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Decision 17-02-015 February 9, 2017

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

In the Matter of the Application of Southern California Edison Company (U338E) for a Permit to Construct Electrical Substation Facilities with Voltage over 50 kV: Mesa 500 kV Substation Project.

Application 15-03-003  
(Filed March 13, 2015)

**DECISION GRANTING PERMIT TO CONSTRUCT THE  
MESA 500-KV SUBSTATION FACILITY PROJECT**

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**DECISION GRANTING PERMIT TO CONSTRUCT THE  
MESA 500-KV SUBSTATION FACILITY PROJECT**

**Summary**

This decision grants Southern California Edison Company a permit to construct the Mesa 500 kV Substation Facility Project, with mitigation identified in the Mitigation Monitoring, and Reporting Plan attached to this order. As the lead agency for environmental review of the project, we find that the Environmental Impact Report for this project meets the requirements of the California Environmental Quality Act. This proceeding is closed.

**1. Background**

Pursuant to California Public Utilities Commission (Commission) General Order (GO) 131-D, Southern California Edison Company (SCE) (U388E) submitted its Application (A.) 15-03-003 for a permit to construct (PTC) the proposed project known as the Mesa 500 kV substation Project (Project) on March 13, 2015. SCE requests authorization in its PTC Application to do the following:

- Construct the proposed Mesa 500 kV Substation and demolish the existing Substation within the City of Monterey Park.
- Remove, relocate, modify and/or construct transmission, subtransmission, distribution, and telecommunications structures within the cities of Monterey Park, Montebello, Rosemead, South El Monte and Commerce and in portions of unincorporated Los Angeles County.
- Convert an existing street light source line from overhead to underground between three street lights on Loveland Street within the City of Bell Gardens.
- Install a temporary 220 kV line loop-in at Goodrich Substation within the City of Pasadena.

- Perform minor modifications within several existing substations. These modifications would be located within the substations' existing fenced perimeters, and the associated work would be similar to Operation and Maintenance activities SCE currently performs.

On April 16, 2015, the Commission's Office of Ratepayer Advocates (ORA) filed a protest. On April 23, 2015, SCE filed its reply to ORA's protest. On July 28, 2016, the California Independent System Operator Corporation (CAISO) filed a motion for party status, which was granted by e-mail ruling on July 29, 2016. Bay Area Municipal Transmission Group (BAMx) filed a motion for party status on October 27, 2016, which was granted by e-mail ruling on October 27, 2016.

Pursuant to GO 131-D, a PTC is conditioned on the Commission's determination that the project complies with the California Environmental Quality Act (CEQA) and the Commission's policies requiring the use of low-cost and no-cost measures to mitigate electric and magnetic field effects (EMF). CEQA requires the lead agency (the Commission in this case) to conduct a review and identify the environmental impacts of the project, and ways to avoid or reduce environmental damage, for consideration in the determination of whether to approve the project, a project alternative, or no project. Where it is anticipated that the proposed project will create significant and unmitigable environmental impacts, then the lead agency must prepare an environmental impact report (EIR) that identifies the environmental impacts of the proposed project and alternatives, designs a recommended mitigation program to reduce any potentially significant impacts, and identifies, from an environmental perspective, the preferred project alternative.

In addition, pursuant to GO 131-D and Decision (D.) 06-01-042, the Commission will not approve a project unless its design is in compliance with the Commission's policies governing the mitigation of EMF effects using low-cost and no-cost measures.

The Commission's Energy Division issued the Draft EIR on April 29, 2016 and issued the Final EIR on October 7, 2016.<sup>1</sup>

A prehearing conference was conducted on November 4, 2016, in Los Angeles, California. Hearings were held on December 9, 2016, in San Francisco, California. Opening briefs were submitted on December 21, 2016. Reply briefs were filed on December 28, 2016.

## **2. Scope of Issues**

The assigned Commissioner's November 14, 2016, scoping memo identifies the following issues to be determined in this matter:

1. What are the significant environmental impacts of the Proposed Project?
2. Are there potentially feasible mitigation measures that will eliminate or lessen the significant environmental impacts?
3. As between the proposed project and the project alternatives, which is environmentally superior?
4. Are the mitigation measures or project alternatives infeasible?
5. To the extent that the proposed project and/or project alternatives result in significant and unavoidable impacts, are there overriding considerations that nevertheless merit Commission approval of the proposed project or project alternative?

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<sup>1</sup> The Final EIR contains comments on the Draft EIR, responses to the comments, and revisions to the Draft EIR. The EIR is comprised of both the Draft EIR and the Final EIR.

6. Was the EIR completed in compliance with CEQA; did the Commission review and consider the EIR prior to approving the project or a project alternative; and does the EIR reflect the Commission's independent judgment and analysis?
7. If the Proposed Project is delayed past the 2020 timeframe, are there additional mitigation measures that may be required to maintain electrical reliability in Southern California?
8. Is the proposed project and/or project alternatives designed in compliance with the Commission's policies governing the mitigation of EMF effects using low-cost and no-cost measures? and
9. Are there any safety issues pursuant to Pub. Util. Code § 451?

### **3. Environmental Impacts of Proposed Project**

Components of the project will be located in various jurisdictions in Los Angeles County and have been divided into three geographical areas referred to as the Main Project Area, North Area and South Area. Additionally, the proposed project includes work to be conducted at multiple existing substations operated by the applicant.

The Main Project Area contains the proposed Mesa Substation site and includes the Metropolitan Water District of Southern California (MWD) pipeline relocation and associated transmission, subtransmission, distribution and telecommunication lines proposed within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and in portions of unincorporated Los Angeles County.

The North Area includes the temporary installation of a 220-kV transmission structure in the City of Pasadena to temporarily connect the Eagle Rock-Mesa 220-kV Transmission Line to Goodrich Substation.

The South Area comprises a proposed transmission structure replacement in the City of Commerce and the proposed conversion from overhead to underground of three spans of existing street light conductors within the City of Bell Gardens.

The proposed project consists of the following main components:<sup>2</sup>

- Construction of the new 500/220/66/16-kV Mesa Substation and demolition of the existing 220/66/16-kV substation, increasing the substations footprint from about 22 acres to 69 acres.<sup>3</sup>
- Removal, relocation, modification, and/or construction of transmission lines,<sup>4</sup> subtransmission,<sup>5</sup> distribution and telecommunication structures to accommodate the new 500/220/66/16-kV Mesa Substation within existing applicant-owned properties, rights-of-way (ROWs),<sup>6</sup> and franchise areas located in the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce and in portions of unincorporated Los Angeles County.
- Installation of a temporary 220-kV transmission structure to connect the Eagle Rock-Mesa 220-kV Transmission Line to Goodrich Substation and maintain a second line of service to the City of Pasadena.
- Replacement of an existing 220-kV double-circuit transmission structure supporting the existing Goodrich-

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<sup>2</sup> Locations of the key proposed project components of the project are provided in Table 1. Attachment 1 contains a detailed description of each proposed project component and the work to be done at each location.

<sup>3</sup> The total acreage owned by the applicant is 86.2 acres.

<sup>4</sup> Transmission lines are designed to operate at or above 200 kV.

<sup>5</sup> For purposes of this proposed decision, subtransmission line refers to a powerline designed to operate between 50 kV and 200 kV.

<sup>6</sup> ROW refers to an area which the applicant would have legal access for construction and operation of the proposed utility facilities.

Laguna Bell (future Laguna Bell-Mesa Number (No.) 1) and Mesa-Redondo 220-kV Transmission Lines in order to increase the capacity rating<sup>7</sup> of the future Laguna Bell-Mesa No. 1 (220 kV) Transmission Line.

- Relocation of an existing 72-inch Metropolitan Water District of Southern California (MWD) waterline that traverses the substation location.
- Decommission 10 existing groundwater monitoring wells located within the substation site that are administered by the United States Environmental Protection Agency.
- Electrical and/or telecommunications equipment upgrades at 27 existing substations.
- Undergrounding of three spans of overhead streetlight conductors within the City of Bell Gardens.
- Minor internal equipment replacement and upgrades within the perimeter of 27 existing substations operated by the applicant within the applicant’s service area.

Table 1: Locations of the key proposed project components.

Jurisdiction	Component(s)
Bell Gardens	<ul style="list-style-type: none"> <li>▪ Street light source line conversion</li> </ul>
Commerce	<ul style="list-style-type: none"> <li>▪ 220-kV structure replacement</li> <li>▪ Staging Yard 5</li> </ul>
Unincorporated Los Angeles County	<ul style="list-style-type: none"> <li>▪ Telecommunications Routes 1 and 3</li> </ul>
Montebello	<ul style="list-style-type: none"> <li>▪ 220-kV transmission lines</li> <li>▪ 500-kV transmission lines</li> <li>▪ Telecommunications Routes 1, 2, and 3</li> <li>▪ Staging Yards 2 and 3</li> </ul>

<sup>7</sup> Capacity rating is defined by the Edison Electric Institute as the specific level of electrical loading that a system, a facility, or element can support or withstand through the daily demand cycles without loss of equipment or equipment life.

Jurisdiction	Component(s)
Monterey Park	<ul style="list-style-type: none"> <li>▪ 16-kV distribution lines</li> <li>▪ 66-kV subtransmission lines</li> <li>▪ 220-kV transmission lines</li> <li>▪ 500-kV transmission lines</li> <li>▪ Telecommunications Routes 1 and 2</li> <li>▪ Staging Yards 1 and 3</li> </ul>
Pasadena	<ul style="list-style-type: none"> <li>▪ Temporary 220-kV structure installation</li> <li>▪ Telecommunications rerouting</li> <li>▪ Staging Yard 4</li> </ul>
Rosemead	<ul style="list-style-type: none"> <li>▪ Staging Yard 6</li> </ul>
South El Monte	<ul style="list-style-type: none"> <li>▪ Staging Yard 7</li> </ul>

The proposed project would result in five significant and unavoidable impacts in the resource areas of aesthetics, air quality, and noise.

The proposed project would have a significant and unavoidable impact on the aesthetics of the surrounding area. Under Landscape Option 1, aesthetics would be impacted until landscaping trees mature. Under Landscape Option 2, aesthetic impacts would remain significant even after the implementation of mitigation. The view of the substation from North Vail Avenue would result in significant impacts to aesthetics after mitigation.

Air quality would also experience significant and unavoidable consequences as a result of the proposed project. Even with mitigation measures in place, there would be significant emissions of carbon monoxide due to construction activities which would violate air quality standards or substantially contribute to an existing or projected air quality violation. Furthermore, the proposed project would result in significant unavoidable impacts after mitigation

due to exposure of sensitive receptors to substantial pollutant concentrations as a result of construction emissions of nitrous oxide.

Montebello, South El Monte, Commerce and Pasadena all have noise ordinances. Construction of the proposed project would result in noise levels in excess of these noise ordinances. Even with mitigation, the noise levels would be significant and unavoidable. Additionally, construction of the substation and telecommunications routes, conversion of the street light source line, and modifications at Walnut substation would result in significant temporary increases in ambient noise levels. Even with mitigation measures in place, the impact would be significant and unavoidable.

The following table provides a summary of the significant and unavoidable impacts of the proposed project:

Resource	Significant and Unavoidable Impact
Aesthetics	<b>Impact AE-1:</b> Substantially degrade the existing visual character or quality of the site and its surroundings.
Air Quality	<b>Impact AQ-2:</b> Violate any air quality standard or contribute substantially to an existing or projected air quality violation. <b>Impact AQ-4:</b> Expose sensitive receptors to substantial pollutant concentrations.
Noise	<b>Impact NV-1:</b> Result in noise levels in excess of standards established in the local general plan or noise ordinance <b>Impact NV-4:</b> Result in substantial temporary or periodic increase in ambient noise levels in the project vicinity.

The EIR determined that the Project would have no impact or a less than significant impact on the resource areas of greenhouse gases; land use and planning; population and housing and recreation. Additionally, the Project will result in impacts that can be mitigated to a less than significant in the remaining resource areas of biological; cultural and paleontological; geology, soils and minerals; hazards and hazardous materials; hydrology and water quality; public services and utilities; and traffic and transportation.

#### **4. Project Alternatives**

CEQA requires the consideration of a range of reasonable project alternatives to the proposed project that would feasibly attain most of the basic objectives of the project and avoid or substantially lessen any of the significant effects of the project.

The EIR identifies the following project objectives:

1. Address anticipated violations of North American Electric Reliability Corporation (NERC) Standard TPL-001-04 (NERC 2015), Western Electricity Coordination Council (WECC) Regional Business Practice TPL-001-WECC-RBP-2 (WECC 2011) and CAISO Planning standards that would occur by December 31, 2020, of generators that use Once-Through-Cooling (OTC).
2. Avoid introduction of new violations of NERC, WECC, and CAISO standards.
3. Maintain electrical service by minimizing service interruptions during the project.

The EIR screened nine project alternatives and determined that three of the alternatives should be carried forward for full analysis in the EIR because they meet CEQA requirements for alternatives as discussed in Section 3.2 of the EIR. All three of the alternatives meet all of the project objectives; are potentially feasible; and substantially reduce or avoid at least one significant impact of the

proposed project.<sup>8</sup> Ultimately, the EIR determined that all three of the alternatives are environmentally superior to the proposed project. The following table provides a summary of the environmentally superior alternatives.

<b>Alternative Name</b>	<b>Description</b>	<b>Differences with Proposed Project</b>
One-Transformer Bank (1600 megavolt amperes (MVA)) Substation	<ul style="list-style-type: none"> <li>▪ Project built as proposed, but using one 1600-MVA 500/220 kilovolt (kV) transformer banks with space for a spare transformer bank</li> </ul>	<ul style="list-style-type: none"> <li>▪ No 1120-MVA 500/220-kV transformer banks</li> <li>▪ One 1600-MVA 500/220-kV transformer bank</li> <li>▪ Smaller 500-kV switchrack</li> <li>▪ Requires Remedial Action Scheme (RAS)</li> <li>▪ Substation footprint reduced by 11.6 acres</li> </ul>
Two-Transformer Bank (1120 MVA) Transformer Alternative	<ul style="list-style-type: none"> <li>▪ Project built as proposed, but using two 1120-MVA 500/220-kV transformer banks instead of three 1120-MVA 500/220-kV transformer banks with space for a spare transformer bank</li> </ul>	<ul style="list-style-type: none"> <li>▪ One fewer 1120-MVA 500/220-kV transformer bank</li> <li>▪ Smaller 500-kV switchrack</li> <li>▪ Requires RAS</li> <li>▪ Substation footprint reduced by 8.3 acres</li> </ul>
Gas-Insulated Substation Alternative	<ul style="list-style-type: none"> <li>▪ Project built as proposed, but using gas-insulated switchgear instead of air insulated</li> </ul>	<ul style="list-style-type: none"> <li>▪ Smaller switchrack for all voltages (500 kV, 220 kV, and 16 kV)</li> <li>▪ Substation footprint</li> </ul>

<sup>8</sup> The remaining six alternatives were rejected because they either fail to meet most of the project objectives; are technically infeasible; or the effect of the alternative cannot be reasonably ascertained and implementation is remote and speculative. The six rejected alternatives are: 500-kV Substation with one 1200- megavolt amperes (MVA) Transformer Bank; 500-kV Substation adjacent to existing Mesa 220-kV Substation; Load shedding in Los Angeles-Long Beach-Anaheim, San Diego, and or Riverside – San Bernardino; Install additional reactive support at other SCE Substations; Load Shedding and Reconductoring; Connection to LADWP System at Alamitos Substation.

	switchgear	reduced by 7.3 acres
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Each of the alternatives noted above would significantly reduce the environmental impacts when compared to the original project. The following table summarizes the reduced significant impacts.

