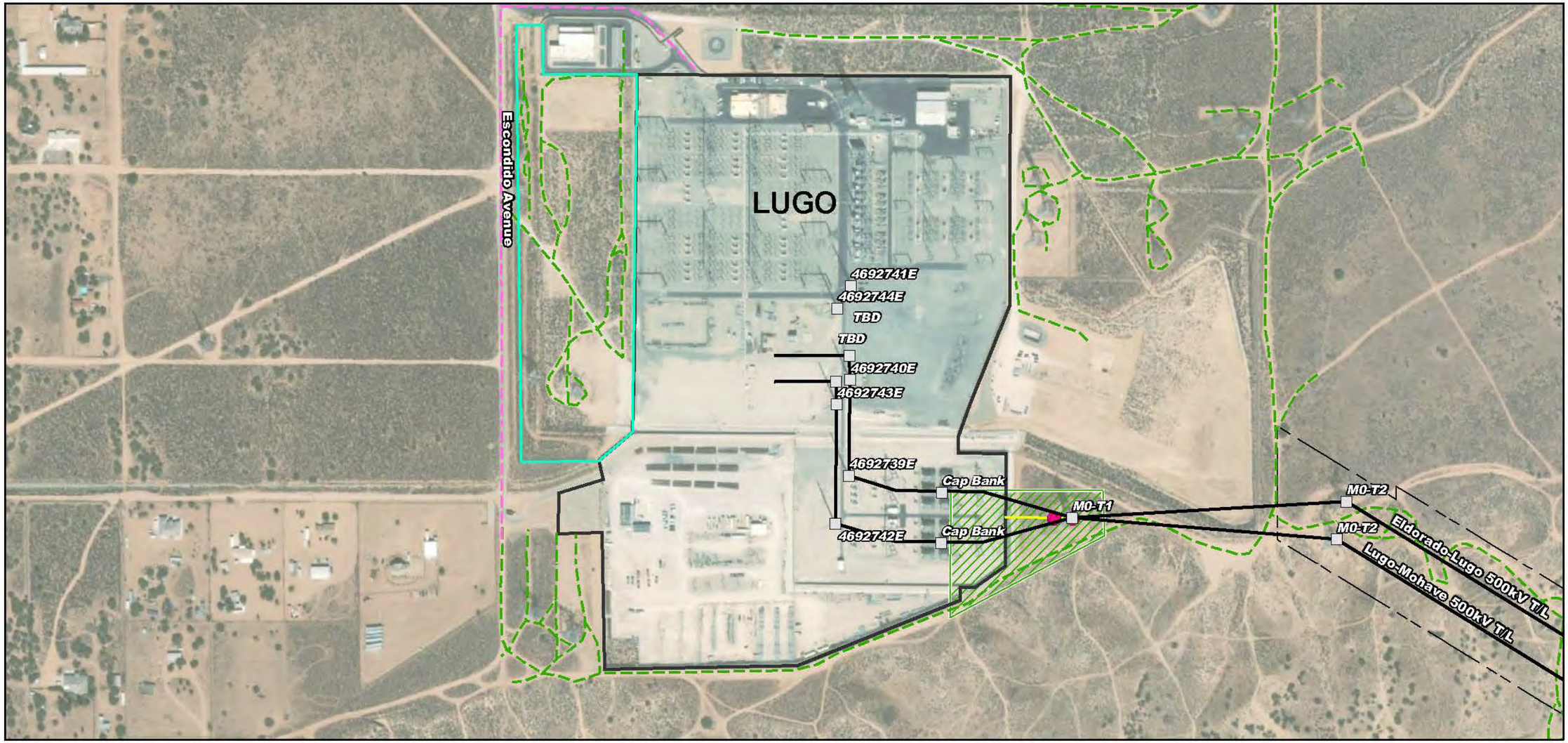
3.3 Compliance with Mitigation Measures and Applicant-Proposed Measures

Refer to Appendix A: Applicant Proposed Measures and Mitigation Measures.

3.4 Substation Modifications – Major Construction

3.4.1 Access Roads

Construction improvements on the existing substation will not require the construction of any new roads. Access to the substation will be from existing utility access roads and public access roads. Access roads and points of access are provided in Figure 2.



General Reference Features

- Existing Towers
- Existing Telecommunication Manhole
- Proposed Telecommunication Manhole
- Existing Line
- Underground Telecommunication Line
- Existing Substation Boundary
- OPGW Pull Site
- Lugo Substation IV Staging Yard
- Right-of-Way
- Existing Non-Paved Access Road
- Existing Paved Access Road

Jurisdiction

- Arizona State Lands
- Bureau of Indian Affairs
- Bureau of Land Managment
- Bureau of Reclamation
- Department of Defense
- National Park Service
- State of Nevada
- Other Federal
- State of California
- United States Forest Service
- United States Fish and Wildlife Service
- State Boundary

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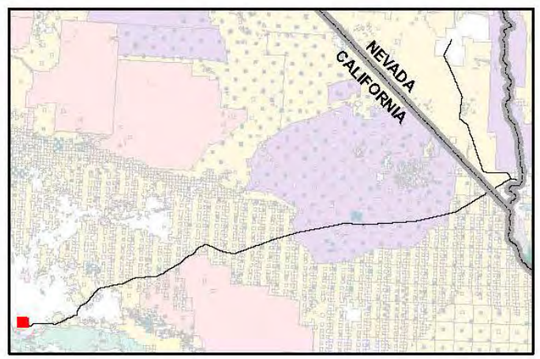

FIGURE 2
LUGO SUBSTATION

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

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3.4.2 Preconstruction Activities

Construction will be contained within the existing substation boundaries; therefore, minimal site preparation will be required for the substation improvements. Facilities within the substation have existing water, lighting, power, finished ground surfacing, and perimeter fencing. To support onsite construction, trailers within the existing substation, phone, electric, and internet services will be necessary. Connections will be constructed within the substation from the nearest existing service provider connection and/or distribution pole. Portable generators will be used in the event that an existing connection cannot be established with an existing facility inside the substation. Air quality impacts will be managed in compliance with regulations and laws and the generators will be placed away from noise-sensitive areas when possible. Portable sanitation facilities and construction trailers may be brought onsite. No clearing of vegetation will be required. Storm Water Pollution Prevention Plan (SWPPP) requirements will be implemented (i.e., best management practices [BMP]). Onsite parking will be provided for construction personnel.

3.4.3 Construction Activities

The major construction activities associated with substation construction are listed in the table below.

Substation	Major Construction Activities
Lugo Substation	Disassemble existing equipment
	Erection of new structures
	Installation of new foundations
	Installation of new equipment
	Relocation of overhead lines to new positions
	Reconfigure two existing 500 kV positions:
	Relocate the Eldorado and Mohave 500 kV transmission lines to two new positions
	Install new foundations, steel structures, grounding, and conduits for the new equipment
	Upgrade existing 500 kV Eldorado series capacitor bank (SC1) and Mohave series capacitor bank (SC4)
	Install underground conduit, manhole and fiber optic cable between M0-T1 and Lugo Substation Communication Room
	Install additional telecommunications equipment — including channel equipment, light wave equipment, and fiber tie cables between buildings and existing MEER

Workers will arrive and park personal vehicles onsite during the construction of substation improvements. The estimated construction workforce required for construction is summarized in Appendix B: Construction Equipment and Workforce Estimates. Construction will be performed by either SCE construction crews or contractors. Multiple crews will work concurrently when possible; however, the estimated deployment and number of crew members will vary depending on factors such as material and equipment availability, weather, and construction scheduling. It is anticipated that a total of approximately 25 construction personnel will be working at the Lugo Substation site on any given day.

Materials associated with the substation construction will be delivered onsite via truck from vendors and suppliers into the substation. Other materials could be delivered from project yards near the project area.

Temporary work areas will be restored to preconstruction conditions after the substation work has been completed.

3.4.4 Equipment

Potential equipment to be used during pre-construction and construction improvements may include the following:

- Dump truck
- Worker commute automobiles
- Hydraulic crane
- Backhoe-loader
- Light-duty crane
- Utility vehicles
- Refueling equipment
- Forklift
- Water trucks
- Maintenance trucks

A comprehensive list of additional equipment that may be used at the project is included in Appendix B: Construction Equipment and Workforce Estimates.

3.4.5 Night Use

Once construction activities have ended for the day and personnel have left the sites, security gates will be secured, and each substation will be equipped with security lighting with movement sensors. Substations will not be illuminated at night with temporary construction lighting. Maintenance outages and emergency repairs requiring light will utilize the manual substation lighting system. To reduce glare, maintenance lights will be directed downward. Substations may have security personnel present.

3.4.6 Helicopter Use

Helicopter use is not anticipated during substation construction improvements.

3.4.7 Temporary Facilities

Typical daily construction activities will include use of construction trailers and portable restrooms, and personal parking for construction personnel. Temporary telecommunication and electrical equipment will be installed for the construction trailer if needed. Connections will be established at existing distribution poles and/or service provider connections within the substation. Impacts are expected to be minimal since the electrical sources are enclosed by fencing.

3.4.8 Water Use

Construction water to be used for the substation modifications will be supplied from the nearest water purveyor within the water basin, as available. San Bernardino County Public Works could potentially provide water for construction activities at the Lugo Substation. Construction water will be provided from a potable-water hydrant, as available, within the purveyor's service district. The proposed water

supply setup located at the northeast corner of the Escondido Avenue and Whitehaven Street intersection, approximately 200 feet north of the Lugo Substation entrance as shown in Figure 3.

The water will be trucked to the site with construction water trucks (approximately 3,000 gallons). The water trucks will discharge water on site for dust control and support construction activities on-site.

3.4.9 Other Activities

Other daily construction activities may include refueling and equipment maintenance and repair, material stockpiling, containment of waste disposal, and structure assembly.

4 Mid-line Series Capacitor Construction

This CPUC NTPR includes construction of the Mid-line Series Capacitor – Ludlow (SC5).