Alternative Considered	Significant Impacts Reduced
One-Transformer Bank (1600 MVA) Substation	<ul style="list-style-type: none"> <li>▪ <b>Aesthetics:</b> Slightly reduces aesthetic impacts to viewers on Potrero Grande Avenue.</li> <li>▪ <b>Air Quality:</b> Substantially reduces fugitive dust emissions from ground disturbance.</li> <li>▪ <b>Biological Resources:</b> Substantially reduces impacts to avian and special-status-species and habitat, and potentially jurisdictional waters.</li> <li>▪ <b>Cultural Resources:</b> Negligibly lowers potential for discovery of a previously undiscovered cultural resource.</li> <li>▪ <b>Geology, Soils, and Minerals:</b> Slightly reduces erosion.</li> <li>▪ <b>Hazards and Hazardous Materials:</b> Slightly reduces risk of contamination of groundwater or soils from groundwater well abandonment. Slightly reduces chance of an accident and or encountering contaminated soils.</li> <li>▪ <b>Hydrology and Water Quality:</b> Slightly reduces risk of water pollution, potential for sedimentation, potential for flooding, and potential of hazardous material spills. Slightly reduces groundwater needs.</li> </ul>

Alternative Considered	Significant Impacts Reduced
Two-Transformer Bank (1120 MVA) Transformer Alternative	<ul style="list-style-type: none"> <li>▪ <b>Aesthetics:</b> Slightly reduces aesthetic impacts to viewers on Potrero Grande Avenue.</li> <li>▪ <b>Air Quality:</b> Substantially reduces fugitive dust emissions from ground disturbance.</li> <li>▪ <b>Biological Resources:</b> Substantially reduces impacts to avian and special-status-species and habitat, and potentially jurisdictional waters.</li> <li>▪ <b>Cultural Resources:</b> Negligibly lowers potential for discovery of a previously undiscovered cultural resource.</li> <li>▪ <b>Geology, Soils, and Minerals:</b> Slightly reduces erosion.</li> <li>▪ <b>Hazards and Hazardous Materials:</b> Slightly reduces risk of contamination of groundwater or soils from groundwater well abandonment. Slightly reduces chance of an accident and or encountering contaminated soils.</li> <li>▪ <b>Hydrology and Water Quality:</b> Slightly reduces risk of water pollution, potential for sedimentation, potential for flooding, and potential of hazardous material spills. Slightly reduces groundwater needs.</li> </ul>
Gas-Insulated Substation Alternative	<ul style="list-style-type: none"> <li>▪ <b>Aesthetics:</b> Slightly reduces aesthetic impacts to viewers on Potrero Grande Avenue.</li> <li>▪ <b>Air Quality:</b> Substantially reduces fugitive dust emissions from ground disturbance.</li> <li>▪ <b>Biological Resources:</b> Substantially reduces impacts to avian and special-status-species and habitat, and potentially jurisdictional waters.</li> <li>▪ <b>Cultural Resources:</b> Negligibly lowers potential for discovery of a previously undiscovered cultural resource.</li> <li>▪ <b>Geology, Soils, and Minerals:</b> Slightly reduces erosion.</li> <li>▪ <b>Hazards and Hazardous Materials:</b> Slightly reduces risk of contamination of groundwater or soils from groundwater well abandonment. Slightly reduces chance of an accident and or encountering</li> </ul>

Alternative Considered	Significant Impacts Reduced
	contaminated soils. ▪ <b>Hydrology and Water Quality:</b> Slightly reduces risk of water pollution, potential for sedimentation, potential for flooding, and potential of hazardous material spills. Slightly reduces groundwater needs.

**5. Environmentally Superior Alternative**

All three of the alternatives discussed above are considered environmentally superior to the proposed Project. As noted in the Final Environmental Impact Report (FEIR), the One-transformer Bank Substation is considered the most environmentally superior alternate in seven resource areas and therefore is considered environmentally superior to all alternatives and the proposed Project.<sup>9</sup> Specifically, the One-Transformer Bank is environmentally superior for permanent impacts to biological resources and therefore, was given substantial weight in the FEIR.

The Gas-Insulated Substation Alternative is considered to be the most environmentally superior alternative for only aesthetics. However, the Gas-Insulated Substation Alternative could result in a significant impact to greenhouse gases (GHG) that would not be presented with the original Project or the One-transformer Bank Substation.

The State of California is concerned about the adverse impacts that GHG have upon the environment and health and safety of the residents of California. Specifically, the Legislature found and declared that global warming caused by GHG “poses a serious threat to the economic well-being, public health, natural

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<sup>9</sup> FEIR Volume II at 5-26.

resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.”<sup>10</sup>

Due to the potential GHG impacts presented by the Gas-Insulated Substation, it is considered environmentally inferior to the One-Transformer Bank Substation. As a result, the One-Transformer Bank Substation is considered to be the overall Environmentally Superior Alternative.

## **6. Certification of EIR**

The lead agency must certify that the EIR was completed in compliance with CEQA, that the agency has reviewed and considered it prior to approving the project, and that the EIR reflects the agency’s independent judgment.

Energy Division issued the Draft EIR for public review and comment on April 29, 2016. Notice was provided of the public review period and public meeting to public agencies, adjacent property owners and occupants, the official service list for this matter, and agencies, organizations, and individuals that submitted comments on the Notice of Preparation for the EIR.<sup>11</sup> Verbal comments were not taken at the public meeting. Energy Division received

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<sup>10</sup> California Global Warming Solutions Act of 2006.

<sup>11</sup> The public meeting was held on May 18, 2016 in Monterey Park.

approximately 25 written comments during the comment period, which ended June 27, 2016.<sup>12</sup>

The Final EIR documents all comments made on the Draft EIR, and responds to them, as required by CEQA.<sup>13</sup> The EIR identifies the proposed project's significant and unavoidable environmental impacts, mitigation measures that will avoid or substantially lessen them, and the environmentally superior alternative. We have reviewed and considered the information contained in the EIR. We certify that the EIR was completed in compliance with CEQA. We have reviewed and considered the information contained in the EIR, and we certify that it reflects our independent judgment and analysis.

## **7. Overriding Considerations and Rejection of the Environmentally Superior Alternatives as Infeasible**

Pursuant to CEQA Guidelines § 15093, the Commission may only approve a project that results in significant and unavoidable impacts if it finds that there are benefits to the project that outweigh the unavoidable adverse environmental impacts and makes a statement of overriding considerations to that effect.

The proposed project would enable SCE to do the following:

1. Address anticipated violations of North American Electric Reliability Corporation (NERC) Standard TPL-001-04 (NERC 2015), Western Electricity Coordination Council (WECC) Regional Business Practice TPL-001-WECC-RBP-2 (WECC 2011) and CAISO Planning standards that would occur by December 31, 2020, of generators that use Once-Through Cooling (OTC).

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<sup>12</sup> The 25 comment letters resulted in approximately 549 discrete issue-by-issue comments, which the Commission responded to in the Final EIR.

<sup>13</sup> The Final EIR was released on October 7, 2016. An errata to the Final EIR was issued on February 3, 2017.

2. Avoid introduction of new violations of NERC, WECC, and CAISO standards.
3. Maintain electrical service by minimizing service interruptions during the project.

CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable (CEQA Guidelines § 15093.)

When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency must state in writing the specific reason to support its actions based on the final EIR and/or other information in the record.

Having (i) adopted all feasible mitigation measures, (ii) recognized all significant, unavoidable impacts, and (iii) balanced the benefits of the Project against its significant and unavoidable impacts, the Commission finds that the Project's benefits outweigh and override its significant unavoidable impacts for the reasons set forth below.

### **7.1. Parties' Positions**

SCE and CAISO filed opening and rebuttal testimony in this proceeding. ORA filed opening testimony and BAMx did not file any testimony in this proceeding. SCE supports approval of its proposed project, as previously described. SCE disagrees with the FEIR findings, reaffirming its position that the three alternatives are not environmentally superior. SCE further asserts that the

One-Transformer Alternative is infeasible, particularly due to reliability and cost concerns. SCE argues that benefits of the proposed project override offsetting impacts, and is the only option to address reliability concerns. The CAISO supports SCE's position in its testimony.

ORA recommends rejection of the proposed project and approval of the One-Transformer Alternative because it: 1) is environmentally superior based on EIR findings, 2) provides a power flow similar to the Proposed Project; and 3) would substantially reduce impacts to biological resources.

## **7.2. Discussion**

We are guided by CEQA rules as the basis for evaluation and approval of SCE's proposed project. As discussed below, we thus find the proposed project warrants approval because (a) although the identified alternatives are environmentally superior, none of them is feasible, and (b) benefits of the proposed project override the identified environmental impacts.

CEQA provides that "public agencies should not approve projects as proposed if there are feasible alternatives...available which would substantially lessen the significant environmental effects of such projects..."<sup>14</sup> In this case, the FEIR identified three alternatives to SCE's proposed project, as noted in Section 3 above. The EIR found (a) Alternative 1 environmentally superior overall, and (b) all three alternatives environmentally superior to SCE's proposed project.<sup>15</sup>

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<sup>14</sup> Pub. Res. Code § 21081. The Guidelines define feasible as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (CEQA Guidelines § 15364).

<sup>15</sup> FEIR Table ES-3 describes the significant impacts reduced by the alternatives, identifying Air Quality and Biological Resources as areas "substantially reduced" by the FEIR Alternatives. All other reduced effects are identified as being only "negligibly lower" or "slightly reduced" by the alternatives.

In addition to being environmentally superior, however, an alternative must be feasible to qualify for approval. (*See* Pub. Resources Code § 21002.) CEQA provides that “in the event specific economic, social or other conditions [or considerations] make infeasible such project alternatives...individual projects may be approved in spite of one or more significant effects thereof.”<sup>16</sup> The Commission may take into account social and other factors in reaching its conclusion about the feasibility of alternatives. We may reject an alternative based on policy considerations. (*See City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417 [“‘[F]easibility’ under CEQA encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors.”])<sup>17</sup>

Although the FEIR found the three alternatives “potentially” feasible, that preliminary assessment was subject to evidentiary proceedings regarding actual feasibility. We find that all three alternatives are infeasible, however, based on consideration of substantial evidence. (PRC § 21081(a); CEQA Guidelines § 15091.)<sup>18</sup> Specifically, based on the testimony of SCE, as supported by the CAISO, we find the FEIR Alternatives are infeasible because they: (a) result in reliability concerns, (b) cause significant delays in scheduling and facilitating OTC Retirement, and (c) are likely to be as costly or more costly than the

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<sup>16</sup> Pub. Res. Code § 21002; §21002.1; CEQA Guidelines § 15091(a)(3).

<sup>17</sup> *California Native Plant Soc. v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1001).

<sup>18</sup> Substantial evidence consists of “facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.” (CEQA Guidelines § 15384(b).) Substantial evidence does not include argument, speculation, unsubstantiated opinion, or evidence that is inaccurate, erroneous, or not credible. (CEQA Guidelines § 15064(f)(5)).

Proposed Project. These factors, in conjunction with specific policy considerations including revised planning assumptions and updated transmission planning modelling, make the FEIR Alternatives infeasible.

In contrast, we conclude that the Proposed Project is feasible and necessary notwithstanding its significant unavoidable impacts found in the FEIR relating to “Aesthetics, Air Quality, and Noise.”<sup>19</sup> Although the identified environmental impacts of the proposed project cannot be mitigated to less than significant levels, we find that overriding considerations outweigh these impacts. More specifically, the proposed project will provide important benefits that warrant project approval.

Although ORA supports Alternative 1, ORA focuses primarily on environmental impact findings as the basis for its position. ORA expresses no opinion, however, as to whether overriding considerations exist which warrant approval of the Proposed Project.<sup>20</sup> Therefore, no party offers a basis to refute evidence presented that there are overriding considerations which warrant approval of the Proposed Project. Given the overriding considerations discussed below, and notwithstanding the environmental impacts found in the FEIR, we conclude that SCE’s proposed project should be approved.

The proposed project will provide an additional point of 500kV service into SCE’s metropolitan load center, addressing important reliability concerns. The proposed project is needed to facilitate OTC retirement requirements by December 31, 2020 and to address anticipated NERC, WECC, and California CAISO violations that could occur upon the retirement of generators using OTC.

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<sup>19</sup> FEIR, Section 6.3 at 6-37 – 6-38.

<sup>20</sup> ORA Opening Brief at 4.

The project will also allow for greater flexibility in siting future generation projects to meet local reliability needs in the Western Los Angeles Basin (Electrical Needs Area or ENA) while reducing new generation requirements by providing additional transmission import capability.

### **7.2.1. Challenges to FEIR Findings on Environmental Impacts**

As discussed above in Sections 3, 4 and 5, we accept FEIR findings on environmental impacts of SCE's proposed project and identified alternatives. SCE, however, continues to challenge certain FEIR findings in its testimony. In particular, SCE continues to dispute FEIR findings that identified alternatives that are environmentally superior.<sup>21</sup> The FEIR did not find the SCE comments in this regard persuasive enough to change its conclusions and retained the alternatives for Commission consideration.

SCE disagreed with the FEIR findings regarding aesthetics, and claimed that the Draft EIR overstated the incremental visual change in this urban, disturbed area and incorrectly concluded that visual effects would be significant. The FEIR did not accept SCE's analysis.

SCE also claims that the FEIR alternatives do not offer substantial environmental advantages over the Proposed Project.<sup>22</sup> SCE further claims that the FEIR alternatives result in greater air quality impacts, particularly from exhaust emissions, due to the increased amount of imported soil, as well as increased potential fugitive dust impacts due to an extended grading schedule. SCE claims that the Proposed Project achieves lower exhaust emissions by

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<sup>21</sup> SCE Opening and Reply Briefs.

<sup>22</sup> SCE Opening and Reply Briefs.

requiring fewer haul trips for grading and a shorter grading schedule.<sup>23</sup> SCE also claims the FEIR underestimates the amount of grading necessary for Alternatives 2 and 3, and, as a result, overestimates the acreage saved under these alternatives.

SCE also claims that the FEIR Alternatives do not substantially lessen impacts to biological resources as compared to the proposed project.<sup>24</sup> SCE thus argues that the FEIR Alternatives do not offer substantial environmental advantages, and considering their other negative effects (*e.g.*, reliability, delay, etc.), the FEIR Alternatives are not feasible.

Finally, SCE argues that in any case, the project would require significant temporary disturbance south of the substation perimeter to replace existing overhead lines traversing that area with new overhead and/or underground lines, as well as the installation of a new storm drain to handle storm water run-on.<sup>25</sup> Because of the uncalculated additional grading for the Two Transformer and GIS Alternatives, and because of the temporary disturbance that would take place, SCE claims the FEIR calculations of acreage preserved are overestimated.<sup>26</sup>

In response to the environmental disputes raised by SCE, we decline to contradict the findings in the FEIR. SCE has had the opportunity to be heard regarding environmental impacts through the EIR process. Notwithstanding SCE's objections to the contrary, we rely on the EIR findings regarding

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<sup>23</sup> SCE Opening Brief referencing Testimony of Pendleton, SCE-01.

<sup>24</sup> SCE Opening Brief at 11.

<sup>25</sup> SCE Opening Brief at 14.

<sup>26</sup> SCE Opening Brief at 14.

significant environmental impacts as a factor in our overall decision on project approval.