Construction activities to be performed at SC5 are as follows:

- Install graded pad, including over-excavation, import/export of materials, and surfacing
- Install drainage features, including detention basin and water diversion features
- Install internal and external access roads with gravel and dirt surfacing
- Install asphalt within the series capacitor platform area for weed control
- Install chain-link fence and gates around the series capacitor bank and chain-link fence and gates with appropriate top guard (e.g., barbed wire) along the perimeter of the facility
- Install a ground grid system
- Install a 500 kV capacitor bank with platforms, support insulators, foundations, conduits or trenches, cables, conductors, and bus and/or cable interconnections
- Install a MEER with alternating current/direct current (AC/DC) panels, control and protection panels, batteries, batteries chargers, telecommunications racks, security racks, heating, ventilating, air conditioning (HVAC) equipment, communication room to house communication equipment, and emergency lighting
- Install one A-Frame interface structure and bus supports
- Install an external site lighting system
- Install a distribution station light and power system
- Install an external bypass switch with required support insulators, foundations, conduits or trenches, conductors, conductors support insulators, and grounding connections
- Install two motor-operated isolating disconnect switches with ground attachments, required support insulators, foundations, conduits or trenches, conductors, conductors support insulators, and grounding connections
- Install up to two new internal bypass switches with required foundations, conduits or trenches, cables, conductors, bus-work, and grounding connections
- Install interior security cameras within the MEER with support structures and foundations
- Install foundations and conduit for all other structures and equipment

General Reference Features

- Fire Hydrant
- Water Line
- Water Truck Fill Location
- Non-Paved Access Road
- Paved Access Road

Jurisdiction

- Arizona State Lands
- Bureau of Indian Affairs
- Bureau of Land Managment
- Bureau of Reclamation
- Department of Defense
- National Park Service
- State of Nevada
- Other Federal
- State of California
- United States Forest Service
- United States Fish and Wildlife Service
- State Boundary

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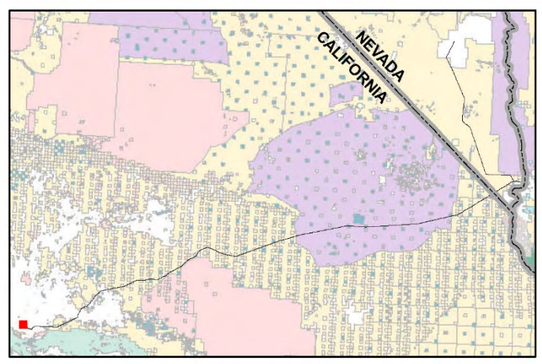

FIGURE 3
SAN BERNARDINO COUNTY HYDRANT

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

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- Install conductor between the two transmission interface structures inside the series capacitor facilities with two-bundled 2,156 kcmil 84/19 stranded "BLUEBIRD" ACSR per phase; insulator assemblies and mounting hardware (existing conductor may be used from existing towers to the new A-Frame interface structures)
- Install insulator assemblies and mounting hardware on both sides of conductor spans
- Install two overhead ground wires to connect existing and proposed towers at the proposed series capacitor facilities with 7 No. 6 Alumoweld wire
- Install propane emergency generator outside MEER structure and a minimum of 1,800-gallon propane fuel tank with block wall or ballistic fencing
- Install temporary construction power from overhead distribution line if needed
- Restore temporary work areas

4.1 Site Locations and Conditions

The mid-line series capacitor is located within the existing easement of the Lugo-Mohave 500 kV transmission line in Ludlow, California. The new permanent facility and graded pads will be constructed in previously undisturbed desert scrub.

Mid-Line Series Capacitor – Ludlow (SC5) Construction				
Construction Location	**Site Conditions**	**Approximate Disturbed Acres**	**Vegetation Impacts**	
			Vegetation Type	**Acres**
Permanent Disturbance				
Access Road	The Proposed Project area is characterized by mostly undeveloped and open lands, utilities and infrastructure, and some low-density residential land uses in San Bernardino County	2.75	Developed	0.03
Access Road			Larrea tridentata – Ambrosia dumosa Shrubland Alliance	0.70
Access Road			Larrea tridentata Shrubland Alliance	0.07
Series Capacitor			Developed	0.90
Series Capacitor			Larrea tridentata – Ambrosia dumosa Shrubland Alliance	1.34
Grading Limit			Developed	0.02
Grading Limit			Larrea tridentata – Ambrosia dumosa Shrubland Alliance	0.49
Temporary				
Temporary Work Area	The Proposed Project area is characterized by mostly undeveloped and open lands, utilities and infrastructure, and some low-density residential land uses in San Bernardino County	1.65	Developed	0.09
Temporary Work Area			Larrea tridentata – Ambrosia dumosa Shrubland Alliance	1.47
Temporary Work Area			Larrea tridentata Shrubland Alliance	0.09

Note: The work areas associated with this project component may overlap with other project components; therefore, the cumulative vegetation impact acreage in this CPUC NTPR may slightly overstate the total project impacts.

See Figure 4 for the location of the Mid-Line Series Capacitor – Ludlow (SC5) construction site.

4.2 Project Activity Schedule

Construction will be completed sporadically over the course of several months, based on any construction outages that may occur throughout the duration of the Project.

Project Component	Construction Start Date	Operation Start Date
Ludlow Series Capacitor (SC5)	October 2020	June 2022

4.3 Compliance with Mitigation Measures and Applicant Proposed Measures

Refer to Appendix A: Applicant Proposed Measures and Mitigation Measures

4.4 Mid-Line Series Capacitor – Major Construction Activities

4.4.1 Access Roads

Construction improvements on the Ludlow Series Capacitor will include developing a new dirt access road and rock-covered entrance road. The new dirt access road will replace an existing utility dirt access road. Access to the Ludlow Series Capacitor site will be from the paved sections of Pisgah Crater Road and will be shared access with the existing Pisgah Substation and new Newberry Springs Series Capacitor. Access roads showing points of access are provided in Figure 4.

4.4.2 Preconstruction Activities

Site preparation required for the Ludlow Series Capacitor will include vegetation clearing and grading to achieve the desired pad elevation and provide drainage berms and basin(s) for stormwater management. Portable generators will be used in case an existing connection cannot be established with an existing facility inside the ROW. Air quality will be in compliance with regulations and laws and the generators will be placed away from noise-sensitive areas when possible. Portable sanitation facilities and construction trailers could be brought onsite. SWPPP requirements will be implemented (i.e., BMPs). Onsite parking will be provided for construction personnel.

General Reference Features

- Existing Towers
- Existing Lines
- Ludlow Work Area
- Ludlow Series Capacitor Boundary
- Temporary Disturbance
- Grading Limit
- Access Road
- Gravel Surfacing
- Right-of-Way
- Other Project Work Area
- Existing Non-Paved Access Road

Jurisdiction

- Arizona State Lands
- Bureau of Indian Affairs
- Bureau of Land Managment
- Bureau of Reclamation
- Department of Defense
- National Park Service
- State of Nevada
- Other Federal
- State of California
- United States Forest Service
- United States Fish and Wildlife Service
- State Boundary

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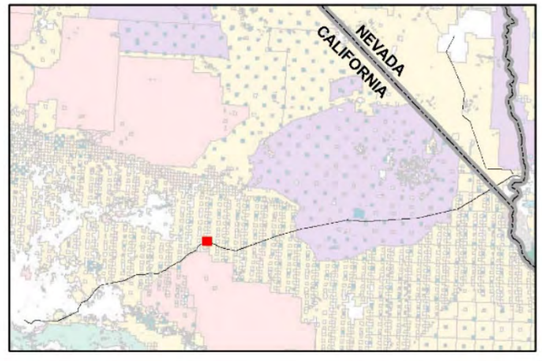

FIGURE 4
LUDLOW SERIES CAPACITOR

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

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4.4.3 Construction Activities

The major construction activities associated with series capacitor construction are listed in the table below.

Location	Major Construction Activities
SC5 500 kV Mid-line Series Capacitor	Site development (pad grading, drainage feature construction, access road construction, surfacing) Below grade installations (conduits, foundations, and grounding) Structure and MEER erections Installation of series capacitor equipment Installation of emergency power equipment Relocation of overhead lines Install underground conduit, manholes and fiber optic cable from Towers to SC5 Install light and power service Electrical Construction (Wiring, Terminating, and Testing) Site restoration or revegetation

Workers will arrive and park personal vehicles onsite during the construction of series capacitor improvements. The estimated construction workforce required for construction is summarized in Appendix B: Construction Equipment and Workforce Estimates. Construction will be performed by either SCE construction crews or contractors. Multiple crews will work concurrently when possible; however, the estimated deployment and number of crew members will vary depending on factors such as material and equipment availability, weather, and construction scheduling. It is anticipated that a total of approximately 40 construction personnel will be working at the site on any given day.

Materials associated with the construction will be delivered onsite via truck from vendors and suppliers to the construction yard and/or series capacitor.

Any temporarily disturbed lands resulting from construction will be restored in accordance with the Habitat Restoration Revegetation Plan after project completion.

4.4.4 Mid-Line Series Capacitors Equipment

Potential equipment to be used during pre-construction and construction improvements may include the following:

- Motor grader
- Dozer/scraper
- Backhoe-loader
- Light-duty crane
- Grader
- Utility vehicle
- Refueling equipment
- Forklift

- Water trucks
- Maintenance trucks
- Worker commute automobiles

A comprehensive list of additional equipment that may be used at the series capacitor site is included in Appendix B: Construction Equipment and Workforce Estimates.

4.4.5 Night Use

Construction of series capacitor is not anticipated to occur within the ROW at night. In the event that night work is conducted, night lighting will comply with MM AES-4.

4.4.6 Helicopter Use

Helicopter use is not anticipated during the construction of the series capacitor.

4.4.7 Temporary Facilities

Typical daily construction activities will include use of temporary construction trailers and portable restrooms, and personal parking for construction personnel. Temporary electrical equipment may be installed for the construction trailer if needed. Connections will be established at existing distribution poles and/or service provider connections.

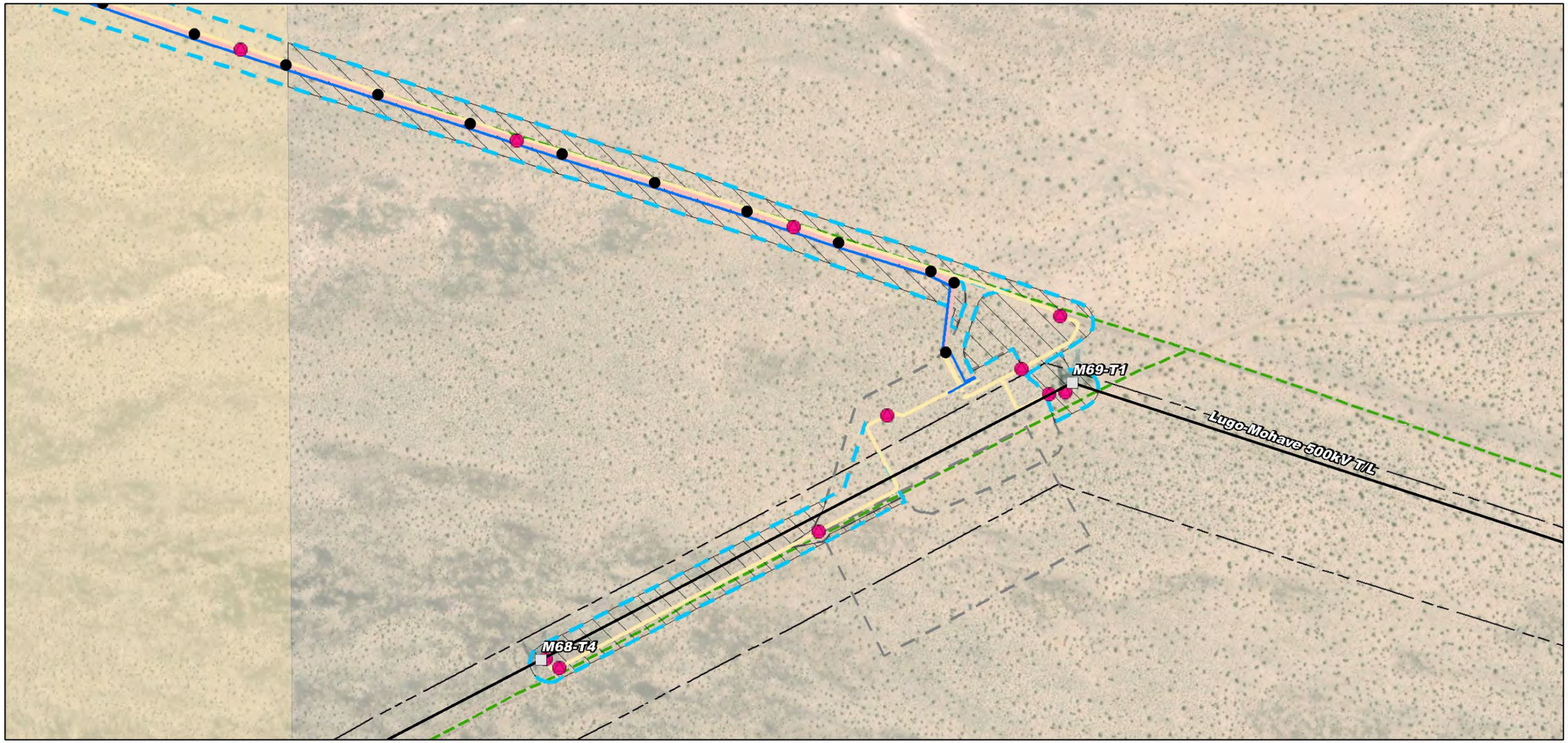
4.4.8 Water Use

Construction water to be used for the mid-line series capacitor construction will come from the nearest water purveyor within the water basin, as available. The Fort Cady California Corporation in Newberry Springs could potentially provide water for construction activities at the Ludlow Series Capacitor. This groundwater source is a private groundwater well. The proposed water extraction setup operated by Fort Cady is located adjacent to the Lugo-Mohave 500 kV TL, 500 feet southwest of LST M66-T4 (116.397058, 34.763499) as shown in Figure 5.

The water will be trucked to the work site with construction water trucks (3,000 gallons). The water trucks will then discharge the water onsite for dust control and to support construction. Larger capacity water tankers (5,000 gallons) may be used as site access allows. If water tankers are used, the water will be stored within the Ludlow Staging Yard or the Newberry Springs Staging Yard. See Ludlow Staging Yard water use for water storage description.

4.4.9 Other Activities

Other daily construction activities may include refueling and equipment maintenance and repair, material stockpiling, containment of waste disposal, and structure assembly.



General Reference Features

- Existing Towers
- Distribution Pole
- Proposed Telecommunication Manhole
- OH Distribution Lines
- OH Telecommunication Lines
- UG Telecommunication Lines
- Existing Lines
- Distribution & Telecommunication Work Area
- Temporary Disturbance
- Other Project Work Area
- Right-of-Way
- Existing Non-Paved Access Road

Jurisdiction

- Arizona State Lands
- Bureau of Indian Affairs
- Bureau of Land Managment
- Bureau of Reclamation
- Department of Defense
- National Park Service
- State of Nevada
- Other Federal
- State of California
- United States Forest Service
- United States Fish and Wildlife Service
- State Boundary

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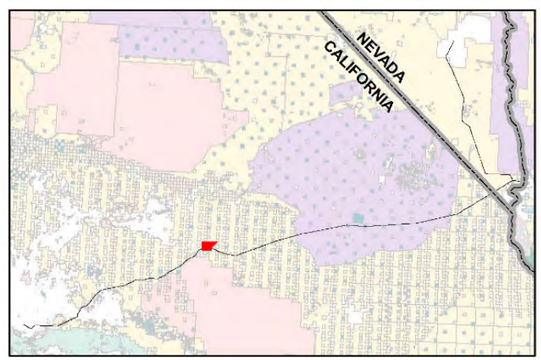

FIGURE 6
DISTRIBUTION & TELECOMMUNICATIONS AT MID-LINE SERIES CAPACITORS

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

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5 Distribution and Telecommunication Construction

This CPUC NTPR includes the following distribution and telecommunication construction components:

- Distribution and Telecommunication improvements for the Mid-line Series Capacitors
- Distribution and Telecommunication (with repeater) at the Barstow Repeater
- Telecommunication at Lugo Substation

Construction activities to be performed are as follows:

- Provide two communication paths between the Mid-line series capacitor sites:
  - Install a portion of approximately 2 miles of overhead and 500 feet of underground telecommunications facilities as one path to connect the proposed series capacitors to SCE's existing communication system.
  - Install a portion of 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 a new fiber optic repeater facility, the Barstow Repeater, within the Lugo-Mohave 500 kV transmission line ROW.
- Relocate distribution facilities and install light and power service at the Barstow fiber optic repeater site.
- Install underground telecommunications facilities from existing transmission structures to the Barstow fiber optic repeater site.
- Install underground conduit, manholes, enclosures, and fiber optic cable between M68-T4 and SC5
- Install underground conduit, manholes, enclosures, and fiber optic cable between M69-T1 and SC5
- Install underground conduit, manhole, enclosure, and fiber optic cable between M0-T1 and Lugo Substation Communication Room

5.1 Site Locations and Conditions

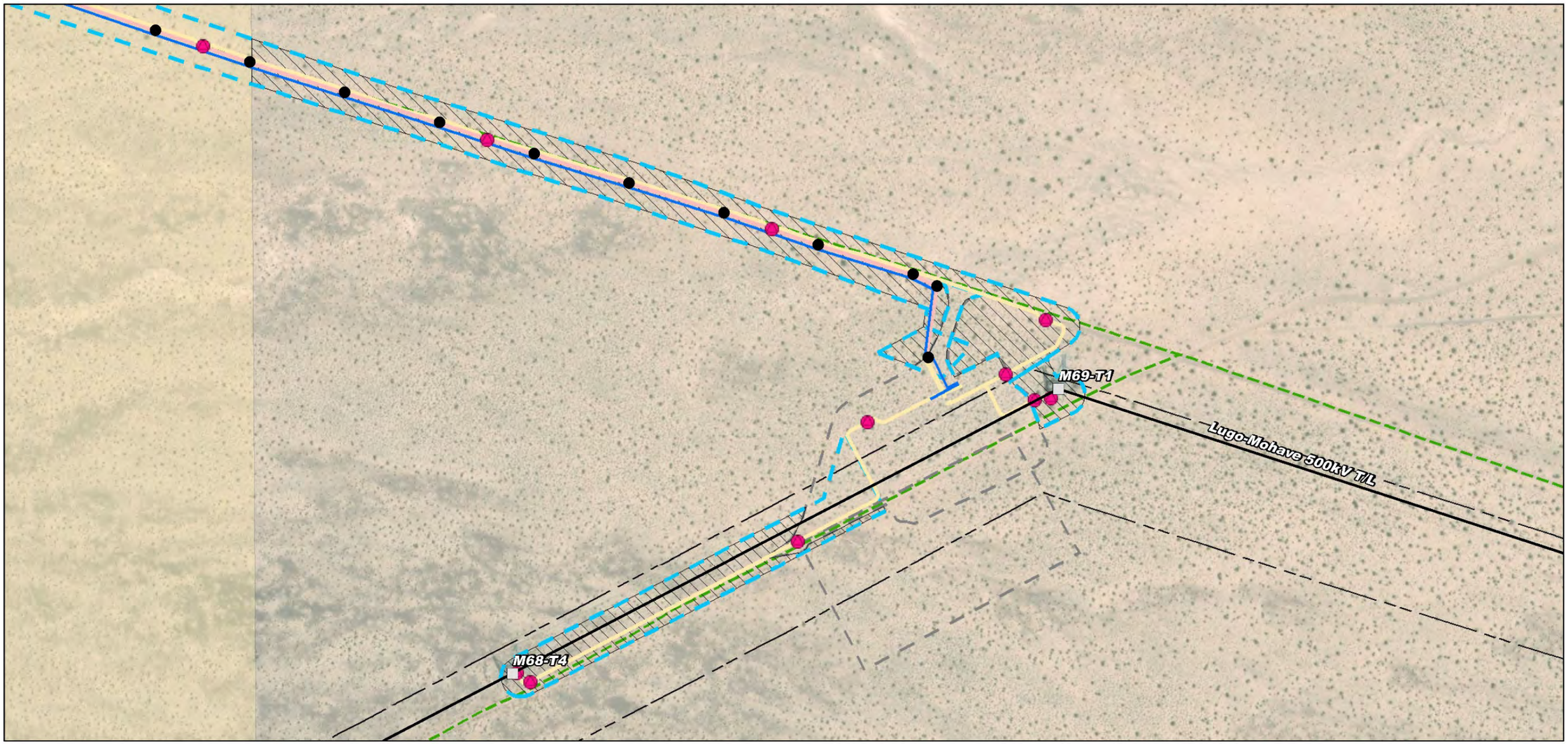
Distribution and telecommunications will be installed at the mid-line series capacitor and the repeater site to provide station power and line protection at the facilities. Distribution and telecommunications at the mid-line series capacitors will utilize an existing gas-line easement as well as the overhead 500 kV easements. At the Barstow repeater, distribution and telecommunications will utilize the existing overhead Lugo-Mohave 500 kV easements. The new facilities will be installed in previously disturbed areas as well as undisturbed areas.