### **7.2.2. Water Pipe Relocation Issues**

ORA sought to refute SCE's claim that the One Transformer Alternative is infeasible by arguing that relocation of the MWD water pipe would be required.<sup>27</sup> SCE responded that infeasibility of the One Transformer Alternative has nothing to do with required relocation of the MWD waterline as the existing MWD waterline falls within the area where the future 220kV switchrack and 220/66 kV transformer banks would be located, regardless of which alternative is selected.<sup>28</sup>

Given these facts, we agree with SCE that selecting the One Transformer Alternative would not avoid the need to relocate the MWD waterline. Accordingly, ORA offers no convincing rebuttal to SCE's claim that the One-Transformer Alternative is infeasible.

### **7.2.3. Reliability Issues**

The electrical grid must maintain reliability during peak periods, which often occur during afternoons when renewable generation output levels are relatively high.<sup>29</sup> During these periods, the grid relies on significant contributions from renewable resources to balance load. But the system grid

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<sup>27</sup> SCE Opening and Reply Briefs.

<sup>28</sup> The Proposed Project requires complete relocation of all existing 200 kV, 66 kV and 16 kV switchracks and associated lines to new locations on the western portion of the property. This substation relocation is driven by the need to build the new 500 kV switchrack and 500/220 kV transformer banks in the area currently occupied by the existing substations, which is a scope element common to the Proposed Project and all three Alternatives.

<sup>29</sup> SCE Opening Brief at 17-25.

must also be flexible enough to serve loads later in the evening, when output from renewable resources drop. FEIR Alternatives 1 and 2, however, are not reliable enough to meet these dynamic needs of the power grid.<sup>30</sup> Because FEIR Alternatives 1 and 2 create undue reliability risks in this regard, they are not feasible.

### **7.2.3.1. Recognition of Renewable Portfolio Assumptions**

As compared to the Proposed Project, FEIR Alternatives 1 and 2 reduce import capability into the Western LA Basin by reducing the number of 500/220kV transformer banks from three (in the Proposed Project) to one or two transformers. The reduced import capability, however, will limit the ability to accommodate changes in the type and location of renewable resources outside the Western LA Basin. These renewable resources will be imported through Mesa Substation to service a large portion of the Western LA Basin and replace the capacity provided from OTC resources. Due to state policy, generation resources are shifting from in-basin fossil fueled power plants to renewable resources located outside of the Western LA Basin. Resource portfolios are moving to a 33% Renewable Portfolio Standard (RPS) by 2020.<sup>31</sup> With passage of Senate Bill 350, the RPS goal will be increased to 50% by 2030.

Although the FEIR Alternatives 1 and 2 are potentially feasible with respect to reliability, the FEIR analyzed violations of planning criteria based only

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<sup>30</sup> SCE Opening Brief at 19-23.

<sup>31</sup> SCE Opening Brief at 18.

on SCE's 2014 annual reliability assessment. Yet, the planning assumptions developed in 2014 by SCE include assumptions that have since changed.<sup>32</sup> SCE's 2014 reliability assessment does not reflect the 33% renewable portfolio assumptions established by the CPUC and the California Energy Commission (CEC). Instead, it focuses on high imports from any resource type outside of SCE's service territory to stress the transmission system during peak load periods. SCE and CAISO both argue, however, that the California renewables target increase from 33% to 50% should be used to analyze whether the FEIR Alternatives are feasible.<sup>33</sup>

Every year, CAISO undertakes a transmission planning process to identify transmission projects to address reliability, cost, and infrastructure needs. The CAISO's 2016 Transmission Plan (2016 Plan) applies more recent planning assumptions, including the 33% renewable portfolio. When the 2016 Plan is modelled, FEIR Alternatives 1 and 2 both result in reliability issues. Relative to the 2014 case, the 2016 Plan has over 1,900 MW more power flowing out of the Tehachapi area north of Mesa Substation, resulting in an increase of over 1,100 MW on the lines directly feeding into Mesa Substation.

We have jurisdiction to render a policy determination as to whether the project must also address all the reliability concerns identified in the CAISO 2015-2016 Transmission Plan. We conclude that both the SCE 2014 case and CAISO's 2016 Plan should be recognized in evaluating the feasibility of the project alternative to ensure a reliable transmission system. The CAISO's power flow studies provide substantial evidence as to the technical infeasibility of FEIR

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<sup>32</sup> SCE-01 at 2:12-14.

<sup>33</sup> EIR-01 at 305-306 and 284-286.

Alternatives 1 and 2. Our policy determination to approve a project that addresses all the reliability concerns identified in the CAISO 2015-2016 Transmission Plan also renders FEIR Alternatives 1 and 2 infeasible.

### **7.2.3.2. Power Flow Issues**

Although the transmission lines connecting into Mesa Substation will be the same for the proposed project and Alternative 1, material differences between the two create significantly different power flows.<sup>34</sup> In this regard, we do not accept ORA's claim that power flow under Alternative 1 is similar to SCE's proposed project.

SCE's proposed project provides 3,360 MVA of capacity with three independent transformer banks. Alternative 1, by contrast, is a single 1,600 MVA transformer bank with a RAS. Three transformer banks versus one bank do not provide the same impedance pathway between the 500kV and 220kV systems and will not produce similar power flows on the 500kV and 220kV lines.

CAISO also performed studies and analyzed technical aspects of reliability associated with the Proposed Project.<sup>35</sup> Based on its power flow analysis, CAISO also concludes the One-and Two-Transformer Alternatives result in overloads.<sup>36</sup>

Reliability concerns are evident by examining how power flows in the Serrano Corridor are modeled in the FEIR. SCE's proposed project is needed to

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<sup>34</sup> See, CAISO-01 and 02 (Testimony and Rebuttal Testimony of Sparks) and SCE-01 Testimony of Chinn.

<sup>35</sup> The CAISO modeled the outputs of renewables at the Net Qualifying Capacity values based on peak impact value for corresponding technology consistent with the Assigned Commissioner Ruling on assumptions and scenarios for use in the CAISO transmission planning process.

<sup>36</sup> CAISO-01 at 6:2-10, 7:2-5, 9:4-9, 11:2-10, 11:17-20.

relieve the Serrano Corridor when OTC units retire because the Serrano Corridor is a transmission import path into the Western LA Basin.<sup>37</sup>

The One Transformer Alternative modeling in the FEIR utilized an impedance value of 0.121 per unit.<sup>38</sup> This results in power flows equal to 98% of the emergency rating of existing transmission lines in the Serrano Corridor. The modeling assumes the one 1600 MVA transformer bank at Mesa Substation loaded to 96% of its rating when examined using the 2014 case, which is just below an overload scenario.

Under renewable generation allocations directed by the CPUC and CEC, however, the 0.121 per unit impedance would cause the single transformer bank to overload to 101% and the Serrano Corridor would be at 100%. If impedance is reduced to relieve the transformer bank at Mesa Substation, the Serrano Corridor would increase above 100%. Therefore, raising the modelled impedance would result in reliability issues to the Serrano Corridor, and lowering the modelled impedance would result in reliability issues with the transformer bank. Consequently, based on the 33% renewable portfolio, virtually no impedance value for the transformer offers a reliable solution under the One-Transformer Alternative.

Increasing the impedance value above 0.121 per unit would divert power away from the one transformer bank at Mesa Substation to the Serrano Corridor. This would cause power flows to reach or exceed the emergency rating of those Serrano Corridor transmission lines.

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<sup>37</sup> EIR-01 at Appendix B, Contingencies 4 and 5.

<sup>38</sup> CAISO-01 at 4:2-3.; Electrical impedance (measured in ohms) represents the total opposition that a circuit presents to alternating current.

If impedance is lowered to 0.110 per unit, more flows would be directed to the one transformer bank which would be at 100% of its rating under base case conditions. Any lower impedance will overload the one transformer bank alternative. The 0.121 per unit impedance assumption thus reflects a narrow balancing of the loading of (a) the one transformer bank at Mesa Substation and (b) the transmission lines in the Serrano Corridor. Yet, planning assumptions can change significantly over time and transmission system components need to be designed with enough flexibility to accommodate the changes.

The One Transformer Alternative also includes a Remedial Action Scheme. Upon the loss of two transmission lines, the RAS will open two other transmission lines in the Serrano Corridor. This will result in the loss of four transmission lines that serve the Western L.A. Basin, and degrade system reliability by making the system less likely to withstand the next contingency. The proposed project with three 1120 MVA transformer banks does not require a RAS, and can reliably serve load under both the 2014 case and 2016 plan.

The Two Transformer Alternative includes two 1120 MVA transformer banks and a RAS. As described in the FEIR, the transformers would have an operating requirement wherein they would be connected in parallel and switched as one. When this alternative was modeled as specified in the FEIR utilizing the 2016 Plan, the Mesa – Laguna Bell line is overloaded to 106%.<sup>39</sup> This is a violation of NERC reliability standards and is less reliable than the Proposed

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<sup>39</sup> SCE-01 at 6:10-12.

Project comprised of three independent 1120 MVA transformers in which the loss of one transformer will not overload the remaining two.<sup>40</sup>

### **7.2.3.3. Once-Through Cooling Retirements Impacts**

As noted in Section 3 above, the FEIR identified three objectives as a basis to evaluate the feasibility of alternatives. Objective 1 addresses violations of reliability standards upon retirement of OTC generation by December 31, 2020. Objective 1 requires that the approved project address anticipated violations of NERC, WECC, and CAISO standards that would occur upon OTC generator retirement by December 31, 2020. Objective 2 requires avoiding the introduction of new reliability standard violations.

Approximately 4,000 MW of additional generation in the Western Los Angeles Basin is to be retired by the year 2020 to comply with State Water Resources Control Board (SWRCB) regulations. The loss of capacity from retired OTC generation and the previous retirement of San Onofre Nuclear Generation Station (SONGS), would stress the existing transmission system and impact its ability to provide reliable service.<sup>41</sup> This occurs under peak electrical demand conditions and abnormal system conditions which cause thermal overloads and voltage collapse.

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<sup>40</sup> SCE-01 at 6:12-15.

<sup>41</sup> Although SONGS' retirement resulted in reliability concerns, SCE has since stated that the Mesa Substation Project would likely not be necessary to maintain reliability unless OTC units are also retired by the end of 2020. (*See*, SCE Opening and Reply Briefs.) We therefore focused on crafting objectives related to impending retirement of OTC units to address reliability concerns and to evaluate alternatives to address those concerns.

The Mesa Substation Project addresses reliability concerns likely to occur only after OTC unit retirement in December 31, 2020.<sup>42</sup> The Mesa 500 kV Substation construction addresses reliability in southern California under abnormal system conditions. If SCE's proposed project is delayed past 2020, the OTC policy compliance dates for gas-fired generation in the Los Angeles Basin would likely need to be extended to preserve reliability. However, there is no guarantee that the SWRCB will extend OTC policy compliance dates.<sup>43</sup>

SCE originally estimated that its proposed project could be constructed in approximately 55 months, but updated its estimates, including refining locations of structures as well as updating civil design and site grading plans. Based on the updates, SCE estimates that its proposed project can be constructed in 48 months with a potential operational date of June 2021.<sup>44</sup>

Although the OTC retirement compliance requirement date is December 31, 2020 for generating plants in SCE's service territory, the system reliability concern does not become critical until the following summer peak loading period, June 1, 2021.<sup>45</sup> Consequently, to timely retire gas-fired generation subject to the OTC policy, the project must be completed and

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<sup>42</sup> The Project would serve the Western Los Angeles Basin ENA in southern Los Angeles County and northern Orange County where most of SCE's load is located. The ENA is also a Local Reliability Area. A Local Reliability Area is an area with constrained ability to import power from elsewhere.

<sup>43</sup> The SWRCB is advised by the Statewide Advisory Committee on Cooling Water Intake Structures to maintain reliability electric service, but the SWRCB itself must approve an adjustment greater than 90 days in the OTC compliance schedule after an evaluation and hearing process.

<sup>44</sup> SCE-01 Lacey Testimony at 9:20-22 and 12:3-7.

<sup>45</sup> SCE-01 at 7:6-10.

energized prior to summer 2021. This date meets the reliability needs resulting from the OTC retirement deadline schedule imposed by the SWRCB.<sup>46</sup>

By contrast, the FEIR Alternatives result in unreasonable delay to completion due to the redesign and engineering work involved. Alternative 1 would result in an approximate 10 month delay with a best-case March 31, 2022 completion date.<sup>47</sup> Alternative 2 would result in an approximate six-month delay with a projected best-case November 30, 2021 completion date.<sup>48</sup> Alternative 3 would result in an approximate 14 month delay with a projected best-case July 31, 2022 completion date.<sup>49</sup> Thus, Alternative 3 is infeasible because the GIS design, construction, and electrification cannot be completed prior to the retirement of Los Angeles Basin OTC generation in December 2020.

Based on these facts, the proposed project could address the OTC policy retirement date substantially earlier than the FEIR Alternatives, and completed in time to meet the OTC retirement deadline imposed by the SWRCB. Because the FEIR Alternatives cannot reasonably meet this deadline schedule, we find that they are infeasible.

Without implementation of the proposed project, OTC retirement would result in violation of NERC, WECC, and CAISO standards. A project that solves these violations could possibly create new violations of NERC, WECC, and CAISO standards. For example, a violation may occur when a transmission line

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<sup>46</sup> SCE characterizes its time estimates as being optimistic, though not unrealistic, providing a best case scenario. SCE's estimates also do not account for the risk of potential environmental delays during the construction of the new substation.

<sup>47</sup> SCE-01 Pendleton Testimony at 14:3-12.

<sup>48</sup> SCE-01 Pendleton Testimony at 14:3-12.

<sup>49</sup> SCE-01 Pendleton Testimony at 17:8-12.

is overloaded between two substations. That transmission line segment could be upgraded to increase its capacity. The overload may then occur, however, on a different transmission segment. Therefore, both the One-and Two-Transformer Alternatives are not feasible.

#### **7.2.4. Infeasibility Due to Higher Costs of Alternative 3**

Alternative 3 is electrically similar to the Proposed Project, but incorporates a GIS instead of an air-insulated substation at Mesa Substation. Alternative 3 meets NERC, WECC and CAISO transmission planning criteria by mitigating known reliability concerns and not creating new reliability concerns.

Installing and maintaining a GIS, however, will result in materially higher costs. Subsequent to issuance of the FEIR, SCE attempted to quantify cost increases associated with the GIS Alternative.<sup>50</sup> SCE conducted cost comparisons for all four voltage levels of the entire substation as described in the EIR.<sup>51</sup> SCE estimates that the GIS Alternative would cost \$64-\$74 million more than the Proposed Project.<sup>52</sup> Based upon the increased costs and potential for GHG emission increases, we find that Alternative 3 is not a feasible option. Although the One-and-Two Transformer Alternatives are likely similar in cost to the Proposed Project, they are not feasible from a reliability or schedule standpoint, as noted elsewhere in this decision.

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<sup>50</sup> SCE-01 Lacy Testimony at 26:3-4.

<sup>51</sup> See FEIR Chapter 3 "Description of Alternatives" (at 3-14, lines 5- 6)

<sup>52</sup> The One-and Two-Transformer Alternatives, by contrast, are likely to be similar in cost to the Proposed Project. See, SCE Opening Brief at 29-32.

## **8. Mitigation Measures**

CEQA Guidelines §15091(a) prohibits an agency from approving a project for which an EIR has been certified and which identifies one or more significant environmental effects of the project unless: (1) the project incorporates changes that avoid or substantially lessen the project's significant environmental impacts, (2) such changes are within the responsibility and jurisdiction of another agency who can or will adopt them, or (3) such changes are infeasible. In this case, with the mitigation identified in the Mitigation Monitoring, and Reporting, Program (MMRP)<sup>53</sup> the proposed project will avoid or reduce all significant environmental impacts to less than significant other than aesthetics, air quality and noise impacts during project construction. No party asserts that any of the identified mitigation is infeasible and we have no reason to find otherwise.