Distribution and Telecommunication Construction				
Construction Location	**Site Conditions**	**Approximate Disturbed Acres**	**Vegetation Impacts**	
			Vegetation Type	**Acres**
Permanent Disturbance				
Barstow Access Road	The Proposed Project area is characterized by mostly undeveloped and open lands, utilities and infrastructure, and some low-density residential land uses in San Bernardino County	0.14	Atriplex polycarpa Shrubland Alliance	0.01
Barstow Telecommunication Repeater			Atriplex polycarpa Shrubland Alliance	0.13
Barstow UG Telecommunication manholes		.0002	Atriplex polycarpa Shrubland Alliance	.0002
Lugo Substation UG Telecommunication manhole	Existing developed tower location	.0001	Developed	.0001
Temporary				
Barstow Distribution Work area	The Proposed Project area is characterized by mostly undeveloped and open lands, utilities and infrastructure, and some low-density residential land uses in San Bernardino County	9.34	Atriplex polycarpa Shrubland Alliance	0.34
Barstow Distribution Work Area			Developed	0.02
Barstow Telecommunication Work Area			Atriplex polycarpa Shrubland Alliance	0.65
Barstow Telecommunication Work Area			Developed	0.06
Ludlow Distribution and Telecommunications Work Area			Developed	0.98
Ludlow Distribution and Telecommunications Work Area			Larrea tridentata – Ambrosia dumosa Shrubland Alliance	5.66
Ludlow Distribution and Telecommunications Work Area			Larrea tridentata Shrubland Alliance	1.63
Lugo Substation UG Telecom Work Area	Existing developed tower location	2.19	Developed	0.65
Lugo Substation UG Telecom Work Area			Ericameria cooperi Provisional Shrubland Alliance	1.39
Lugo Substation UG Telecom Work Area			Eriogonum fasciculatum Shrubland Alliance	0.15

See Figures 6 and 7 for the locations of the distribution and telecommunications construction, including the Barstow Repeater. For the Lugo Substation UG Telecom Manhole location see Figure 2.

5.2 Project Activity Schedule

Construction will be completed sporadically over the course of several months, based on many construction outages that will occur throughout the duration of the Project.



General Reference Features

- Existing Towers
- Distribution Pole
- Proposed Telecommunication Manhole
- OH Distribution Lines
- OH Telecommunication Lines
- UG Telecommunication Lines
- Existing Lines
- Distribution & Telecommunication Work Area
- Temporary Disturbance
- Other Project Work Area
- Right-of-Way
- Existing Non-Paved Access Road

Jurisdiction

- Arizona State Lands
- Bureau of Indian Affairs
- Bureau of Land Managment
- Bureau of Reclamation
- Department of Defense
- National Park Service
- State of Nevada
- Other Federal
- State of California
- United States Forest Service
- United States Fish and Wildlife Service
- State Boundary

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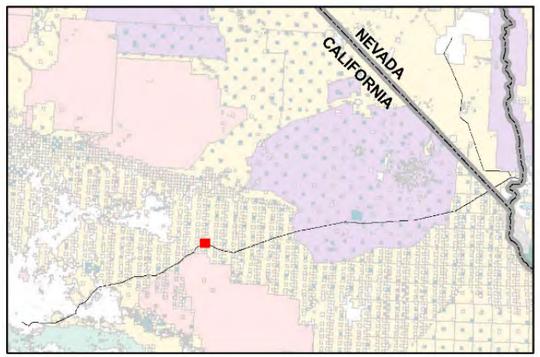

FIGURE 6
DISTRIBUTION & TELECOMMUNICATIONS AT MID-LINE SERIES CAPACITORS

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

SOUTHERN CALIFORNIA EDISON
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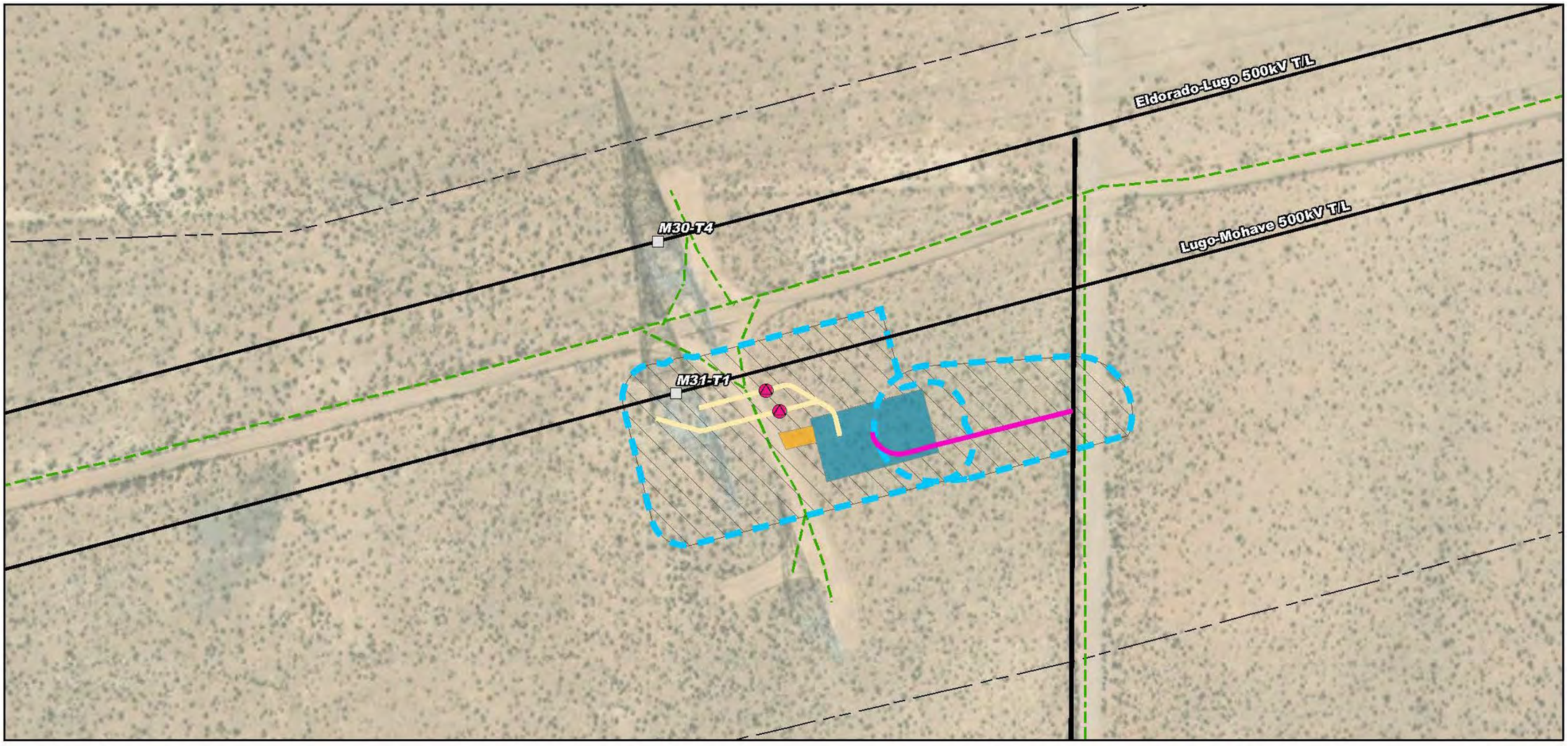

General Reference Features

- Existing Towers
- Proposed Telecommunication Manhole
- UG Distribution Lines
- UG Telecommunication Lines
- Existing Lines
- Distribution & Telecommunication Work Area
- Temporary Disturbance
- Barstow Repeater
- Access Road
- Right-of-Way
- Existing Non-Paved Access Road

Jurisdiction

- Arizona State Lands
- Bureau of Indian Affairs
- Bureau of Land Managment
- Bureau of Reclamation
- Department of Defense
- National Park Service
- State of Nevada
- Other Federal
- State of California
- United States Forest Service
- United States Fish and Wildlife Service
- State Boundary

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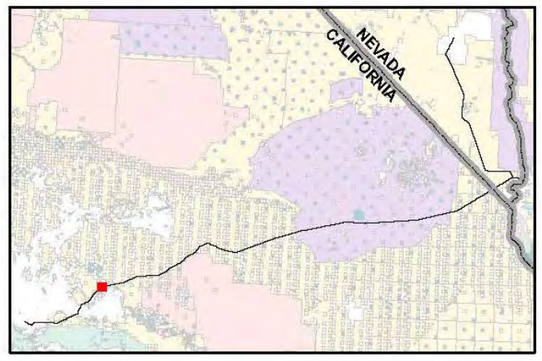

FIGURE 7
DISTRIBUTION & TELECOMMUNICATIONS AT BARSTOW REPEATER

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

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Construction Location	Construction Start Date	Operation Start Date
Distribution and Telecommunication at Mid-Line Series Capacitors	October 2020	March 2022
Distribution and Telecommunication (with repeater) at Barstow Repeater	October 2020	March 2022

5.3 Compliance with Mitigation Measures and Applicant Proposed Measures

Refer to Appendix A: Applicant Proposed Measures and Mitigation Measures.

5.4 Distribution/Telecommunication – Major Construction Activities

5.4.1 Access Roads

An entrance road will be constructed from the existing access road to the Barstow Repeater site. Access to the distribution/telecommunication lines will be from existing utility access roads and public access roads to the existing substations and transmission lines. Access roads showing points of access are provided in Figures 4 and 5.

5.4.2 Preconstruction Activities

Construction of the distribution and telecommunication lines will be contained within work areas located within and adjacent to the existing ROWs. Minimal site preparation will be required for the construction of the distribution/telecommunication lines. Construction of the Barstow Repeater site will be contained within the existing ROW and require vegetation clearing and grading to achieve a level pad for construction of the facilities. A chain-link fence will be installed around the repeater site. Connections will be constructed within the distribution/telecommunication lines from the nearest existing service provider connection and/or distribution pole. Portable generators will be used in case an existing connection cannot be established with an existing facility. Air quality will be in compliance with regulations and laws and the generators will be placed away from noise-sensitive areas when possible. Portable lights will be used to light work areas during night work. Portable sanitation facilities and construction trailers may be brought onsite if necessary. SWPPP requirements will be implemented (i.e., BMPs). Onsite parking will be provided for construction personnel.

5.4.3 Construction Activities

The major construction activities associated with telecommunication and distribution activities are listed in the table below.

Distribution/ Telecommunication	Major Construction Activities
Distribution/ Telecommunication	Provide two communication paths between the series capacitor sites: • Install approximately 2 miles of overhead and 500 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.

Distribution/ Telecommunication	Major Construction Activities
	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 new fiber optic repeater facility (Barstow Repeater) within and adjacent to the Lugo-Mohave 500kV transmission line ROW. The repeater site will include a prefabricated building, emergency generator with an above ground propane fuel tank surrounded by a block wall. Install distribution lines for light and power at the Barstow fiber optic repeater site. Install underground telecommunications facilities from existing transmission structures to the Barstow fiber optic repeater site.