## **9. Electric and Magnetic Fields Mitigation**

The Commission has examined EMF impacts in several previous proceedings.<sup>54</sup> We found the scientific evidence presented in those proceedings was uncertain as to the possible health effects of EMFs and we did not find it appropriate to adopt any related numerical standards. Because there is no agreement among scientists that exposure to EMFs creates any potential health risk, and because CEQA does not define or adopt any standards to address the potential health risk impacts of possible exposure to EMFs, the Commission does not consider magnetic fields in the context of CEQA and its determination of environmental impacts.

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<sup>53</sup> The MMRP is included as Attachment 2.

<sup>54</sup> See D.06-01-042 and D.93-11-013.

However, recognizing that public concern remains, we do require, pursuant to GO 131-D, Section X.A, that all requests for a permit to construct include a description of the measures taken or proposed by the utility to reduce the potential for exposure to EMFs generated by the proposed project. We developed an interim policy that requires utilities, among other things, to identify the no-cost measures undertaken, and the low-cost measures implemented, to reduce the potential EMF impacts. The benchmark established for low-cost measures is 4% of the total budgeted project cost that results in an EMF reduction of at least 15% (as measured at the edge of the utility right-of-way).

SCE filed a detailed Field Management Plan (FMP) as Appendix F to its application, based on the proposed project. The FMP provides that the project will utilize double-circuit construction that reduces spacing between circuits as compared with single-circuit construction and place new substation electrical equipment (such as breakers, switchracks, and buses and underground duct banks) away from the substation property lines closest to populated areas as a no-cost measure.

No party challenged SCE's proposed no-cost/low-cost measures to reduce the potential for exposure to EMFs generated by the proposed project. Accordingly, we find that the FMP complies with the Commission's EMF decisions.

#### **10. Notice to Proceed**

Prior to starting construction on the Project, the Commission will need to approve and issue a notice to proceed (NTP). In order to assist SCE with obtaining the NTP in a timely fashion we have attached a checklist of plans and permits that SCE will need to obtain and submit to the Commission before the

Commission can issue the first NTP.<sup>55</sup> Many of the plans and permits will require SCE to coordinate with other entities other than the Commission.<sup>56</sup> SCE shall submit the necessary plans and permits set forth in Attachment 3 to the Commission's Energy Division within 10 days of receipt.

#### **11. Safety Considerations Pursuant to Pub. Util. Code § 451**

Pub. Util. Code § 451 requires that every public utility must maintain adequate, efficient, just and reasonable service to promote the "safety, health, comfort, and convenience of its patrons, employees, and the public." We have evaluated this application to determine whether approving SCE's permit to construct the Mesa Project raises any safety concerns which the Commission needs to address.

On July 6, 2015 and September 21, 2015 the assigned Administrative Law Judge issued two rulings to request additional information from SCE concerning the safety measures that would be adhered to by SCE during the construction of the Mesa Project. On July 27, 2015, SCE submitted testimony from James MacKenzie and Sandra Blain addressing the requests set forth in the July

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<sup>55</sup> This checklist is included in Attachment 3. It is noted that this checklist may not be all inclusive and/or may contain items that are not required, there may be additional or fewer plans and permits that SCE will need to obtain and submit to the Commission prior to the issuance of any NTP. This checklist is included as guidance only in an effort to assist SCE with the issuance of the first NTP in a timely manner. In the event that additional NTPs are necessary, SCE may be required to submit additional information as required by the Commission.

<sup>56</sup> Footnotes 1-7 in Attachment 3 indicates which plans and permits may require coordination with entities other than the Commission.

6, 2015 ruling. On October 9, 2015, SCE submitted additional testimony from James MacKenzie to address the questions set for the September 21, 2015 ruling.<sup>57</sup>

Additionally, no parties raised any safety concerns in their opening or rebuttal testimony and no party addressed any safety concerns at the hearing. Therefore, we are confident that as long as SCE complies with the MMRP and measures set forth in Exhibits SCE-05 and SCE-06, that there are no safety issues that need to be addressed in this decision.

## **12. Conclusion**

SCE is granted a permit to construct the Mesa 500 kV Substation Facility Project, with mitigation identified in the Mitigation Monitoring and Reporting Plan, which is attached to this order. The Commission is the lead agency for environmental review and we find that the Environmental Impact Report for this project meets the requirements of the California Environmental Quality Act. We also conclude that SCE's FMP is in compliance with the Commission's EMF low-cost/no-cost measures. Furthermore, we conclude that the environmentally superior alternatives identified in the EIR are infeasible. We also find that the benefits of the Project outweigh the unavoidable adverse environmental effects and based on these overriding considerations we approve SCE's request for a PTC as set forth in its Application.

## **13. Reduction of Comment Period**

Pursuant to Rule 14.6(b), all parties stipulated to reduce the 30-day review and comment period required by Pub. Util. Code § 311 to 13 days. Pursuant to the parties' stipulation, comments are due on January 27, 2017 and reply

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<sup>57</sup> The testimony is contained in SCE-05 and SCE-06.

comments are due on January 31, 2017. Comments were filed by SCE, CAISO and BAMx and reply comments were filed by SCE and CAISO.

#### **14. Assignment of Proceeding**

Liane M. Randolph is the assigned Commissioner and Gerald F. Kelly is the assigned Administrative Law Judge in this proceeding.

#### **Findings of Fact**

1. The proposed project would have significant impacts to aesthetics, air quality and noise during the project construction that can be reduced, but not avoided, with the mitigation measures identified in the MMRP.
2. The proposed project would substantially degrade the existing visual character or quality of the site and its surroundings.
3. The proposed project would violate air quality standards or contribute substantially to an existing or projected air quality violation during the construction of the project.
4. The proposed project would expose sensitive receptors to substantial pollutant concentrations during the construction of the project.
5. The proposed project would result in noise levels in excess of standards established in the local general plan or noise ordinance during the construction of the project.
6. The proposed project would result in substantial temporary or periodic increase in ambient noise levels in the project vicinity during the construction of the project.
7. The proposed project would not have any significant environmental impacts on biological resources; cultural and paleontological resources; geology, soils and minerals; hazards and hazardous materials; hydrology and water quality; public services and utilities; and traffic and transportation that cannot be

mitigated to less than significant level with the mitigation measures identified in the MMRP.

8. The proposed project would have no impact or a less-than-significant impact on GHG, land use, population and housing and recreation.

9. The One-Transformer Bank (1600 MVA Substation), Two-Transformer Bank (1120 MVA) Transformer and Gas-Insulated Substation are all alternatives to the proposed project that would avoid or substantially lessen at least one of the significant impacts of the proposed project.

10. The One-Transformer Bank (1600 MVA) is the environmentally superior project alternative.

11. Because the One-and Two-Transformer Alternatives result in reliability issues, the One-and-Two Transformer Alternatives are not feasible.

12. As the basis for finding the identified alternatives to be potentially feasible, the FEIR relied only on SCE's 2014 reliability assessment. The 2014 assessment, however, does not reflect 33% renewable portfolio assumptions as established by the CPUC and the CEC.

13. During peak periods the grid relies on significant contributions from renewable resources to balance load.

14. Both the SCE 2014 case and CAISO's 2016 Plan need to be recognized in evaluating the feasibility of the project alternatives to ensure a reliable transmission system.

15. When the 33% renewable portfolio assumptions are modelled, FEIR Alternatives 1 and 2 both result in reliability issues. For this reason, FEIR Alternatives 1 and 2 are not feasible.

16. Failure to recognize the 33% renewable portfolio assumptions in the design of the One-and-Two Transformer Alternatives would result in immediate

initiation of an additional transmission project to install additional 500/220kV transformer capacity at Mesa Substation.

17. Although the transmission lines going into Mesa Substation will be the same for the proposed project and Alternative 1, material differences between the two create significantly different power flows.

18. The One-and-Two Transformer Alternatives result in power overloads.

19. Approximately 4,000 MW of additional generation in the Western Los Angeles Basin is expected to be retired by the year 2020.

20. To timely retire gas-fired generation subject to the OTC policy, the proposed project must be completed and energized prior to summer 2021.

21. SCE's proposed project can be completed in time to meet the OTC retirement deadline imposed by the SWRCB.

22. The FEIR Alternatives cannot reasonably meet this deadline schedule and are not feasible.

23. Under FEIR Alternative 3, installing and maintaining a gas-insulated substation at the Mesa Substation will result in materially higher costs compared to SCE's proposed project and could result in the creation of significant GHG concerns.

24. The Project and its identified mitigation measures in the MMRP are feasible and should be approved.

25. The benefits of the proposed project outweigh its significant and unavoidable impacts and therefore overriding considerations exist that support the approval of the proposed project. These benefits include:

- a) policy compliance in a timely manner relating to the schedule for OTC units;
- b) maintaining NERC, WECC, and CAISO reliability standards;

- c) facilitating California's progress towards meeting RPS goals;
- d) promoting prudent system planning (i.e., not triggering the need for an immediate capacity upgrade as the One-and Two Transformer Alternatives would);
- e) decreasing environmental impacts associated with OTC by facilitating OTC retirement sooner than other alternative; and
- f) building a project that is economically cost effective.

26. The proposed project would enable SCE to address anticipated violations of NERC Standard TPL-001-04 (NERC 2015), WECC Regional Business Practice TPL-001-WECC-RBP-2 (WECC 2011) and CAISO Planning standards that would occur by December 31, 2020, of generators that use OTC.

27. The proposed project will avoid introduction of new violations of NERC, WECC, and CAISO standards.

28. SCE's FMP incorporates many feasible no-cost and low-cost measures to reduce potential EMF impacts such as utilizing double-circuit construction that reduces spacing between circuits as compared with single-circuit construction and placing new substation electrical equipment (such as breakers, switchracks, and buses and underground duct banks) away from the substation property lines closest to populated areas.

### **Conclusions of Law**

1. The EIR was completed in compliance with CEQA.
2. The EIR was presented to the Commission, and the Commission reviewed and considered the information in the EIR prior to approving the project.
3. The EIR reflects the Commission's independent judgment and analysis on all material matters.

4. The project provides the benefit of enabling SCE to address anticipated violations of NERC Standard TPL-001-04 (NERC 2015), WECC Regional Business Practice TPL-001-WECC-RBP-2 (WECC 2011) and CAISO Planning standards that would occur by December 31, 2020, of generators that use OTC and avoids introduction of new violations of NERC, WECC, and CAISO standards.

5. CEQA provides that public agencies should not approve projects as proposed if there are feasible alternatives available which would substantially lessen the significant environmental effects of such projects. CEQA also provides, however, that if specific economic, social or other conditions or considerations make infeasible such project alternatives, individual projects may be approved in spite of one or more significant effects thereof.

6. SCE's FMP comports with the Commission's policies regarding the mitigation of EMF effects.

7. The environmentally superior alternatives identified in the EIR are rejected as infeasible.

8. SCE should be granted a permit to construct the Mesa 500kV Substation Project with the mitigation identified in the MMRP, which is attached to this decision.

9. This decision should be effective today.

10. Application 15-03-003 should be closed.

## **ORDER**

### **IT IS ORDERED** that:

1. The Environmental Impact Report for the Mesa 500 kiloVolt Substation Project is certified as having been completed in compliance with the California Environmental Quality Act, reviewed and considered by the California Public Utilities Commission (Commission) prior to approving the project, and reflective of the Commission's Independent judgment and analysis.
2. Southern California Edison Company is granted a permit to construct the Mesa 500 kilo Volt Substation Project, with the mitigation identified in the Mitigation Monitoring and Reporting Plan, which is attached to this decision.
3. Energy Division may approve requests by Southern California Edison for minor project refinements that may be necessary due to final engineering of the Mesa 500 kiloVolt Substation Project so long as such minor project refinements are located within the geographical boundary of the study area of the Environmental Impact Report and do not, without mitigation, result in a new significant impact or a substantial increase in the severity of a previously identified significant impact based on the criteria used in the environmental document; conflict with any mitigation measure or applicable law or policy; or trigger an additional permit requirement.
4. Southern California Edison Company shall seek any other project refinements by a petition to modify this decision.
5. To assist with a timely approval of the Notice To Proceed, Southern California Edison Company must submit to the California Public Utilities

Commission's Energy Division any plans or permits received from other entities, as set forth in Attachment Number 2 within ten days of receipt.

6. Application 15-03-003 is closed.

This order is effective today.

Dated February 9, 2017, at San Francisco, California.

MICHAEL PICKER  
President  
CARLA J. PETERMAN  
LIANE M. RANDOLPH  
MARTHA GUZMAN ACEVES  
CLIFFORD RECHTSCHAFFEN  
Commissioners

# **ATTACHMENT 1**

### COMPONENTS OF THE PROPOSED PROJECT

Component	Quantity/ Dimensions	Proposed Project Specifications
<b>Mesa 500-kV Substation</b>		
New 500/220/66/16-kV substation	69.4 acres	<ul style="list-style-type: none"> <li>• Replaces existing 220/66/16 kV Mesa Substation.</li> <li>• Located within applicant-owned property (86.2 acres) in the City of Monterey Park.</li> <li>• Staffed, automated substation.</li> <li>• Operating capacity: 3,360 MVA at 500/220-kV; 840 MVA at 220/66-kV; and 56 MVA at 66/16-kV.</li> <li>• Potential future capacity: 4,800 MVA at 500/220 kV; 1,120 at 220/66-kV; and 112 MVA at 66/16 kV.<sup>(1)</sup></li> <li>• Construction would be conducted in three phases: <ul style="list-style-type: none"> <li>- Phase 1: Initial Site Development (33.4 acres) and start of 220/66-kV Switchrack</li> <li>- Phase 2: 220/66-kV Switchrack Expansion (8 acres)</li> <li>- Phase 3: Existing Mesa Substation Decommissioning (40 acres) and build out of 500-kV Switchrack.</li> </ul> </li> </ul>
New and replaced steel switchracks	<u>500 kV</u> : 8.2 acres	<ul style="list-style-type: none"> <li>• Height: 65 feet. Area: 650 feet long and 550 feet wide.</li> <li>• Positions: 6. Width per position: 90 feet.</li> </ul>
	<u>220 kV</u> : 6.8 acres	<ul style="list-style-type: none"> <li>• Height: 40 feet. Area: 900 feet long and 330 feet wide.</li> <li>• Positions: 14. Width per position: 50 feet.</li> </ul>
	<u>66 kV</u> : 1.4 acres	<ul style="list-style-type: none"> <li>• Height: 22 feet. Area: 460 feet long and 135 feet wide.</li> <li>• Positions: 20. Width per position: 22 feet.</li> </ul>
	<u>16 kV</u> : 0.13 acres	<ul style="list-style-type: none"> <li>• Height: 18.5 feet. Area: 162 feet long and 34 feet wide.</li> <li>• Positions: 18. Width per position: 8 feet.</li> </ul>
Transformer banks	<u>500/220 kV</u> : 11 transformers (0.25 acres total)	<ul style="list-style-type: none"> <li>• Oil-filled, single-phase, 373 MVA transformers installed in three 1120 MVA transformer banks.</li> <li>• 35-foot-high transformers.</li> <li>• 27,000 gallons of oil per transformer.</li> </ul>
	<u>220/66 kV</u> : 3 transformers (0.06 acres total)	<ul style="list-style-type: none"> <li>• Oil-filled, three-phase, 280 MVA transformers.</li> <li>• 27-foot-high transformers.</li> <li>• 27,000 gallons of oil per transformer.</li> </ul>
	<u>66/16 kV</u> : 2 transformers (0.04 acres total)	<ul style="list-style-type: none"> <li>• Oil-filled, three-phase, 28 MVA transformers installed in one transformer bank.</li> <li>• 14-foot-high transformers.</li> <li>• 25,000 gallons of oil per transformer.</li> </ul>

<b>Component</b>	<b>Quantity/ Dimensions</b>	<b>Proposed Project Specifications</b>
New permanent buildings	Two buildings: – Operations – Test and Maintenance	<ul style="list-style-type: none"> <li>• Operations building: 25 feet tall. 15,000 square feet.</li> <li>• Test and Maintenance Building: 35 feet tall, 16,000 square feet.</li> <li>• Components: pre-engineered metal building shell, metal panel exterior walls, windows, and metal doors.</li> <li>• Both buildings include permanent restrooms/lockers.</li> </ul>
Mechanical and equipment rooms (MEER)	Two MEERs: – Senior – Junior	<ul style="list-style-type: none"> <li>• Senior MEER: connected to 500-, 220-, and 66-kV switchracks.</li> <li>• Junior MEER: connected to 16-kV switchrack.</li> <li>• Metal framing, structural steel, concrete masonry units.</li> </ul>
Microwave tower foundation (future use)	Four concrete piles	<ul style="list-style-type: none"> <li>• Pile dimensions: 7 feet in diameter, 45 feet deep.</li> <li>• Separation between piles: 29 feet.</li> </ul>
Access Driveways	Two permanent access driveways; one temporary driveway	<ul style="list-style-type: none"> <li>• Main entrance: Potrero Grande Drive near Greenwood Avenue (50 feet wide).</li> <li>• Secondary/Emergency: East Markland Drive (25 feet wide).</li> <li>• Temporary construction access: Potrero Grande Drive near Atlas Avenue.</li> </ul>
MWD water line relocation	2,700 feet removed 3,200 feet installed	<ul style="list-style-type: none"> <li>• Removal of existing 72-inch-diameter waterline.</li> <li>• Replacement: 84-inch-diameter waterline west of the current alignment.</li> </ul>
Telephone buildings and equipment relocation	Two sets of components	<ul style="list-style-type: none"> <li>• Third-party cellular telephone buildings, tower, and antennas.</li> <li>• Proposed location: northwest of substation property.</li> </ul>
Groundwater monitoring wells decommissioning	10 Monitoring Wells	<ul style="list-style-type: none"> <li>• Validation of no obstructions interfering with filling and sealing each well.</li> <li>• Removal of the dedicated pump, associated tubing, and lines from each well.</li> <li>• Filling of each well casing and filter pack with sealing material consisting of a bentonite grout and by using a tremie pipe.</li> <li>• Drilling of the borehole to a depth of 10 feet below ground surface to remove the upper casing and annular materials.</li> <li>• Sealing of the resultant borehole from bottom to top with bentonite slurry.</li> </ul>
<b>500/220-kV Transmission Line Features (Overhead)</b>		
<b>Main Project Area</b>		
500-kV transmission line	One line loop-in	<ul style="list-style-type: none"> <li>• Re-align and connect the existing single-circuit Mira Loma-Vincent 500-kV line into the new proposed 500-kV switchrack at Mesa Substation.</li> </ul>
	Up to 3 LSTs	<ul style="list-style-type: none"> <li>• Remove one and relocate up to three 500-kV structures in the ROW adjacent to Mesa Substation.</li> </ul>

<b>Component</b>	<b>Quantity/ Dimensions</b>	<b>Proposed Project Specifications</b>
220-kV transmission lines	Two line loop-in	<ul style="list-style-type: none"> <li>Re-align and connect the existing Goodrich-Laguna Bell and Laguna Bell-Rio Hondo 220-kV transmission lines into the new 220-kV switchrack at Mesa Substation.</li> </ul>
	Eight lines relocation	<ul style="list-style-type: none"> <li>Construct new overhead getaways to relocate eight existing 220-kV transmission lines into the new proposed 220-kV switchracks at Mesa Substation.</li> </ul>
	17 structure replacements	<ul style="list-style-type: none"> <li>Replace existing 220-kV structures in the ROW adjacent to Mesa Substation.</li> </ul>
	35 LSTs and 4 TSPs removal	<ul style="list-style-type: none"> <li>Removal of portions of existing 220-kV transmission lines.</li> </ul>
<b>North Area: City of Pasadena</b>		
220-kV transmission lines	<b>One temporary TSP</b>	<ul style="list-style-type: none"> <li>Install temporary TSP (110 to 140 feet tall) to connect the Eagle Rock-Mesa 220-kV transmission line to Goodrich Substation.</li> <li>Work area required: 200 feet by 200 feet.</li> <li>Structure would maintain a second line of service to the City of Pasadena when the Goodrich-Laguna Bell 220-kV transmission line is temporarily out of service during its reconnection to the new proposed Mesa Substation.</li> </ul>
<b>South Area: City of Commerce</b>		
220-kV structure replacement	One LST	<ul style="list-style-type: none"> <li>Replace existing LST on the Laguna Bell-Mesa No. 1 220-kV Transmission Line to maintain compliance with phase to ground clearance requirements (G.O. 95) when increasing the circuit's capacity rating.</li> </ul>
<b>66-kV Subtransmission Line Features (Overhead and Underground)</b>		
<b>Main Project Area</b>		
Relocation within Mesa Substation	16 overhead circuits	<ul style="list-style-type: none"> <li>Relocation of existing 66-kV subtransmission circuits into the new 66-kV switchrack at Mesa Substation.</li> </ul>
Structure removal	65 poles and underground line	<ul style="list-style-type: none"> <li>Removal of 65 existing 66-kV subtransmission poles and 2,000 feet of underground conductor.</li> </ul>
New overhead structures	24 new TSPs	<ul style="list-style-type: none"> <li>Double-circuit structures: 50 to 100 feet high, 3 to 5 feet in diameter. Concrete foundations: 5 to 7 feet diameter, 20 to 40 feet depth.</li> <li>Conductor: 954 kcmil stranded aluminum conductor <sup>(2)</sup>.</li> </ul>
New underground structures and conduits	3.4 miles of trench and 28 new vaults	<ul style="list-style-type: none"> <li>13 vaults within Mesa Substation site and 15 vaults outside the substation perimeter.</li> </ul>

Component	Quantity/ Dimensions	Proposed Project Specifications
<b>16-kV Distribution Lines (Underground)</b>		
<b>Main Project Area</b>		
Underground lines within Mesa Substation site	Five distribution lines	<ul style="list-style-type: none"> <li>• Relocation of existing 16-kV distribution lines into new proposed 16-kV switchracks.</li> </ul>
Underground lines outside Mesa Substation site	1,300 feet of underground lines	<ul style="list-style-type: none"> <li>• Four new vaults and five duct banks using six 5-inch conduits.</li> <li>• Duct bank dimensions: 2 feet wide and 45 inches deep.</li> </ul>
South Area: City of Bell Gardens		
Street light source line conversion	Three spans of existing conductor	<ul style="list-style-type: none"> <li>• Conversion of existing street light conductor from overhead to underground in Loveland Street, City of Bell Gardens.</li> <li>• Installation of approximately three pullboxes and approximately 300 feet of one 3-inch conduit between Toler Avenue and Darwell Avenue.</li> </ul>
<b>Telecommunications (Overhead and Underground)</b>		
<b>Main Project Area</b>		
Structure relocations within Mesa Substation site	One existing and two new lines	<ul style="list-style-type: none"> <li>• Reroute one existing telecommunications line to clear the Mesa Substation construction area.</li> <li>• Relocate existing overhead and underground telecom lines using five existing vaults and one manhole.</li> <li>• Install two new lines to increase circuit diversity.</li> </ul>
<b>Main Project Area</b>		
Telecommunications Route 1	Total route length: 3.5 miles	<ul style="list-style-type: none"> <li>• Installation of new telecom line between existing 220-kV LST near Darlington Street in the City of Rosemead and North Wilcox Avenue in City of Montebello.</li> <li>• This route would use existing manholes and utility poles.</li> <li>• Proposed new cable: <ul style="list-style-type: none"> <li>- Overhead: 2.7 miles (existing poles)</li> <li>- Underground: 0.8 miles (new conduit)</li> </ul> </li> </ul>

Component	Quantity/ Dimensions	Proposed Project Specifications
Telecommunications Route 2	Route lengths: 2A: 2.4 miles 2B: 1.5 miles  Total: 3.9 miles	<ul style="list-style-type: none"> <li>• Installation of new telecom line using existing structures along two parallel routes: <ul style="list-style-type: none"> <li>– Route 2A: starts in the southwestern limit of Mesa Substation site (City of Monterey Park) and ends at the intersection of North Montebello Road and Lincoln Avenue, near Harding Substation (City of Montebello).</li> <li>– Route 2B: starts southeast the Mesa Substation site in North Wilcox Avenue and ends at the intersection of North Montebello Road and Lincoln Avenue, near Harding Substation (City of Montebello).</li> </ul> </li> <li>• Existing telecommunications line would be removed from Route 2A prior to installation of new telecommunications line on Route 2B; then, new telecommunications line would be added to Route 2A.</li> <li>• Overhead route: 3.0 miles</li> <li>• Underground route: 0.9 miles</li> </ul>
Telecommunications Route 3	Total route length: 4.2 miles	<ul style="list-style-type: none"> <li>• New telecommunication line between an existing 220-kV LST in the Whittier Narrows Natural Area near Durfee Avenue (Unincorporated Los Angeles County) and the intersection of North Montebello Road and West Avenida De La Merced (City of Montebello) then to continue to Mesa substation transitioning back to existing conduit and existing overhead.</li> <li>• New overhead route: 3.9 miles.</li> <li>• New underground route: 0.3 miles.</li> </ul>
Duct banks and vaults along Telecommunications Routes	18 existing vaults and 5 new vaults; 1.8 miles of new duct bank	<ul style="list-style-type: none"> <li>• Installation of existing and new underground duct banks.</li> <li>• Duct banks: two 5-inch conduits per bank, spacers and concrete.</li> <li>• Vaults: 5 feet wide by 5 feet long and 6 feet deep.</li> </ul>

Component	Quantity/ Dimensions	Proposed Project Specifications
<b>Minor Modifications to Existing Substations</b>		
Vincent, Pardee, and Walnut Substations <sup>(3)</sup>	Telecom line rerouting	<ul style="list-style-type: none"> <li>• Installation of new conduits within substation perimeter to provide diverse fiber optic routes.</li> <li>• Maximum duration: 2 weeks per location.</li> <li>• Export Quantities: <ul style="list-style-type: none"> <li>- Vincent and Walnut Substations: 10 cubic yards.</li> <li>- Pardee Substation: 5 cubic yards.</li> </ul> </li> <li>• Vehicle use: 50 trips per week.</li> </ul>
Laguna Bell Substation	220-kV equipment replacement	<ul style="list-style-type: none"> <li>• Replacement of 220-kV switchrack equipment and upgrade of line protection for the future Laguna Bell-Mesa No. 1 and No. 2 transmission lines.</li> <li>• Duration: 7 weeks (Phase 1: 4 weeks; Phase 2: 3 weeks).</li> <li>• Vehicle use: <ul style="list-style-type: none"> <li>- Phase 1: 100 trips per week.</li> <li>- Phase 2: 25 trips per week.</li> </ul> </li> <li>• No land disturbance associated with equipment replacement and upgrades.</li> </ul>
Lighthipe Substation	220-kV equipment replacement	<ul style="list-style-type: none"> <li>• Replacement of 220-kV switchrack equipment and upgrade of line protection for the 220-kV Lighthipe-Mesa transmission line.</li> <li>• Duration: 7 weeks (Phase 1: 4 weeks; Phase 2: 3 weeks).</li> <li>• Vehicle use: <ul style="list-style-type: none"> <li>- Phase 1: 100 trips per week.</li> <li>- Phase 2: 25 trips per week.</li> </ul> </li> <li>• No land disturbance associated with equipment replacement and upgrades.</li> </ul>

Component	Quantity/ Dimensions	Proposed Project Specifications
Other substations	Equipment upgrades	<ul style="list-style-type: none"> <li>• Upgrade 220-kV and 66-kV protection relays and/or telecommunications equipment inside existing relay houses and/or MEERs.</li> <li>• No land disturbance associated as works would involve replacement of relays on existing support racks.</li> <li>• Vehicle use: 5 vehicle trips (mainly crew vehicles) would be associated with each satellite location.</li> </ul>

## Notes:

- (1) The acreage associated with transformer pads is analyzed in the EIR, but one space would not contain a transformer bank. A full analysis of potential future capacity would be speculative, as the applicant has indicated in the Proponent's Environmental Assessment that capacity would be expanded based on future demand, which is not defined and is often unpredictable in the long term given the number of variables affecting demand, such as energy efficiency, distributed generation, and demand response.
- (2) A circular mil (cmil) is a standard unit of measure used for electrical systems that refers to the area of the cross section of larger conductor sizes. One cmil is equal to the area of a circle with a 1-mil diameter, and 1 kcmil is equal to 1,000 cmils. In general, a larger diameter conductor is capable of greater electrical carrying capacity than smaller diameter conductor (Grigsby 2001).
- (3) The applicant would conduct conduit installation work at Goodrich Substation as part of a separate project currently being negotiated with the City of Pasadena. However, the applicant has stated that if this separate project does not come to fruition, the identified conduit work would be performed as part of the Mesa 500-kV Substation Project, as indicated in Attachment 3-B of the Proponent's Environmental Assessment. In either case, the estimated construction duration, export quantities, and vehicle trips would be similar to the values shown for Vincent and Walnut Substations. At the moment of publication of this Draft EIR, the applicant is still negotiating with the City of Pasadena the proposed conduit installation. Therefore, the Draft EIR analyzes impacts of conduit installation at Goodrich Substation as part of the proposed project.

## Key:

cmil circular mil  
kV kilovolt  
kcmil 1,000 circular mil units (see definition in the Notes section above)  
LST lattice steel tower  
MEER Mechanical Electrical Equipment Room  
MVA megavolt amperes  
ROW right-of-way  
TSP tubular steel pole

(End of Attachment 1)

# **ATTACHMENT 2**

## Mitigation Monitoring and Reporting Plan

Pursuant to Public Resources Code Section 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines, when an agency finds that mitigation measures (MMs) have been required in, or incorporated into, a project to avoid or substantially lessen its significant environmental effects, the agency must adopt a program for monitoring or reporting on such mitigation measures. The purpose of this Mitigation Monitoring and Reporting Plan (MMRP) is to ensure effective implementation of the applicant proposed measures (APMs) and mitigation measures required by the California Public Utilities Commission (CPUC) that Southern California Edison (the applicant) has agreed to implement as part of the proposed Mesa 500-kilovolt (kV) Substation Project (proposed project). The MMRP, which is outlined in Table 1-1, includes:

- Each significant impact identified in the Environmental Impact Report (EIR);
- APMs and mitigation measures that the applicant is required to implement as part of the proposed project;
- Monitoring requirements;
- Timing for implementation of APMs and mitigation measures;
- Indicators for determining the effectiveness of implementation of APMs and MMs
- Reporting requirements.

The MMRP contains the approach for mitigation and APM implementation. If the CPUC approves the proposed project, a more detailed Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) will be developed. The MMCRP is how CPUC would implement the MMRP.

### 1.0 Agency Jurisdiction

The California Public Utilities Code gives authority to the CPUC to regulate the terms of service and the safety, practices, and equipment of utilities subject to its jurisdiction. It is CPUC practice, pursuant to its statutory responsibility, to protect the environment and require proper implementation, monitoring, and reporting of mitigation measures stipulated as conditions of approval. Public Resources Code (PRC) section 21081.6 requires that a public agency adopt a mitigation monitoring or reporting program when it approves a project for which an EIR has been prepared and that would result in significant adverse environmental effects.