Workers will arrive and park personal vehicles onsite during the construction of the distribution/ telecommunication lines. The estimated construction workforce required for construction are summarized in Appendix B: Construction Equipment and Workforce Estimates. Construction will be performed by either SCE construction crews or contractors. Multiple crews will work concurrently when possible; however, the estimated deployment and number of crew members will vary depending on factors such as material and equipment availability, weather, and construction scheduling. It is anticipated that approximately 30 construction personnel will be working at the site on any given day.

Materials associated with construction will be delivered via truck by vendors and suppliers directly to the site or to the nearest staging yard and/or substation for storage and distribution to the specific sites.

Any land that may be temporarily disturbed as a result of telecommunication/distribution construction will be restored in accordance with the Habitat Restoration and Revegetation Plan (HRRP) following project completion.

5.4.4 Telecommunication Construction

The construction activity will be largely maintained within an existing ROW; therefore, minimal site preparation would be necessary for the improvement project. Stormwater BMPs will be installed at various work sites required by the Project's SWPPP.

5.4.5 Overhead Fiber Optic Cable Telecommunications Facilities Installation

Construction of overhead telecommunication facilities will be constructed by attaching cable to structures. Two trucks will be used; one with a wench and one with a cable reel set at each end of the cable. The truck with the cable reel pulls the cable from the other truck. Fiber optic cables are as long as the cable installation stretching between two selected points along existing structure line.

5.4.6 Underground Fiber Optic Cable Telecommunication Facilities Installation

A backhoe will be used to place underground fiber optic cables. Trenches for this type of project are typically 12 to 18 inches wide and approximately 36 inches deep. Ground disturbance from the excavator will be approximately 25 feet wide by the specific length of the excavation. Existing utilities that may be crossed during excavation will be located by digging a pothole with a backhoe or vacuum

truck. Trenches will be prepared with polyvinyl chloride conduit and covered with approximately 8 inches of concrete slurry. Once completed, it will be backfilled and compacted. For the pull boxes and manholes, holes will be excavated 4 to 10 feet deep, 5 to 8 feet long and 4 to 8 feet wide. Ground disturbance will be approximately 40 to 50 feet in length, and manholes and pull boxes will be lowered into place. Once lowered, the manhole and/or pull box will be connected to the conduits and backfilled. Excess soil may be fill material for transmission, subtransmission, distribution, or substation project element or hauled to an existing disposal facility in accordance with California laws and regulations.

New underground cable may also be installed by directional bore to minimize ground disturbance and reduce impacts to environmental resources. The ground disturbance area for the borehole construction will be approximately 50 by 50 feet for each bore pit. Smaller bore pits, approximately 2 feet wide by 10 feet in length, will be dug with a backhoe at each end of the bore. A horizontal bore rig will be set up at one end of the bore pits. The setup will include anchoring the rig to the ground with augers attached to the front. As the bore machine spins its head, it inserts drilling rods behind the head as it pushes through the ground. Drilling fluid assists in moving the disturbed dirt and excess is vacuumed up and disposed of at an approved location. The conduit is then laid in line with the bore and attached to the reamer. As the reamer is pulled back to the bore rig, the conduit is installed. The bore pits are then reused for other bores going in the opposite direction or may be part of the excavation for a manhole.

The fiber optic cable will be installed the length of the entire conduit and structures installed. First an innerduct will be installed, providing protection and identification of the cable. The innerduct will be pulled through the conduit from structure to structure via a pull rope and pulling machine. Once the installation of the innerduct has been finalized, the fiber optic cable will be pulled through the innerduct using the same method and equipment.

Materials used for the telecommunication work will be delivered via truck directly to the site or to the nearest staging yard or substation for storage and distribution to the specific work sites. Telecommunication construction areas will serve as temporary working areas where project-related materials will be placed at or near each structure location. Materials will include but are not limited to optical ground wire (OPGW) reels, hardware, construction equipment, OPGW cable, conduit, cross arms, insulators, consumables, signage, BMP material, and waste materials for salvaging.

Hydraulic fluid and fuel will be stored at an existing SCE facility or designated substation yard and will be used for the refueling and maintenance. All refueling and fuel storage will be performed in compliance with the SWPPP. BMPs will be implemented for the handling of hazardous material.

Any temporarily disturbed land used for telecommunication/distribution construction will be restored in accordance with the HRRP.

5.4.7 Distribution/Telecommunication Equipment

Potential equipment to be used during pre-construction and construction improvements may include the following:

- Motor Grader
- Dozer / Scraper
- Crew truck
- Dump truck
- Forklift

- Bucket truck
- Backhoe-loader
- Flatbed truck
- Line truck
- Water truck
- Utility vehicle
- Splice lab
- Bore equipment
- Refueling equipment

A comprehensive list of additional equipment that may be used at the telecommunications/ distribution and repeater sites is included in Appendix B: Construction Equipment and Workforce Estimates.

5.4.8 Night Use

Telecommunication/distribution night work is not anticipated to occur within the ROW or franchise at night. In the event that night work is conducted, night lighting will comply with MM AES-4.

5.4.9 Helicopter Use

Helicopter use is not anticipated during the construction of the telecommunication/distribution lines.

5.4.10 Temporary Facilities

Typical daily construction activities will include use of construction trailers and portable restrooms, and personal parking for construction personnel. Temporary electrical equipment may be installed for the construction trailer if needed. Connections will be established at existing distribution poles and/or service provider connections.

5.4.11 Water Use

Construction water to be used for the distribution and telecommunications construction will come from the nearest water purveyor within the water basin that construction is located, as available. The Fort Cady California Corporation could potentially provide water for construction activities at the distribution and telecommunications construction at the mid-line series capacitor. This groundwater source is a private groundwater well. This proposed water source will be the same as the mid-line series capacitor and is shown in Figure 5 in Section 4.4.8.

A water source for the distribution and telecommunications construction at the Barstow Repeater site has not yet been identified. For either location, the water will be trucked to the site with construction water trucks (3,000 gallons). The water trucks will then discharge the water on site for dust control to support construction.

5.4.12 Other Activities

Other daily construction activities may include refueling and equipment maintenance and repair, material stockpiling, containment of waste disposal, and structure assembly.

6 Staging Yard Construction

This CPUC NTPR includes construction of the Ludlow Series Capacitor Yard.

The staging yard will serve as a reporting location for workers, vehicle and equipment parking, and material storage during project execution. The yard may be fenced and have construction trailers for supervisory and clerical personnel and may be lit for staging and security. Normal maintenance and refueling of construction equipment would be conducted at the yard; refueling and storage of fuels would be in accordance with the SWPPPs.

The need for temporary power would be determined based on the type of equipment and facilities to be used for construction. If existing distribution lines are available, a temporary service and meter may be used to provide electrical power at the yard. If it is determined that temporary power is not available, then a portable generator may be used intermittently for electrical power.

Materials commonly stored would include, but not be limited to, construction trailers; construction equipment; portable sanitation facilities; electrical equipment such as circuit breakers, steel/wood poles, OHGW or overhead OPGW reels, marker balls, hardware, insulators, and cross arms; signage; consumables (e.g., fuel); waste materials for salvaging, recycling, or disposal; and BMP materials (e.g., straw wattles, gravel, and silt fences).

The staging yard may also serve as assembly points for crews, from where they would be transported to work sites. The majority of materials associated with the construction will be delivered by truck to the staging yard for subsequent distribution to work areas. Some materials may be delivered directly to construction work areas.

6.1 Site Locations and Conditions

The Ludlow staging yard is located southeast of and adjacent to the Ludlow series capacitor site near Ludlow, California.

Staging Yards				
Construction Location	**Site Conditions**	**Approximate Disturbed Acres**	**Vegetation Impacts**	
			Vegetation Type	**Acres**
Temporary Disturbance				
Ludlow Series Capacitor	The Proposed Project area is characterized by mostly undeveloped and open lands, utilities, and infrastructure.	3.96	Larrea tridentata Shrubland Alliance	3.96

See Figure 8 for the location of the Ludlow series capacitor yard construction.

6.2 Project Activity Schedule

Construction will be completed prior to construction of the Ludlow series capacitor.

Project Component	Construction Start Date	Operation Start Date
Staging Yard at Ludlow Series Capacitor Site	October 2020	June 2022

General Reference Features

- Existing Towers
- Existing Lines
- Ludlow Series Capacitor Yard
- Temporary Disturbance
- Other Project Work Area
- Right-of-Way
- Existing Non-Paved Access Road

Jurisdiction

- Arizona State Lands
- Bureau of Indian Affairs
- Bureau of Land Managment
- Bureau of Reclamation
- Department of Defense
- National Park Service
- State of Nevada
- Other Federal
- State of California
- United States Forest Service
- United States Fish and Wildlife Service
- State Boundary

0 95 190
Feet

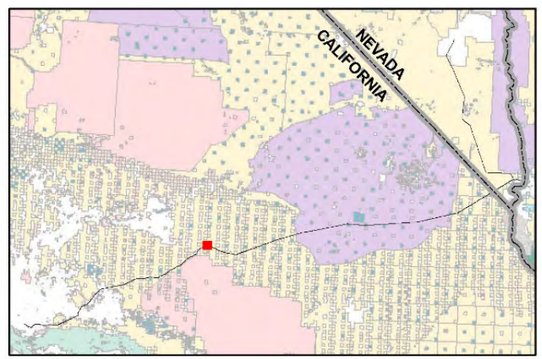

FIGURE 8
LUDLOW SERIES CAPACITOR YARD

CPUC-NTPR-1: Substation Modifications, Mid-Line Series Capacitors and Distribution & Telecommunication Construction, and Staging Yards

ELDORADO-LUGO-MOHAVE SERIES CAPACITOR PROJECT

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6.3 Compliance with Mitigation Measures and Applicant Proposed Measures

Refer to Appendix A: Applicant Proposed Measures and Mitigation Measures.

6.4 Staging Yard – Major Construction Activities

6.4.1 Access Roads

Access to the Ludlow Series Capacitor site and staging yard will be from the paved sections of Pisgah Crater Road and will be shared access with the existing Pisgah Substation and new Newberry Springs Series Capacitor. Access roads showing points of access are provided in Figure 8.

6.4.2 Preconstruction Activities

Site preparation required for the staging yard will include vegetation clearing and grubbing, with minimal grading to provide drainage berms for stormwater management, and SWPPP requirements will be implemented. Onsite parking will be provided for construction personnel.