CEQA Guidelines Section 15097 describes agency requirements for mitigation monitoring and reporting. The CPUC would address the requirements of PRC § 21081.6 when it takes action on SCE's application for a Permit to Construct. If the Commission approves the Proposed Project or an alternative, it would adopt the MMRP and include the mitigation measures as a condition of approval. The MMRP would be incorporated into the MMCRP. The MMCRP serves as a working guide to ensure that the measures adopted to mitigate or avoid significant impacts of a project are implemented, and to report on their implementation. The MMCRP would contain information from the Final EIR and specific protocols, guidelines, and standard procedures for monitoring, compliance, and reporting activities of the project proponent and the CPUC and its designated monitors.

## **1.1 Roles and Responsibilities**

This section outlines roles and responsibilities specific to the MMRP. More specific details regarding project roles will be included in the MMCRP.

### **1.1.1 CPUC Project Manager, Compliance Manager, and Compliance Monitors**

The CPUC Energy Division Project Manager will assign monitoring and reporting responsibilities to a third-party contractor as described below. The third-party contractor will assign a Compliance Manager (CPUC Compliance Manager) as the designated point of contact for both the CPUC and the applicant, who will report to the CPUC Project Manager. The CPUC Compliance Manager will oversee one or more Compliance Monitors, who are the field personnel responsible for observing and reporting the applicant's compliance with the terms and conditions of the CPUC Permit to Construct during construction of the proposed project. The number of Compliance Monitors and frequency of site inspections will depend on the number and locations of concurrent construction activities. The Compliance Manager and Compliance Monitors will document compliance through daily site inspection forms, frequent phone and email contact, and regular reports to the CPUC Project Manager. The third-party contractor will notify the CPUC Project Manager of noncompliance situations and may suggest measures to help resolve the issue. The applicant must submit all requests for minor project deviations to the CPUC Project Manager via the third party contractor for review. When a mitigation measure requires that a study or plan be developed during the design or pre-construction phase of the project, the applicant must submit the final study or plan to the CPUC Project Manager via the third party contractor.

### **1.1.2 Applicant and Applicant's Environmental and Construction Contractors**

#### **Applicant**

The applicant is responsible for implementing all adopted APMs and mitigation measures listed in the adopted MMRP. The applicant may elect to hire an environmental contractor to assist with environmental compliance and serve as environmental monitors during construction. The applicant's monitors ("first-party" monitors) will monitor compliance with the MMCRP, present worker environmental awareness program (WEAP) training, and help interpret APMs and mitigation measures and prevent and correct compliance problems. SCE's contractors would also be responsible for adhering to the project's environmental conditions.

#### **Applicant's Construction Management Team**

The applicant's construction management team will ensure that all construction activities conform to the details outlined in the construction contract, the schedule, and all project environmental and permit conditions. The construction management team will communicate with the Construction Contractor to ensure that noncompliance issues are resolved in a timely manner and that similar issues are prevented in the future. The construction management team mediates communication between the CPUC and Construction Contractor.

### **1.1.3 Enforcement**

The CPUC Compliance Monitor, under the supervision of the CPUC Compliance Manager and on behalf of the CPUC Project Manager, is responsible for ensuring that monitoring procedures outlined in project APMs and mitigation measures are followed as required. The CPUC Compliance Monitor will document all instances of noncompliance, and the CPUC Compliance Manager will

discuss solutions to noncompliance with the applicant and the applicant's construction management team. Copies of reports documenting noncompliance will be supplied to the applicant and the CPUC. The CPUC Energy Division has the authority to halt any construction, operation, or maintenance activity associated with the project that deviates from the approved project description or violates adopted APMs or mitigation measures.

The CPUC Energy Division does not conduct enforcement actions related to non-compliance with APMs, mitigation measures, or Commission Orders or Decisions. The CPUC Safety and Enforcement Division (SED) investigates and conducts enforcement actions related to noncompliance. Any enforcement actions related to non-compliance with APMs or mitigation measures would be taken by SED pursuant to the process created by the Commission in Resolution E-4550 (May 9, 2013). Per Resolution E-4550, the CPUC may impose fines in the event the applicant does not comply with the Permit to Construct's conditions of approval. CPUC staff will determine whether a fine is appropriate for non-compliance events consistent with Resolution E-4550.

## **1.2 Communication and Reporting**

Communication is a critical component of a successful environmental compliance program. The CPUC compliance staff, the applicant, and the applicant's contractors must maintain regular communication throughout construction to avoid noncompliance, project delays, and work stoppages. The applicant and its contractors must coordinate closely with the CPUC's Compliance Manager and Monitors to resolve compliance issues in a timely manner and accurately disseminate the construction plan and results of resource surveys. A detailed communication protocol will be developed as part of the MMCRP prior to the commencement of construction.

### **1.2.1 Monthly Environmental Compliance Report**

The applicant will prepare a monthly environmental compliance report for the CPUC. The CPUC Compliance Manager will review this report to ensure that the status of APMs and mitigation measures is consistent with observations in the field. The monthly environmental compliance report will keep all parties informed of construction progress and schedule and any noncompliance incident resolution.

### **1.2.2 Agency Coordination**

Several local, state, and federal agencies have jurisdiction over portions of the project and may issue permits with conditions that must be followed during construction. In addition, certain APMs and mitigation measures in the Final EIR were written based on agency input. The applicant will be responsible for coordinating with applicable agencies to meet environmental and permit conditions and notifying agencies of noncompliance incidents if required. The CPUC Project Manager and Compliance Manager may facilitate these discussions as appropriate and may request copies of email correspondence, contact reports, or other documentation of conversations between the applicant and an agency to document compliance.

## **1.3 Project Changes**

This section describes the CPUC's process for staff approval of project changes that may be necessary due to changes needed after the applicant's final engineering of elements of the proposed project or if circumstances arise during the course of construction that require deviations from the

project as approved. The CPUC, along with the CPUC Compliance Manager, would evaluate any proposed deviations from the approved project to determine if they are consistent with approved CEQA requirements. Depending on its nature, a requested deviation would be processed as a Minor Project Change (MPC) or be the subject of a Petition for Modification (PFM) submitted by the applicant.

MPCs would be strictly limited to minor project changes that do not trigger additional permit requirements, do not increase the severity of an impact or create a new impact, and are within the geographic scope of the EIR.

If a project change would create or have the potential to create a new significant impact, increase the severity of an impact, or occur outside the geographic area evaluated in the EIR, the applicant would be required to submit a PFM. The CPUC would evaluate the PFM under CEQA, as appropriate, to determine what form of supplemental environmental review would be required.

Requests for CPUC Project Manager/Compliance Manager approval of a change must be made in writing and should include the following:

- A detailed description of the proposed change(s), including an explanation of why the deviation is necessary;
- Identification of the APM, mitigation measure, project parameter, or other project stipulation for which the change is being requested, and citations for associated approved documents;
- Photographs, maps, and other supporting documentation illustrating the difference between the existing conditions in the project area, the approved project, and the proposed change;
- The potential impacts of the proposed change, including a discussion of each environmental issue area that could be affected by the deviation with accompanying verification, and whether there would be an increase in significant impacts on resources affected by the project and/or any new significant impacts, after application of previously adopted APM(s) and/or mitigation measure(s);
- Whether the change conflicts with any APMs or mitigation measures;
- Whether the change conflicts with any applicable guideline, ordinance, code, rule, regulation, order, decision, statute, or policy; and
- The date of expected construction at the location of the change.

The CPUC Project Manager or Compliance Manager may request additional information, agency consultations, or a site visit in order to determine the appropriate vehicle for approval and to process the request.

## 1.4 Dispute Resolution

The following procedure will be observed for dispute resolution:

- **Step 1.** Disputes and complaints (including those of the public) should be directed first to the CPUC Project Manager or Compliance Manager for resolution. The CPUC Project Manager or Compliance Manager will attempt to resolve the dispute. If the dispute can be

resolved by SCE, then the CPUC's Project Manager would direct the person to SCE. If the complaint is received by SCE's Construction Relations Officer pursuant to MM NV-1 (Noise Control Plan), the complaint would be handled in accordance with MM NV-1.

- **Step 2.** Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the proposed project or adopted MMRP.
- **Step 3.** If a dispute or complaint regarding the implementation or evaluation of the adopted MMRP cannot be resolved informally or through enforcement or compliance action by the CPUC, any affected participant in the dispute or complaint may file a written "notice of dispute" with the CPUC Executive Director or his/her designee. This notice should be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the CPUC Executive Director or designee(s) shall meet or confer with the filer and other affected participants for the purposes of resolving the dispute. The CPUC Executive Director shall issue an Executive Resolution describing his/her decision, and serve it on the filer and other affected participants.
- **Step 4.** If one or more of the affected parties is not satisfied with the decision as described in the resolution, such party(ies) may appeal it to the CPUC via a procedure to be specified by the CPUC.

Parties may also seek review by the CPUC through existing procedures specified in the CPUC Rules of Practice and Procedure for formal and expedited dispute resolution, although a good faith effort should first be made to use the foregoing procedure.

## 1.5 Final Mitigation Monitoring and Reporting Plan

This Final MMRP incorporates changes to the proposed project or mitigation measures that were made as a result of public review of the Draft EIR and further consideration of the proposed projects by the CPUC.

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Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<b>Aesthetics</b>				
<b>MM AES-1: Staging Area Screening.</b> For Staging Yards 1, 2, 6, and 7, the applicant shall at a minimum screen most views of the interiors of these areas using perimeter screening fences or other effective screening. Perimeter screening fences will be a minimum of 6 feet high and covered with a dark-colored (e.g., dark green, brown, or black) fabric or other material that provides at least 50 percent screening and covers the fence exterior.				
<b>MM AES-2: Minimize Clearing and Ground Disturbance and Improve Disturbed Areas.</b> Clearing and ground disturbance required for construction, including but not limited to access roads, pulling sites, construction and maintenance pads, and construction laydown areas, shall be the minimum required, and the applicant shall improve all disturbed areas not required for operation and maintenance to pre-construction conditions or better to the extent feasible. Improvement would not be feasible if, for example, a landowner other than SCE does not wish the area to be improved. Areas around new or rebuilt transmission structures that must be cleared during the construction process or other areas of ground disturbance shall be regraded and revegetated to an appearance that would replicate or improve pre-construction conditions. The CPUC shall verify appropriate improvements of disturbed areas. For all paved areas (e.g., streets, sidewalks, and parking areas) disturbed by construction, the applicant shall restore these areas in compliance with permits for work within these areas.				
<b>MM AES-3: Landscape and Aesthetic Treatment along Potrero Grande Drive.</b> Prior to construction, the applicant shall prepare a Landscape and Aesthetic Treatment Plan that will, at a minimum, provide vegetative screening, with the use of California native and/or drought tolerant vegetation, and other aesthetic treatments (e.g., decorative caps on block walls) along Potrero Grande Drive and in the vicinity of the new entry drive at the substation, and provide aesthetic treatment of the operations and test and maintenance buildings and their immediate surroundings. The Landscape and Aesthetic Treatment Plan shall not conflict with NERC CIP requirements in CIP-014-2 (Physical Security) or related NERC findings. Aesthetic treatments along Potrero Grande Drive shall include design enhancements for the masonry screening wall, adjacent walkway, pavement surfaces, and planting areas and may include raised and median planters or other design enhancements. Aesthetic treatment of the operations and test and maintenance buildings and their immediate surroundings shall include improved color selection and design for the buildings and landscaping of their surroundings that will help screen views of the buildings and blend them with their surroundings. All color finishes for built elements shall be flat and non-reflective. The final Landscape and Aesthetic Treatment Plan along Potrero Grande Drive shall be prepared by a professional landscape architect licensed to work in California. The applicant shall consult with the City of Monterey Park in development of the Landscape and Aesthetic Treatment Plan and both this plan and the final designs for the buildings shall be subject to design review and approval by the City. The Landscape and Aesthetic Treatment Plan shall include the Landscape and Irrigation Plan and Wall Plan required to be submitted to the City for its review and approval as part of the overall permitting process. Copies of the final approved Landscape and Aesthetic Treatment Plan and associated City permits shall be provided to the CPUC prior to construction of these buildings and aesthetic treatments along Potrero Grande Drive. The final approved Landscape and Aesthetic Treatment Plan shall be fully implemented within four months of beginning operation of the new substation.				
<b>MM AES-4: Graffiti Deterrence.</b> Prior to construction, the applicant shall prepare a Graffiti Prevention and Abatement Plan that will, at a minimum, provide measures for the installation of vegetative screening, with the use of California native and/or drought tolerant vegetation, and the removal of graffiti within 48 hours of report or implement other measures to screen or substantially reduce aesthetic impacts associated with graffiti on the new 12-foot-high perimeter wall facing SR 60 along the southeast edge of the proposed Mesa Substation site, such as vegetative screening or other measures intended to fully or mostly screen views from SR 60 of the southeast-facing portion of the wall that is likely to provide a surface that attracts graffiti generally considered unattractive or offensive. The applicant shall consult with the City of Monterey Park in development of the Graffiti Prevention and Abatement Plan, and this plan shall be subject to review and comment by the City. The Graffiti Prevention and Abatement Plan shall be provided to the CPUC for final review and approval prior to beginning construction. The final approved Graffiti Prevention and Abatement Plan shall be fully implemented, including installation of all plants for vegetative screening, within four months of beginning operation of the new substation.				
<b>MM AES-5: Glare Reduction.</b> To reduce potential glare from components of the proposed project and help blend them into the landscape setting, the finishes on all new transmission and other structures with metal surfaces shall be non-reflective and new conductors shall be non-specular. With the exception of LSTs, TSPs, and switchracks, all metal structures up to 35 feet high, including transformer banks and new permanent buildings, and visible from the vicinity of KOP 7 shall have finishes that are dark in color or otherwise colored to help blend the structures with their surroundings.				
The CPUC shall verify that SCE installs screening fences at Staging Yards 1, 2, 6, and 7.				
The CPUC shall verify whether the restoration of disturbed areas proposed by SCE is to pre-project conditions. For disturbance covered by local permits (e.g., streets, sidewalks, and parking areas), the applicant shall restore these areas to pre-project conditions in compliance with permits for work within these areas.				
The applicant shall consult with the City of Monterey Park in development of the Landscape and Aesthetic Treatment Plan and both this plan and the final designs for the buildings shall be subject to design review and approval by the City. The Landscape and Aesthetic Treatment Plan shall be provided to the CPUC for final review and receive final approval from the CPUC prior to construction of these buildings and aesthetic treatments along Potrero Grande Drive.				
The Graffiti Prevention and Abatement Plan shall be provided to the CPUC for final review and approval prior to beginning construction.				
CPUC verifies that all new transmission and other structures with metal surfaces installed by SCE be non-reflective and new conductors non-specular.				

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures			
Monitoring Requirements	Timing	Location	
<p><b>MM AES-6: Night Lighting.</b> To minimize the effect on any nearby sensitive receptors, night lighting for construction activities, staging areas and other areas used for construction, and nighttime facility operations shall be the minimum necessary to ensure safety and security for nighttime activities and operations. All night lighting used for construction or operations and maintenance shall orient lights downward and be shielded to eliminate off-site light spill at times when the lighting is in use. Lighting at the proposed Mesa Substation shall consist of light-emitting diode lights in all areas where nighttime operations or maintenance activities would occur and be either motion-activated or use timers to the maximum extent feasible to ensure safety and security and reduce the impact of additional light pollution at night.</p>	<p>During Construction</p>	<p>All locations with nighttime lighting.</p>	
<p><b>Air Quality</b> <b>APM-AIR-01: Fugitive Dust.</b> During construction, surfaces disturbed by construction activities would be covered or treated with a dust suppressant until completion of activities at each site of disturbance. On-site unpaved roads and off-site unpaved access roads utilized during construction within the proposed project area would be effectively stabilized to control dust emissions (e.g., using water or chemical stabilizer/suppressant). On-road vehicle speeds on unpaved roadways would be restricted to 15 miles per hour.</p>	<p>During Construction</p>	<p>Entire project area.</p>	
<p><b>APM-AIR-02: Tier 3 Engines.</b> Off-road diesel construction equipment with a rating between 100 and 750 horsepower (hp) would be required to use engines compliant with EPA Tier 3 non-road engine standards. In the event that a Tier 3 engine is not available, the equipment would be equipped with a Tier 2 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 2 engine is not available, that equipment would be equipped with a Tier 1 engine and documentation of unavailability would be provided.</p>	<p>Prior to and During Construction</p>	<p>Any area where off-road diesel construction equipment is being utilized.</p>	
<p><b>MM AQ-1: Construction Emission Reduction Measures.</b> SCE shall implement the following emission reduction measures for all construction activities:</p> <ol style="list-style-type: none"> <li>All off-road diesel-powered construction equipment with engines greater than 100 horsepower (hp) shall be compliant with Tier 4 off-road emissions standards where available. In the event that equipment with a Tier 4 engine is not available for any off-road engine larger than 100 hp SCE shall investigate all available diesel retrofit technologies to reduce emissions. Any technologically feasible retrofit control technologies must be implemented. If emission levels equivalent to Tier IV standards cannot be reached, the emissions shall be reduced to the maximum extent possible based on the selected retrofit technology. Diesel retrofit technologies investigated shall include, but are not limited to, the Air Resource Board currently verified diesel emission control strategies. SCE shall document the results of its investigation for review by the CPUC.</li> <li>All off-road diesel-powered construction equipment with engines greater than 50 hp shall be compliant with Tier 3 off-road emissions standards where available. In the event that equipment with a Tier 3 engine is not available for any off-road engine larger than 50 hp SCE shall investigate all available diesel retrofit technologies to reduce emissions. Any technologically feasible retrofit control technologies must be implemented. If emission levels equivalent to Tier III standards cannot be reached, the emissions shall be reduced to the maximum extent possible based on the selected retrofit technology. Diesel retrofit technologies investigated shall include, but are not limited to, the Air Resource Board currently verified diesel emission control strategies. SCE shall document the results of its investigation for review by the CPUC.</li> <li>Equipment with an engine not compliant with the Tier 3 or Tier 4 standards, as applicable, will be allowed on a case-by-case basis only when the applicant has documented that no Tier 3 or Tier 4 equipment (or emissions equivalent retrofit equipment) is available for a particular equipment type. Each case shall be documented with signed written correspondence by the appropriate construction contractor, along with documented correspondence from at least two construction equipment rental firms representing a good faith effort to locate engines that meet Tier 3 or Tier 4 requirements, as applicable. Documentation will be submitted to CPUC staff for review before equipment is used on the project.</li> </ol>	<p>Prior to and During Construction</p>	<p>Entire project area.</p>	

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p>4. Submit to CPUC staff and/or construction monitors a copy of each piece of construction equipment's certified tier specification, best available control technology (BACT) documentation, and/or CARB or SCAQMD operating permit, as applicable, at least 15 days prior to mobilization of each applicable unit of equipment. In the event that unforeseen equipment replacement is required after the initial notification, replacement equipment may be used so long as notification is submitted 24 hours prior to mobilization of the replacement equipment.</p>	<p>CPUC verifies that SCE has purchased and submitted documentation of the required ETC to the SCAQMD, and that SCE submits the results of a monitoring plan tracking to CPUC staff. If monthly reports indicate that too few credits have been purchased to compensate for ROG emissions after implementation of all applicable mitigation measures, the applicant shall purchase additional ROG credits within 6 months of the end of construction. The applicant shall submit proof of the purchase of credits within 7 months of the end of construction.</p>	<p>Prior to Construction – Calculate the total amount of VOC/ROG ETCs to be purchased.  During Construction – Adhere to monitoring plan and submit reports to CPUC on a monthly basis.  Post-construction – Submit proof of the purchase of credits within 7 months of the end of construction.</p>	<p>Entire project area.</p>
<p>5. Idling construction equipment will be turned off when not in use for periods longer than 15 minutes. <b>MM AQ-2: Volatile Organic Compounds Credits.</b> The remaining emissions of VOC/ ROG resulting from construction of the proposed Mesa Substation Project shall be mitigated through the purchase of Emissions Trading Credits (ETCs) for every pound of VOC/ROG in excess of the SCAQMD regional significance threshold of 100 pounds per day, as measured. The total amount of VOC/ROG ETCs to be purchased shall be calculated once the construction schedule is finalized. The applicant shall purchase and submit documentation of purchase of the required ETC to the SCAQMD prior to the start of construction. The applicant shall also track actual daily ROG emissions during construction according to a monitoring plan that includes records of equipment and vehicle usage and submit the results of this tracking to CPUC staff on a monthly basis. If monthly reports indicate that too few credits have been purchased to compensate for ROG emissions after implementation of all applicable mitigation measures, the applicant shall purchase additional ROG credits within 6 months of the end of construction. The applicant shall submit proof of the purchase of credits within 7 months of the end of construction.</p>	<p>Prior to construction, the applicant and SCE will submit proposed additional measures to reduce daily emissions of NO<sub>x</sub> to CPUC staff for review and approval, with the measures implemented depending on the amount of Tier III and Tier IV engines available at the time of construction. Measures may include the following:</p> <ol style="list-style-type: none"> <li>1. The use of 2010 and newer haul trucks (e.g., material delivery trucks and soil import/export) or the use of trucks that meet EPA 2007 model year NO<sub>x</sub> emissions requirements if 2010 model year or newer diesel trucks cannot be obtained.</li> <li>2. Other measures as determined appropriate by the applicant-in consultation with the SCAQMD.</li> </ol>	<p>Prior to Construction – Verify measures have been identified for implementation.  During Construction – Implement proposed additional measures.</p>	<p>Entire project area.</p>
<p><b>MM AQ-4: Mitigation Agreement for Purchase of Oxides of Nitrogen (NO<sub>x</sub>) Credits.</b> Twenty days prior to the start of project construction, the applicant shall provide CPUC staff with an estimate of the total construction-related NO<sub>x</sub> emissions after implementation of all applicable mitigation measures, broken down by individual construction day. All NO<sub>x</sub> emissions that would exceed the daily threshold of 100 pounds per day shall be offset through the purchase of either Regional Clean Air Incentive Market Trading Credits (RTCs), Mobile Source Emission Reduction Credits (MSERCs), or a combination of RTCs and MSERCs. For each day that estimated NO<sub>x</sub> emissions are less than 100 pounds per day, the purchase of NO<sub>x</sub> offset credits is not required.  The total amount of NO<sub>x</sub> RTCs and/or MSERCs to be purchased shall be determined by the CPUC after the construction schedule and operating conditions are finalized, based on estimates provided by the applicant as described above. The NO<sub>x</sub> emission credits shall be purchased and submitted to the CPUC prior to the start of project construction. Credits must be current for the time the project takes place. The applicant shall also track actual daily NO<sub>x</sub> emissions during construction according to a monitoring plan that includes records of equipment and vehicle usage and submit the results of this tracking to CPUC staff on a monthly basis. If monthly reports indicate that too few credits have been purchased to compensate for NO<sub>x</sub> emissions after implementation of all applicable mitigation measures, the applicant shall purchase additional NO<sub>x</sub> credits within 6 months of the end of construction. The applicant shall submit proof of the purchase of credits within 7 months of the end of construction.</p>	<p>Twenty days prior to the start of project construction, the applicant shall provide CPUC staff with an estimate of the total construction-related NO<sub>x</sub> emissions after implementation of all applicable mitigation measures, broken down by individual construction day. All NO<sub>x</sub> emissions that would exceed the daily threshold of 100 pounds per day shall be offset through the purchase of either Regional Clean Air Incentive Market Trading Credits (RTCs), Mobile Source Emission Reduction Credits (MSERCs), or a combination of RTCs and MSERCs. For each day that estimated NO<sub>x</sub> emissions are less than 100 pounds per day, the purchase of NO<sub>x</sub> offset credits is not required.</p>	<p>Prior to Construction – Provide CPUC staff with estimate of total construction-related NO<sub>x</sub> emissions and purchase the credits.  During Construction – Implement monitoring plan tracking equipment and vehicle use. If needed, purchase additional credits within 6 months of the end of construction.  Post-construction – Submit proof of additional credits purchased during construction within 7 months of the end of construction.</p>	<p>Entire project area.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures			
	Monitoring Requirements	Timing	Location
<p><b>Biological Resources</b></p> <p><b>APM-BIO-01: Special Status Plant Species.</b> During the appropriate phenological periods, formal pre-construction surveys for rare plants would be conducted in areas where special-status plants have the potential to occur within the construction areas. Prior to construction, the locations of special-status plants identified during the surveys would be marked or flagged for avoidance. This boundary would be maintained during work at these locations and would be avoided during all construction activities to the extent possible. Impacts to Nevim's barberry would be avoided. Where disturbance to these areas cannot be avoided, SCE would develop and implement a Revegetation Plan. The Revegetation Plan would include measures for transplanting and replacing special-status plant species that may be impacted by construction of the proposed project. This plan would also include general measures in the event that special-status plant species are encountered prior to construction of the proposed project, as well as post-construction invasive weed management measures, where necessary, to ensure successful revegetation back to pre-construction conditions or to equivalent conditions of representative habitat immediately adjacent to the affected area.</p> <p><b>APM-BIO-02: Revegetation Plan.</b> To the extent feasible, SCE would minimize impacts and permanent loss to riparian habitat, native trees, and other vegetation that is regulated by federal, state, or local agencies; and/or that provides suitable habitat for special-status species. Impacts would be minimized at construction sites by flagging native vegetation to be avoided. If unable to avoid impacts to protected vegetation, a Revegetation Plan would be prepared in coordination with the appropriate agencies for areas of native habitat temporarily and/or permanently impacted during construction. The Revegetation Plan would describe, at a minimum, which vegetation restoration method (e.g., natural revegetation, planting, or reseeding with native seed stock in compliance with the proposed project's Stormwater Pollution Prevention Plan) would be implemented in the proposed project area. The Revegetation Plan would also include the species or habitats that could be impacted, the replacement or restoration ratios (as appropriate), the restoration methods and techniques, and the monitoring periods and success criteria, as identified in each measure.</p> <p><b>APM-BIO-03: Biological Monitoring.</b> To the extent feasible, biological monitors would monitor construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided.</p> <p><b>APM-BIO-04: Coastal California Gnatcatcher Protection.</b> A USFWS-approved biologist would conduct pre-construction surveys for coastal California gnatcatcher no more than seven days prior to the start of ground-disturbing activities; if this would commence between February 1 and August 30. Surveys for coastal California gnatcatcher would be conducted in suitable habitat within 500 feet of the proposed project area. If a breeding territory or nest is confirmed, the USFWS would be notified and, in coordination with the USFWS, an exclusionary buffer would be established around the nest. Construction activities in occupied coastal California gnatcatcher habitat would be monitored by a full-time USFWS-approved biologist. Unless otherwise authorized by the USFWS, no proposed activities would occur within the established buffer until it is determined by the biologist that the young have left the nest. Temporary and permanent impacts to coastal California gnatcatcher and their habitat would be mitigated as required by the USFWS.</p>	<p>purchased during construction, within 7 months of the end of construction.</p> <p>CPUC shall verify pre-construction surveys for rare plants are conducted and the locations of special-status plants have been marked for avoidance. CPUC shall verify that a Revegetation Plan has been developed and implemented. CPUC shall verify that a Revegetation Plan has been developed and implemented, in coordination with the appropriate agencies.</p> <p>CPUC verifies that biological monitors are present when construction occurs in areas with special-status species, native vegetation, wildlife habitat, or unique resources.</p> <p>CPUC verifies that a USFWS-approved biologist conducts pre-construction surveys for the coastal California gnatcatcher within suitable habitat, and construction activities occurring in occupied habitat would be monitored by a full-time USFWS-approved biologist. CPUC also verifies that appropriate mitigation, as required by USFWS, would be implemented in areas of temporary and permanent impacts to the coastal California gnatcatcher and their habitat.</p>	<p>months from the end of construction.</p> <p>Prior to Construction – Conduct pre-construction surveys and mark special-status plants. During Construction – Avoidance of Nevim's barberry and special-status plants located during preconstruction surveys. Post-construction – Implement the Revegetation Plan.</p> <p>Prior to Construction – Prepare a Revegetation Plan. Post-construction – Implement the Revegetation Plan.</p> <p>During Construction</p> <p>Prior to Construction – Conduct pre-construction surveys. During Construction – Perform construction monitoring.</p>	<p>All areas that may support special-status plant species.</p> <p>Entire project area.</p> <p>All areas where special-status species, native vegetation, wildlife habitat, or unique resources may occur.</p> <p>Suitable habitat within 500 feet of the project area.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<p><b>APM-BIO-05: Least Bell's Vireo Protection.</b> SCE would avoid ground-disturbing activities within suitable habitat for least Bell's vireo during the nesting season to the extent possible. In the event that activities within least Bell's vireo nesting habitat are unavoidable, a USFWS-approved biologist would conduct pre-construction surveys for least Bell's vireo no more than seven days prior to the start of ground-disturbing activities; if this work would commence between March 15 and September 30. Surveys for least Bell's vireo would be conducted in suitable nesting habitat within 500 feet of the proposed project area. If a breeding territory or nest is confirmed, the USFWS and CDFW would be notified and, in coordination with the USFWS and CDFW, an exclusion buffer would be established around the nest. Construction activities in occupied least Bell's vireo habitat would be monitored by a full-time USFWS- and CDFW-approved biologist. Unless otherwise authorized by the USFWS and CDFW, no proposed project activities would occur within the established buffer until it is determined by the biologist that the young have left the nest. Temporary and permanent impacts to least Bell's vireo, and their habitat, would be mitigated as required by the USFWS and CDFW.</p>	<p>CPUC verifies that a USFWS-approved biologist conducts pre-construction surveys for least Bell's vireo within suitable habitat, and construction activities occurring in occupied habitat would be monitored by a full-time USFWS-approved biologist. CPUC also verifies that appropriate mitigation, as required by USFWS, would be implemented in areas of temporary and permanent impacts to least Bell's vireo and their habitat.</p>	<p>Prior to Construction - Conduct pre-construction surveys. During Construction - Perform construction monitoring.</p>	<p>Suitable habitat within 500 of the project area.</p>	
<p><b>APM-BIO-06: Nesting Birds.</b> SCE would conduct pre-construction clearance surveys no more than seven days prior to construction, to determine the location of nesting birds and territories during the nesting bird season (typically February 1 to August 31, earlier for species such as raptors). An avian biologist would establish a buffer area around active nest(s) and would monitor the effects of construction activities to prevent failure of the active nest(s). The buffer would be established based on construction activities, potential noise disturbance levels, and behavior of the species. Monitoring of construction activities that have the potential to affect active nests would continue until the adjacent construction activities are completed or until the nests are no longer active.</p>	<p>CPUC verifies that SCE conducts pre-construction clearance surveys no more than 7 days prior to construction, establishes buffers around active nests, and monitors construction activities around active nests.</p>	<p>Prior to Construction - Conduct pre-construction surveys. During Construction - Perform construction monitoring and establish buffer areas around nests.</p>	<p>Entire project area.</p>	
<p><b>APM-BIO-07: Avian Protection.</b> Electrical facilities would be designed in accordance with Avian Power Line Interaction Committee's <i>Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006</i> (APLIC 2006).</p>	<p>CPUC verifies that SCE has implemented applicable design measures.</p>	<p>Prior to Construction</p>	<p>Power line components.</p>	
<p><b>APM-BIO-08: Compensation for Permanent Impacts.</b> Permanent impacts to all jurisdictional water resources would be compensated at a 1-to-1 ratio, or as required by the USACE, CDFW, and RWQCB.</p>	<p>CPUC verifies that SCE consults with the appropriate agency (USACE, CDFW, or RWQCB) and mitigates all permanent impacts to jurisdictional waters.</p>	<p>Post-construction</p>	<p>All areas where permanent impacts to jurisdictional waters occurs.</p>	
<p><b>MM BR-1: Pre-construction Surveys.</b> Prior to construction and activities in a new work area that may include vegetation clearing, staging, and stockpiling, or other activities with the potential to directly or indirectly affect wildlife, the applicant shall retain a qualified biologist approved by the CPUC to conduct pre-construction surveys for sensitive biological resources, including special-status plant species and special-status wildlife, and nesting birds in all areas of temporary and permanent disturbance. Pre-construction surveys shall be species and resource appropriate and typically conducted a maximum of 14 days prior to construction as approved by the CPUC. If there is no work in an area for 14 days or more, the area shall be considered a "new work area" if construction begins again. Nesting bird and burrowing owl pre-construction surveys shall be consistent with the timing specified in the Nesting Bird Management Plan required by MM BR-11. Additional western spade-foot pre-construction surveys shall be conducted at any time of year where project activities cause vibrations and where artificial wetting of ground surface may result in spade-foot emergence. Western pond turtle pre-construction surveys shall include live trapping in areas where visual observation may be compromised due to water depth or dense vegetation growth near water. The information gathered from these surveys shall be used to develop site- and resource- specific actions to minimize impacts on sensitive resources from project-related activities.  Additionally, a CPUC-approved qualified biologist shall conduct pre-construction clearance sweeps for special-status species at all access, staging, and laydown/work areas where suitable habitat is present within approximately 24 hours of construction activities each day.</p>	<p>CPUC verifies that pre-construction surveys are completed.</p>	<p>Prior to Construction</p>	<p>All areas of temporary and permanent disturbance.</p>	