6.4.3 Construction Activities

Typical daily construction activities will include use of construction trailers and portable restrooms and personal parking for construction personnel. Other construction activities may include refueling and equipment maintenance and repair, material stockpiling, containment of waste disposal, and structure assembly.

Workers will arrive and park personal vehicles onsite during the construction of series capacitor improvements. The estimated construction workforce required for construction is summarized in Appendix B: Construction Equipment and Workforce Estimates. Construction will be performed by either SCE construction crews or contractors. Multiple crews will work concurrently when possible; however, the estimated deployment and number of crew members will vary depending on factors such as material and equipment availability, weather, and construction scheduling. It is anticipated that a total of approximately 40 construction personnel will be working at the site on any given day.

6.4.4 Equipment

Refer to Section 4.4.4 Mid-Line Series Capacitors Equipment and Section 5.4.7 Distribution/ Telecommunication Equipment for potential equipment to be used during pre-construction and construction improvements at the staging yard. A comprehensive list of equipment that may be used at the series capacitor and distribution/telecommunication sites is included in Appendix B: Construction Equipment and Workforce Estimates.

6.4.5 Night Use

In the event that night work is conducted, night lighting will comply with MM AES-4.

6.4.6 Helicopter Use

Helicopter use is not anticipated at this yard.

6.4.7 Temporary Facilities

Typical daily construction activities will include use of construction trailers and portable restrooms, and personal parking for construction personnel. Temporary electrical equipment may be installed for the construction trailer if needed. Connections will be established at existing distribution poles and/or service provider connections.

6.4.8 Water Use

Construction water to be used for this project component will include dust control, but will primarily be incidental to the water demand of the other nearby project components, including the mid-line series capacitor construction. Refer to Section 4.4.8 for a description of the sources and construction water to be used to support the construction of those project components.

As site access allows and high water demand is needed, large capacity water tankers (5,000 gallons) may be used to allow for on-site water storage within the staging yard. High volume storage tanks, such as baker tanks (20,000 gallon), will be used for water storage and secondary storage tanks or drop tanks (5,000 gallons) will be used to gravity feed the on-site construction water trucks.

6.4.9 Other Activities

Other daily construction activities may include refueling and equipment maintenance and repair, material stockpiling, containment of waste disposal, and structure assembly.

7 Checklist of Required Permits, Plans, and Other Project Approvals

7.1 Environmental/Biological/Cultural Permits

Permit		Required	Approval Date	Applicability/Status
Federal				
Clean Water Act (CWA) Section 404	CWA Section 401		404 - 7/29/20	CWA Section 404 approved/401 permit should be approved at the end of September. Impacts to jurisdictional waters are not anticipated for construction of project components subject to this CPUC NTPR-1.
CWA Section 402 National Pollutant Discharge Elimination System (NPDES) Comprehensive Procurement Guidelines (CPG)		√	8/10/20	Section 402 Construction General Permit(s) and SWPPP are approved.
Paleontological Resources Use Permit		√	TBD	Monitoring is only required in areas of PFYC U, 4, and 5. It is anticipated that the components subject to this CPUC NTPR-1 area are not in one of these PFYCs. A final determination will be made in accordance with the Paleontological Resource Mitigation and Monitoring Plan

Permit	Required	Approval Date	Applicability/Status
			(PRMMP). PRMMP to be submitted for agency review by TBD. Approval is anticipated by TBD.
Section 7 Consultation	√	7/16/20	Section 7 Consultation is complete
Section 106 Consultation, National Historic Preservation Act	√	Approval Pending	Cultural Resources Management Plan (CRMP) to be submitted for agency review by TBD. Approval is anticipated by TBD.
Field Work Authorization (Archaeology)	√	To be submitted	Fieldwork authorization is required to conduct monitoring and address unanticipated discoveries. Applications for permits will be submitted upon approval of CRMP. CRMP to be submitted for agency review by TBD. Approval is anticipated by TBD.
Field Work Authorization (Paleontology)	√	To be submitted	Fieldwork authorization is required to conduct monitoring and address unanticipated discoveries. Applications for permits will be submitted upon approval of PRMMP. PRMMP to be submitted for agency review by TBD. Approval is anticipated by TBD.
Archaeological Resources Protection Act Permit	√	Approval Pending	Permit for archaeological investigations is required if artifacts are collected during construction. Applications for permits will be submitted upon approval of CRMP. CRMP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
State			
Certificate of Public Convenience and Necessity (CPCN)	√	TBD	CPUC to issue (Pending Proposed Decision, date to be determined).
2081 Incidental Take Permit	√	Pending Approval	SCE applied for an Incidental Take Permit (ITP) pursuant to Section 2081 of the California Fish and Game Code. SCE anticipates that the ITP will be issued week of 9/21/20.
NPDES Municipal Storm Water (MS4-I, II)	√	8/10/20	Permits and SWPPPs will be implemented following California CPG and EPA CPG. SWPPPs The SWPPP was approved 8/10/20.
Encroachment/Traffic/Flood Control/Pipeline Permit		N/A	Not required because project activities are not anticipated to encroach on traffic, flood control facilities, or pipelines.

Permit	Required	Approval Date	Applicability/Status
Local			
Dust Control Permit	√	To be submitted	A dust control permit will be obtained from Mohave Desert Air Quality District (MDAQD). The MDAQD Dust Control Permit is to be submitted for agency review by TBD. Approval is anticipated by July 31, 2020.
Generator Permit	√	To be submitted	SCE is preparing applications for use of temporary (1 year or greater) and permanent generators for submittal to the agencies. Submittal is anticipated by TBD. Approval is anticipated by TBD.
Hazardous Materials Permits	√	To be submitted upon arrival to site	EPC Contractor will maintain a hazardous materials inventory for materials used for construction upon site delivery.
Grading Permit		N/A	Project received an exemption for a grading permit from San Bernardino County.
Building Permit Fencing		N/A	Project received an exemption for a building permit from San Bernardino County.
Building Permit MEER		N/A	Project received an exemption for a building permit from San Bernardino County.
Demolition Permit		N/A	Project received an exemption for a demolition permit from San Bernardino County.
Encroachment Permit		N/A	Encroachment Permit is not required for this CPUC NTPR-1. Project activities subject to this CPUC NTPR-1 are not anticipated to encroach within, under, or over public roadways.
Other			
License, Easement, or Agreement (Railroad Permits)	√	N/A	Not required for this CPUC NTPR-1. Construction of project components subject to this CPUC NTPR-1 do not cross any railroad ROWs or easements.
Source: CPUC 2020			

7.1.1 Mitigation Plans and Reports

Plan/Report	Applicable MMCRP Measure(s)	Applicable	Approval Date	Notes
Burrowing Owl Management and Passive Relocation Plan (BOMPRP)	MM BR-11	√	TBD	Survey completed Spring 2020. BOMPRP to be submitted for agency review by TBD. Approval is anticipated by TBD.
Construction Traffic Control Plan	MM T-1		N/A	Existing roads will be used to access the project sites from the public right-of-way. Access roads being installed are located in non-public lands. No encroachment permits are required for work associated with components of this CPUC NTPR-1.
Cultural Resource Management Plan/Cultural Resource Protection Plan (CRMP/CRPP)	MM CR-1	√	TBD	Cultural resources may require monitoring due to new disturbance being performed during the construction of this CPUC NTPR-1 components. The CRMP/CRPP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Horizontal Direction Drill (HDD) Fluid Management Plan	MM HWQ-2	√	TBD	Construction of the UG Telecom at the Mid-Line Series Capacitors will require an HDD under the existing railway. The HDD is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Alternating Current Interference Analysis	MM UT-1	√	N/A	Before construction begins, SCE will perform engineering studies to determine what type of cathodic protection will be required on pipelines that may be affected by the project. Studies are in progress. Ongoing coordination with SoCalGas and their Engineering Consultant. To be completed by TBD.
Induction Study	MM UT-3	√	N/A	Final Induction Studies will be submitted to CPUC on 7/15/20

Plan/Report	Applicable MMCRP Measure(s)	Applicable	Approval Date	Notes
Erosion Control Plan (with Grading Plans)	MM HWQ-1	√	8/10/20	Project will be completed in accordance with Erosion Control and Grading Plans. Erosion Control Plans and Grading Plans are incorporated into the project SWPPP. The SWPPP was approved 8/10/20.
Fire Management Plan	MM WF-1	√	TBD	A Fire Management Plan will be implemented to comply with CPUC requirements. The Fire Management Plan is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Dust Control Plan	MM AQ-1	√	TBD	A Dust Control Plan will be implemented in compliance with California and EPAs CPGs. The Dust Control Plan is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Habitat Restoration and Revegetation Plan (HRRP)	MM BR-4	√	TBD	Temporary disturbance will occur and be restored/revegetated per the HRRP. The HRRP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Hazardous Materials, Waste Management Plan (HMWMP)	MM HH-1	√	TBD	A HMWMP will be implemented. The HMWMP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Helicopter Use Plan	MM T-3		N/A	Helicopter use is not anticipated during the construction of the CPUC NTPR-1 components.
Integrated Weed Management Plan (IWMP)	MM BR-5	√	9/10/20	The IWMP is approved.
Nesting Bird Management Plan (NBMP)	MM BR-10	√	TBD	A NBMP will be implemented. The NBMP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Paleontological Resource Mitigation and Monitoring Plan (PRMMP)	MM PAL-3	√	TBD	A PRMMP will be implemented. The PRMMP is to be submitted for agency review by TBD. Approval is anticipated by TBD.

Plan/Report	Applicable MMCRP Measure(s)	Applicable	Approval Date	Notes
Raven Management Plan (RMP)	MM BR-9	√	TBD	An RMP will be implemented and applies to all components of the capacitor project. The RMP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Special Status Plant Salvage and Relocation Plan (SSPSRP)	MM BR-6	√	TBD	A SSPSRP will be implemented and will be submitted for agency review by TBD. Approval is anticipated by July 31, 2020.
Cacti and Yucca Salvage and Relocation Plan (CYSRP)	MM BR-6	√	TBD	Potential impacts to cacti and yucca may occur during this project. A CYSRP will be implemented. The CYSRP is to be submitted for agency review by TBD. Approval anticipated by July 31, 2020.
Stormwater Pollution Prevention Plan (SWPPP)	MM HWQ-2	√	8/10/20	The SWPPP is approved.
Project Design and Surface Treatment Plan (PDSTP)	MM AES-1	√	TBD	A PDSTP will be implemented to comply with MM AES-1. The PDSTP is to be submitted to the agency for review by TBD. Approval is anticipated by TBD.
Worker Environmental Awareness Program (WEAP)	MM BR-2	√	TBD	Project personnel will complete WEAP training prior to starting work on the Project. The WEAP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Construction Notice Mailer	MM N-2	√	9/10/20	A Construction Notice Mailer is approved.
Source: CPUC 2020				

7.1.2 Coordination/Notification

Coordination	Applicable MMCRP Measure(s)	Required	Completion Date	Notes
Fire Agencies	MM WF-1	√	TBD	Coordination with fire agencies will be implemented based on the project Fire Management Plan. Fire Management Plan is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Emergency Service Providers (Coordination)	MM T-1		N/A	Impacts to roadways are not anticipated for the components subject to this CPUC NTPR-1; therefore, preparation of a Construction Traffic Control Plan and coordination with emergency service providers is not required.
Recreation Area (Notification)	MM AES-2 MM CR-3		N/A	No recreation areas will be affected during this work; therefore, notification to recreation areas is not required.
Right-of-Way Buffer (Notification)	MM T-1	√	N/A	Impacts to right-of-way buffers are not anticipated for the components subject to this CPUC NTPR-1; therefore, preparation of a Construction Traffic Control Plan and notification or right-of-way buffer notifications is not required.
Source: CPUC 2018				

7.2 Required Surveys

7.2.1 Biological

Survey	Applicable MMCRP Measure(s)	Required	Completion Date	Notes
Nesting Birds	MM BR-10	√	TBD	Preconstruction clearance surveys will be required for activities conducted between January 1 through August 31.
Special – Status Plants	MM BR-6	√	Spring 2020	The survey results are provided in the SSPSRP.
Cacti and Yucca	MM BR-6	√	Spring 2020	The survey results are provided in the CYSRP.
Desert Tortoise	MM BR-4	√	Spring 2020	The survey results are provided in the Desert Tortoise Take Avoidance and Minimization Plan.
Burrowing Owl	MM BR-11	√	Spring 2020	The survey results are provided in the BOMPRP.
Source: CPUC 2020				

7.2.2 Cultural

Survey	Applicable MMCRP Measure(s)	Required	Completion Date	Notes
Class III Cultural Resources Inventories for the ELM Project	MM-CR-1 MM-CR-2 MM-CR-3	√	2018	Class III Cultural Resources Inventories for the ELM Project were completed in 2017, and the report was completed in 2018. No sensitive areas were located within the work areas for construction of project components subject to this CPUC NTPR-1. CRMP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Source: CPUC 2020				

7.2.3 Paleontological

Survey	Applicable MMCRP Measure(s)	Required	Completion Date	Notes
Paleontological surveys for the ELM Project	MM-PAL-3	√	2018	Paleo surveys for the ELM Project were completed in 2017 and 2018. No paleontological resources were observed during the surveys of these project areas. Mitigation includes preparation of a PRMMP prior to construction and monitoring of geologic units with a PFYC of U, 4, and 5 The PRMMP is to be submitted for agency review by TBD. Approval is anticipated by TBD.
Source: CPUC 2020				

7.2.4 Tribal

Survey	Applicable MMCRP Measure(s)	Required	Completion Date	Notes
Tribal Consultation based on Class III Cultural Resources Survey	MM-CR-4 MM CR-5 APM-TCR-2	√	November 2019	Tribal Consultation was completed with the consulting parties.
Source: CPUC 2020				

8 Monitoring Required

Type	Required	Notes
Biological	√	Preconstruction surveys will be conducted prior to the start of construction. Biological monitoring will be required as specified in the Biological Opinion. The Biological Opinion was received by SCE on July 2, 2020.
Cultural	√	Cultural resource monitoring will be required as specified in the CRMP. Submittal of the CRMP is anticipated by TBD.
Paleontological	√	Paleontological resource monitoring will be required as specified in the PRMMP. Submittal of the PRMMP is anticipated by TBD.
Tribal	√	Tribal monitoring will be required as specified in the CRMP. Submittal of the CRMP is anticipated by TBD.
Source: CPUC 2020		

9 Anticipated Notice to Proceed Conditions

Requirement	Anticipated Completion Date	Notes
MM BR-2	Prior to workers arriving onsite	SCE will prepare a WEAP before construction activities begin and will require construction workers to complete training prior to starting construction.
MM BR-1	Preconstruction	SCE will complete preconstruction surveys before activities start for the project components of this CPUC NTPR-1.
MM BR-10	Preconstruction	Nesting Bird surveys will be conducted prior to construction activities during nesting bird surveys in the project components of this CPUC NTPR-1. Appropriate precautions will be taken to avoid disturbance.
MM BR-11	Preconstruction	Burrowing owl surveys will be conducted for suitable habitat before construction begins.
MM BR-6	Preconstruction	Surveys for special-status plants, including cacti and yucca, will be conducted prior to construction.
MM BR-12	Preconstruction	Special-status bat surveys will be completed prior to construction.
MM BR-13	Preconstruction	American badger, ringtail, and desert kit fox surveys will be completed prior to preconstruction.
MM CR-2	Preconstruction	The WEAP training will address cultural resources training.
MM HWQ-1	Preconstruction	Erosion Control Plans will be implemented to comply with California requirements.
Source: CPUC 2018		

10 References

State of California Public Utilities Commission (CPUC). 2020. Appendix F: Stipulations and Mitigation Measures. Available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/1504053/20016524/250022003/Appendix_E__Mitigation_Measures_CMAs.pdf. Accessed on April 27, 2020.

Appendix A: Applicant Proposed Measures and Mitigation Measures

A1 Eldorado-Lugo-Mohave Series Capacitor Project Notice to Proceed Request Mitigation Measures

This section describes the applicant-Proposed Measures (APM) and Mitigation Measures (MM).

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	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 PDSTP for review and approval at least 60 days prior to construction. Applicable for tower raising at M14-T4	The PDSTP identifies treatments to minimize the visual contrast of the project. The PDSTP is to be submitted for agency review by TBD. Approval is anticipated by TBD.

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
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.	The PDSTP identifies screening treatments or reasons for exceptions (on existing substation property or not located in proximity to areas of high public visibility) for each of the construction yards, staging areas, and material and equipment storage areas. The PDSTP is anticipated to be submitted for the complete project for agency review by TBD. Approval is anticipated by TBD.
Air Quality			
APM AIR-1	**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.	Implement measures during construction	Measures to be implemented during construction

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	• 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 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.		
APM AIR-2	**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.	Implement measure during construction	Measure to be implemented during construction
APM AIR-3	**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.	Implement measure during construction	Measure to be implemented during construction
APM AIR-4	**Equipment Maintenance.** Diesel engines would be maintained in good working order and according to manufacturer's specifications to reduce emissions.	Implement measure during construction	Measure to be implemented during construction
APM AIR-5	**Ridesharing.** Workers would be encouraged to carpool to work sites, and/or utilize public transportation for employee commutes.	Implement measure during construction	Measure to be implemented during construction
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	SCE to submit Dust Control Plan to MDAQMD, and CPUC	The Dust Control Plan is anticipated to be submitted for agency review by

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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.	prior to commencing earth-moving activity.	TBD. Approval is anticipated by TBD.
Biological Resources			
APM-BIO-08	**Compensation for Permanent Impacts to Jurisdictional Water Resources.** All necessary authorizations must be obtained from the applicable jurisdictional agencies for impacts to aquatic resources. Permanent impacts to all jurisdictional water resources would be compensated for at a one to-one ratio, or as agreed upon with the U.S. Army Corps of Engineers, State Water Resources Control Board, NDEP, and CDFW.	Impacts to jurisdictional waters will be authorized prior to construction. Authorizations will be provided to CPUC.	JD Permits to be provided prior to impacting jurisdictional water features.

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
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 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	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, mitigation measurement requirements, etc., prior to the monitor commencing field duties. Prior to the start of monitoring activities, SCE shall provide proposed communication protocols and monitoring report formats, describing content and organization, for CPUC and BLM review and approval in consultation with CDFW and USFWS.	Monitoring to commence at start of construction.

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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.		
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:	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.	The WEAP is anticipated to be submitted for agency review by TBD. Approval is anticipated by TBD.

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	• 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. • One-hour hold (or other method SCE will use to halt work when necessary to maintain compliance) and the requirement for compliance.		

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	• 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	Prior to any ground-disturbing activities, SCE shall provide CPUC and BLM with final engineering GIS	No vegetation areas are subject to disturbance subject to this CPUC NTPR-1

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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 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.	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.	
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	Prior to construction, SCE shall submit HRRP for review and approval. SCE shall provide compensatory mitigation for desert tortoise.	No vegetation areas are subject to disturbance subject to this CPUC NTPR-1.

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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 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.		

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	• 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 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.		

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
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-	At least 60 days prior to requesting an NTP, SCE shall submit IWMP for review and approval, and conduct preconstruction weed inventory and treatment.	The IWMP was approved 9/10/2020.

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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. **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		

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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 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.		

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	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 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	SCE shall conduct focused preconstruction surveys for federal- and state-listed and other special-status plants within suitable habitat prior to construction at individual work sites and submit	The SSPSRP is anticipated to be submitted for agency review by TBD. Approval is anticipated by TBD. The CYSRP is anticipated to be submitted for agency

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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	reports to CPUC and BLM for review and approval. SCE shall prepare a CYSRP. 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.	review TBD. Approval is anticipated by TBD.

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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 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		

[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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	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 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		

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	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. 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	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 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	The Habitat Compensation Plan is anticipated to be submitted for agency review by TBD. Approval is anticipated by TBD.

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	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	identify management planning needs (if any).	

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	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; • 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; o 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.		

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	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 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	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. If potentially suitable burrows, sand fields, or rock piles are found, they will be checked for occupancy and flagged. SCE shall prepare (for CPUC review and wildlife agency approval) Raven Management Plan.	The RMP is anticipated to be submitted for agency review by TBD. Approval is anticipated by TBD.

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	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.		
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 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	SCE shall prepare a NBMP for approval by CPUC and BLM in consultation with CDFW and USFWS.	The NBMP is anticipated to be submitted for agency review on TBD. Approval is anticipated TBD.

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	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		

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	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 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	Prior to construction, conduct burrowing owl surveys. Prepare a draft BOMPRP for review and approval by CPUC and BLM in consultation with CDFW and USFWS	Burrowing owl surveys were conducted in Spring of 2020 and survey results are provided in the BOMPRP. The BOMPRP is anticipated to be submitted for review by TBD. Approval is anticipated by TBD.

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	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 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		

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	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 concurrence in consultation with CDFW and USFWS. Conduct preconstruction 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.	Resume of a qualified bat biologist will be submitted for agency review. Preconstruction surveys for bats will be conducted prior to construction and buffers for active roosts will be establish prior to construction.
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-	SCE shall conduct preconstruction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of	Preconstruction surveys for desert kit fox, ringtail, and American badger will be conducted within 30 days prior to

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	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.	construction activities and submit to CPUC and BLM for review and approval. Active or potentially active dens will be flagged, and project activities will be avoided, unless otherwise specified.	initiation of construction activities.
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.	Class III Cultural Resources Inventory reports were completed in 2018.
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.	SCE will retain a qualified Cultural Resource Specialist and staff; resumes will be provided to CPUC. The CRMP/CRPP is anticipated to be submitted for agency review by TBD. Approval is anticipated TBD.
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	At least 30 days prior to the start of construction, a cultural training	The WEAP training program is anticipated to be

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	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 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.	program shall be submitted to the CPUC for approval. Training shall be required for all personnel before they begin work on a project site. Documentation of training to be provided to CPUC and BLM; CPUC to provide to tribes.	submitted for agency review TBD. Approval is anticipated TBD.
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	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.	The CRMP/CRPP is anticipated to be submitted for agency review TBD. Approval is anticipated by TBD.

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	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. • 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,		

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	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.		
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	Prior to ground disturbance, a resume for the Project Paleontologist will be submitted to	A qualified Project paleontologist will be retained by SCE prior

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	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: o 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 o 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.	CPUC and BLM for approval. Additional paleontological staff must meet the qualifications described in BLM IM 2009-011.	to the start of construction.

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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**.**	The WEAP will address paleontologist training.
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;	Prior to the start of the project, SCE shall submit PRMMP to the CPUC and BLM for review and approval.	The PRMMP is anticipated to be submitted for agency review by TBD. Approval is anticipated by TBD.

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	• 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. • 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	Submit Project-specific HWMP to CPUC and BLM 30 days prior to the start	The Project-specific HWMP is anticipated to be submitted for agency review by

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	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 with the ground. Refueling would be located in areas where absorbent pad and trays	of construction for review and approval by CPUC.	TBD. Approval is anticipated by TBD.

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	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.	SCE to submit Erosion Control Plan to the CPUC and BLM for review at least 60 days prior to construction.	The Erosion Control Plan is contained in the SWPPP. The SWPPP was approved 8/10/20.

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	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. • 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,	Prior to construction submit grading plans and all applicable permits.	

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	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. • 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.	If HDD is required, an HHD Fluid Management Plan will be prepared.	Construction of the UG Telecom under the existing railway at the Mid-Line Series Capacitors will require an HDD Fluid Management Plan. The HDD Fluid Management Plan is anticipated to be submitted for agency review by TBD. Approval is anticipated by TBD.

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	• 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 geotechnical 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			
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.	Implement measure during construction	Helicopter use is not anticipated during the construction of the CPUC NTPR-1 components.
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.	Implement measure during construction	Helicopter use is not anticipated during the construction of the CPUC NTPR-1 components.
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	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	TBD Helicopter use is not anticipated during the construction of the CPUC NTPR-1 components.

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	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.	would occur within 500 feet of residences, businesses, or other occupied structures, SCE shall distribute a public notice mailer.	
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,	Prior to construction, SCE shall submit a Construction Traffic Control Plan for review and approval by state and local agencies for application on public roadways.	A Construction Traffic Control Plan is not required because no regional or local roadways will be affected by construction of the Project.

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	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.		
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 preconstruction conditions of the roads within 500 feet in each direction of project access points and confer with state and local agencies.	SCE will establish preconstruction conditions prior to construction.
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 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	30 days prior to using helicopters, SCE shall submit a 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.	Helicopter use is not anticipated during the construction of the CPUC NTPR-1 components.

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	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		

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	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. o 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. o 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-01	**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	Implement measure during construction.	Measure to be implemented during construction.

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	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.		
APM-TCR-02	**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.	The Tribal Engagement Plan will be included in the CRMP. Tribal consultation was completed in 2019.
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 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	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 prior to cathodic protection installation.	The utility/metallic object locations will be provided to CPUC and BLM at least 60 days prior to installation of cathodic protection.

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	to the CPUC and BLM for review and approval at least 60 days prior to initiation of installation of such protection.		
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.	Construction subject to this CPUC NTPR-1 would not affect pipelines.
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 trans-mission 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.	The metallic object locations and an Induced Current Touch Study will be provided to CPUC and BLM prior to commencing construction.
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	Prior to construction, SCE to submit Fire Management Plan to	The Fire Management Plan is anticipated to be submitted for agency

Mitigation Number	Applicant-Proposed Mitigation/Mitigation Measure Requirements	Requirement	Status
	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: o identification of daily site-specific risk conditions, o the appropriate tools and equipment needed on vehicles and to be on hand at sites, o reiteration of fire prevention and safety considerations during tailboard meetings, and o 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.	CPUC for review and approval.	review by TBD. Approval is anticipated by TBD.

Appendix B: Construction Equipment and Workforce Estimates

Activity	Equipment Type	Approximate Quantity	Approximate Number of Workers
Substation			
Substation – Lugo-Line Pos – Electrical	Bobcat	2	15
	Crane	1	15
	Forklift	2	15
	Generator	2	15
	Manlift	2	15
	Foreman's Truck	1	15
	Job Site Utility Cart	4	15
	Tool Truck	2	15
	Worker Commute Automobile	15	15
	Bobcat	2	15
	Crane	1	15
	Forklift	2	15
	Generator	2	15
	Manlift	2	15
	Foreman's Truck	1	15
	Job Site Utility Cart	4	15
	Tool Truck	2	15
	Worker Commute Automobile	15	15
Substation – Lugo-Line Pos – Grading/Civil	Backhoe	2	15
	Bobcat	2	15
	Compactor	1	15
	Excavator	2	15
	Generator	2	15
	Grader	2	15
	LoDrill	1	15
	Skip Loader	1	15
	Trencher	1	15
	Dump Truck	1	15
	Foreman's Truck	1	15
	Fuel Truck	1	15
	Job Site Utility Cart	4	15
	Low Bed Hauler	1	15
	Tool Truck	2	15
	Water Truck	2	15
	Worker Commute Automobile	15	15
Substation – Lugo-Line Pos – Survey	Foreman's Truck	1	2
	Job Site Utility Cart	1	2
	Tool Truck	1	2
	Worker Commute Automobile	2	2

Activity	Equipment Type	Approximate Quantity	Approximate Number of Workers
Substation – Lugo-Line Pos – Testing	Test Truck	2	4
	Worker Commute Automobile	4	4
	Test Truck	2	4
	Worker Commute Automobile	4	4
	Manlift	1	5
	Foreman's Truck	1	5
	Job Site Utility Cart	2	5
	Tool Truck	2	5
	Worker Commute Automobile	5	5
Capacitor			
Capacitors – Ludlow Series Capacitor – SC5 – Civil: Foundations, Below Grade, Stone Cover	140 Motor Grader	1	12
	250-Ton Hydraulic Crane	1	12
	50,000-Pound Excavator/Breaker	1	12
	500-Gallon Water Buffalo with Truck	1	12
	75,000-Pound Excavator	1	12
	84-Inch Vibratory Roller Compactor	2	12
	Bobcat Compactor	1	12
	Bobcat Skid Steer	1	12
	Bobcat with Auger	1	12
	Bobcat with Sweeper	1	12
	Cat 623 Scraper	1	12
	Cat 950 Loader	1	12
	D-6 Cat Dozer	1	12
	Ditch Witch	1	12
	LoDrill Over 50,000 Pounds	1	12
	LoDrill up to 50,000 Pounds	1	12
	Mini Excavator	1	12
	Premiertrak 300 Rock Crusher	1	12
	Skip Loader	1	12
	Vermeer RT-450 Trencher	1	12
	10-Cubic-Yard Dump Truck	3	12
	4,000-Gallon Water Truck	3	12
	Foreman's Truck	1	12
	Job Site Utility Cart	1	12
	Low Bed Equipment Hauler (5 axle)	1	12
	Low Bed Equipment Hauler (7 axle)	1	12
	Low Side End Dump	3	12
	Tool Truck	1	12
	Worker Commute Automobile	12	12
Capacitors – Ludlow Series Capacitor – SC5 – Commissioning: Testing	Scissor Lift	3	10
	Foreman’s Truck	1	10
	Job Site Utility Cart	1	10
	Test Truck	1	10
	Tool Truck	1	10
	Worker Commute Automobile	10	10

Activity	Equipment Type	Approximate Quantity	Approximate Number of Workers
Capacitors – Ludlow Series Capacitor – SC5 – Grading	140 Motor Grader	1	12
	250-Ton Hydraulic Crane	1	12
	50,000-Pound Excavator/Breaker	1	12
	500-Gallon Water Buffalo with Truck	1	12
	75,000-Pound Excavator	1	12
	84-Inch Vibratory Roller Compactor	2	12
	Bobcat Compactor	1	12
	Bobcat Skid Steer	1	12
	Bobcat with Auger	1	12
	Bobcat with Sweeper	1	12
	Cat 623 Scraper	1	12
	Cat 950 Loader	1	12
	D-6 Cat Dozer	1	12
	Ditch Witch	1	12
	LoDrill Over 50,000 Pounds	1	12
	LoDrill up to 50,000 Pounds	1	12
	Mini Excavator	1	12
	Premiertrak 300 Rock Crusher	1	12
	Skip Loader	1	12
	Vermeer RT-450 Trencher	1	12
	10-Cubic-Yard Dump Truck	3	12
	4,000-Gallon Water Truck	3	12
	Foreman's Truck	1	12
	Job Site Utility Cart	1	12
	Low Bed Equipment Hauler (5 axle)	1	12
	Low Bed Equipment Hauler (7 axle)	1	12
	Low Side End Dump	3	12
	Tool Truck	1	12
	Worker Commute Automobile	12	12
Capacitors – Ludlow Series Capacitor – SC5 – Installations: Structures, Equipment, Wiring	135-Foot Manlift	1	20
	20,000-Pound Forklift	1	20
	27-Ton Boom Truck	1	20
	65-Foot Manlift	1	20
	85-Foot Manlift	1	20
	Bobcat with Forks	2	20
	Crane	1	20
	Generator	1	20
	Genie 45-Foot Manlift	1	20
	Scissor Lift	3	20
	Tele-Handler Forklift (5,000-7,000 Pounds)	1	20
	Tele-Handler Forklift (8,000-12,000 Pounds)	1	20
	Foreman's Truck	1	20
	Job Site Utility Cart	1	20
	Tool Truck	1	20
	Worker Commute Automobile	20	20