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p><b>MM BR-2: Limits of Construction Activities: Project Boundaries and Sensitive Areas Clearly Marked.</b> In all locations of the project, construction activities, vehicular traffic (including movement of all equipment), and storage of construction materials shall be restricted to approved access roads and established construction areas indicated by flagging, fencing, and/or signage. The applicant shall ensure that exclusionary fencing is installed prior to the start of construction activities around laydown and work and staging areas, where necessary and appropriate, to prevent inadvertent encroachment into the project area by special status species and the inadvertent encroachment by project activities into habitat. Identified sensitive resources such as aquatic features, special-status plants and natural communities, and known wildlife habitat of special-status species (e.g., nests, burrows, or dens) shall be assigned a buffer as appropriate and clearly marked (e.g., with signs, flagging, ropes, and/or fencing) to ensure they are avoided unless disturbance was previously approved. A CPUC-approved qualified biologist shall determine the appropriate buffer depending on the species and the construction activity. The CPUC-approved qualified biologist shall perform or supervise flagging and fencing to ensure that these activities are conducted without harm to sensitive species or habitat.</p> <p>If special-status wildlife, or evidence of special-status wildlife or special-status plant species not previously analyzed in this document, is found at any time, the applicant shall immediately halt work and contact the appropriate wildlife agency(ies) and the CPUC. Work will resume once the CPUC provides approval.</p> <p><b>MM BR-3: Habitat Restoration and Mitigation.</b> Prior to construction of the proposed project the applicant shall ensure that seasonally-appropriate surveys of vegetation are completed by a qualified botanist familiar with these vegetation associations. SCE shall develop a Habitat Restoration and Mitigation Plan that shall include an estimate of the total area of sensitive natural communities, including all coastal California gnatcatcher habitat and riparian habitat. With the consultation, review, and comment from the USFWS, CDFW, and CPUC, SCE shall prepare the plan to ensure restoration of all temporary impact areas and to ensure mitigation for permanent impacts on sensitive natural communities and coastal California gnatcatcher habitat. The plan must be submitted 60 days prior to the planned start of construction. CPUC approval is required before the plan is implemented. Required plan details include but are not limited to:</p> <ul style="list-style-type: none"> <li>All temporarily impacted areas shall be restored. All temporary disturbances to sensitive natural communities shall be restored with the pre-disturbance natural community (except for areas burned in the 2015 "Lincoln" fire, which shall be restored to the pre-fire natural community). All other temporarily impacted areas observed to be utilized by the coastal California gnatcatcher shall be restored with the appropriate coastal sage scrub community if feasible. Temporary impacts on sensitive natural communities and habitat utilized by gnatcatchers shall be mitigated by restoration at a minimum ratio of 1.5:1; if restoration is not feasible within 1 mile of the project area, SCE shall purchase credits and/or mitigation lands at a minimum ratio of 2.5:1 from an entity approved by CDFW and/or USFWS, as appropriate. Areas that do not provide habitat to coastal California gnatcatcher, other special-status species, or sensitive resources may be restored to the conditions agreed upon between the landowner and the applicant.</li> <li>The restoration plan shall specify how each type of vegetation community, including sensitive natural communities, shall be addressed in terms of the following restoration details: topsoil segregation and conservation; vegetation treatment and removal; revegetation methods, including seed mixes, rates, appropriate habitat structure, and transplants; criteria to monitor and evaluate revegetation success (minimum of four years of monitoring and 80% successful native plant establishment); and compensation and remedial measures to be implemented as needed.</li> <li>For sensitive natural communities, mitigation of permanent impacts shall occur after construction at a minimum level of 1.5:1. In addition, permanent disturbances to coastal California gnatcatcher habitat that is not coastal sage scrub or another sensitive natural community shall be mitigated at a minimum 1.5:1 ratio with appropriate coastal sage scrub. Mitigation for permanent impacts shall be completed through one of the following methods:                         <ol style="list-style-type: none"> <li>Establishing the natural community within the proposed project areas (onsite);</li> <li>Establishing the natural community outside the proposed project areas (within one mile of the project area); or</li> <li>If Options 1 and 2 are not feasible, SCE shall purchase credits and/or mitigation lands at a minimum ratio of 2.5:1 from an entity approved by CDFW and USFWS, as appropriate.</li> </ol> <p>For Options 1 and 2 (onsite and offsite), the plan shall specify restoration details, including that post-construction monitoring shall be performed for a minimum of four years, a success criteria of 80% successful native plant establishment shall be met, and remedial measures shall be implemented if success criteria are not met.</p> </li> <li>Impacts on areas that were previously restored for SCE's TRTP shall be avoided if possible. The plan shall identify any impacts on areas that</li> </ul>	<p>CPUC verifies that construction activities are limited to approved work areas and access roads, and are indicated with flagging, fencing, and/or signage.</p> <p>The plan must be submitted 60 days prior to the planned start of construction. CPUC approval is required before the plan is implemented.</p> <p>CPUC shall verify that USFWS and CDFW have reviewed the plan.</p> <p>With CPUC approval, requirements described in this mitigation measure and the Habitat Restoration and Mitigation Plan may be satisfied through compliance with permit conditions, if these requirements are equally or more effective.</p>	<p>Prior to Construction</p> <p>Prior to Construction – Ensure seasonally appropriate surveys of vegetation are completed and a Habitat Restoration and Mitigation Plan is prepared.</p> <p>During Construction - Minimize the removal of coastal sage scrub or other suitable coastal California gnatcatcher habitat.</p> <p>Post-construction – Restore all temporarily impacted areas and mitigate for permanent impacts on sensitive natural communities and coastal California gnatcatcher habitat.</p>	<p>All locations of the project, construction activities, vehicular traffic, and storage of construction materials.</p> <p>Entire project area.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan	APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p>were previously restored for TRTP and provide detailed restoration plans for these areas. Restoration in these areas shall follow restoration criteria that are consistent with the goals and criteria of TRTP restoration, per TRTP Mitigation Measure B-1a. Provide restoration/compensation for impacts to native vegetation communities.</p> <p>With CPUC approval, requirements described in this mitigation measure and the Habitat Restoration and Mitigation Plan may be satisfied through compliance with permit conditions, if these requirements are equally or more effective.</p> <p>SCE shall also minimize the removal of coastal sage scrub or other suitable coastal California gnatcatcher habitat, particularly within designated critical habitat for the coastal California gnatcatcher. To minimize the removal of vegetation in habitat areas of the coastal California gnatcatcher, SCE shall ensure that trimming of all native vegetation, riparian vegetation, and vegetation that provides potential habitat for coastal California gnatcatcher is monitored by a qualified biologist approved by the CPUC. Trimming of native trees and native arborescent shrubs shall be completed outside of the nesting bird season and shall be monitored by a qualified arborist.</p> <p><b>MM BR-4: Noxious and Invasive Weed Control Plan.</b> Prior to construction, the applicant shall submit a Noxious and Invasive Weed Control Plan that shall be implemented before, during, and after construction, including during the project restoration phase. This plan shall include measures designed to avoid the introduction and spread of noxious weeds and invasive plant species designated by the state, the counties, and local weed control boards. This plan shall be developed in consultation with the CPUC and must be submitted to the CPUC 60 days prior to the planned start of construction. CPUC approval is required before the plan is implemented.</p> <p>At a minimum, this plan shall include the following measures:</p> <ul style="list-style-type: none"> <li>• Pre-construction surveys for special-status plant species (APM BIO-01 and MM BR-1) shall include surveys for state-, county-, and locally designated noxious weed species. The applicant shall coordinate with the appropriate agencies, including the CPUC, to determine appropriate species-specific measures to implement, or whether control or treatment of a species is feasible and preferable.</li> <li>• All vehicles and equipment shall be clean and free of dirt, mud, and any debris that may carry invasive plant seeds or parts prior to arrival at the project location, including prior to use of access roads.</li> <li>• Vehicle and equipment wash stations (mobile or built in place) shall be erected at strategic locations on the ROW where designated weed species have been detected, and where doing so would help prevent the spread of these species.</li> <li>• Straw, hay, gravel, soil, or other construction or erosion control materials that could inadvertently contain unwanted plant propagules shall come from state-cleared sources that are free of invasive weeds.</li> <li>• All seeds to be used in revegetation and reclamation activities shall come from weed-free sources.</li> <li>• All temporary disturbance areas that will be restored post-construction shall be monitored for invasive species establishment on a monthly basis during the growing season and on a quarterly basis outside of the growing season for at least one year after project restoration is completed. If evidence of the expansion or increase in abundance of a known invasive species or introduction of a new invasive species is found, the applicant shall initiate appropriate control measures, which may include mowing or trimming of weeds prior to seed set, as outlined in the plan.</li> </ul> <p><b>MM BR-5: Worker Environmental Awareness Program.</b> The applicant shall develop and implement a WEAP for all project personnel. The program must be submitted to the CPUC at least 30 days prior to the start of construction for review. CPUC approval is required before the program is implemented. All project personnel shall undergo training prior to entering the ROW. The training shall include a description of the species of concern and their habitats, the general provisions of applicable environmental regulations, the need to adhere to the provisions of the regulations, the penalties associated with violating the provisions of the regulations, the general measures that are being implemented to conserve the species of concern as they relate to the project, the access routes to the project, and project boundaries within which the project-related activities must be accomplished. This training shall include a detailed review of how project personnel can identify sensitive biological resources in the project area which need to be avoided or where work activities will be restricted.</p> <p><b>MM BR-6: Avoidance of Nevin's barberry.</b> The project shall be designed to avoid impacts on occurrences of Nevin's barberry during construction and operation and maintenance. Prior to the start of construction, the applicant's CPUC-approved qualified biologist shall complete pre-construction surveys in suitable habitat to identify any occurrences. Where Nevin's barberry occurs, all construction and operation and maintenance activities shall occur outside a restrictive buffer, which shall be established by a CPUC-approved qualified biologist. Vehicles and crew members shall be prohibited from coming within 200 feet of identified Nevin's barberry unless a buffer reduction is approved by the CPUC after coordination with USFWS. A reduced buffer shall be a minimum of approximately 15 feet from a Nevin's barberry plant. A qualified</p>	<p>This plan shall be developed in consultation with CPUC and shall be provided to these agencies for review and comment. The plan must be submitted to the CPUC 60 days prior to the planned start of construction. CPUC approval is required before the plan is implemented.</p>	<p>Prior to Construction – Prepare and submit a Noxious and Invasive Weed Control Plan and perform pre-construction surveys for special-status plant species.</p> <p>During Construction – Implement the Noxious and Invasive Weed Control Plan.</p> <p>Post-construction – Monitor of all restored work areas for the presence of invasive weeds.</p>	<p>Entire project area.</p>	
		<p>SCE shall submit sign-in sheets for those who attended WEAP training.</p>	<p>Prior to Construction – Submit WEAP During Construction – Submit sign-in sheets monthly</p>	<p>Entire project area.</p>
		<p>SCE shall submit preconstruction survey results to the CPUC, report any previously unknown occurrences found during pre-construction surveys or construction surveys or construction, and submit a</p>	<p>Prior to Construction – Conduct pre-construction surveys in suitable habitat to identify any occurrences and establish a buffer around any occurrences.</p>	<p>Areas of suitable habitat for Nevin's barberry and around known occurrences.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<p>biologist approved by the CPUC shall monitor crew members and the Nevin's barberry to ensure all project activities stay away from Nevin's barberry within the buffer. The biologist shall have the authority to halt work if it is determined that Nevin's barberry could be impacted.</p> <p>In the event that previously unknown occurrences of Nevin's barberry are discovered during pre-construction surveys or during construction or operations, a 200-foot buffer shall be established and the USFWS and CPUC shall be contacted within 24 hours.</p> <p><b>MM BR-7: Restoration of Southern California Black Walnut.</b> SCE shall take measures to avoid and minimize impacts on Southern California black walnut resulting from project construction activities, and shall plant replacement trees for any impacted or removed specimens. Prior to construction (after completion of final engineering design of project features), black walnut tree evaluation surveys shall be completed by a qualified arborist (an arborist with extensive local or regional expertise in the planting, care, and maintenance of black walnut trees). The arborist must be approved by the CPUC. The arborist shall record a brief description (e.g., location, height, diameter at breast height, condition) of each black walnut tree with a dripline within 25 feet of construction activities. All construction activities that take place within the driplines of black walnut trees (i.e., the outermost extent of the canopy) that are not being intentionally removed shall be monitored by a qualified arborist to reduce, to the extent feasible, impacts on the tree, including roots.</p> <p>California black walnut trees that are impacted within the drip line or intentionally removed shall be replaced at a 2:1 ratio. If the diameter at breast height of the tree to be removed is 24 inches or less, it shall be replaced with a 24-inch box tree. If the diameter at breast height of the tree to be removed is greater than 24 inches, it shall be replaced with a 36-inch box tree. Replacement trees shall be planted on site as near to the original location as feasible and biologically appropriate, and shall be monitored by a qualified arborist who will ensure the replacement trees are placed in a suitable area. Replacement trees shall be monitored for seven years after the initial planting or until the arborist determines that 80 percent of trees are successfully established. If onsite replacement is not feasible, SCE shall plant replacement trees offsite as near to the proposed project as is appropriate and feasible. The same monitoring requirements and success criteria would apply as for those trees planted onsite. If neither of the two options above are feasible, SCE shall purchase credits and/or mitigation lands from an entity approved by CDFW such that a restoration ratio of 4:1 is achieved.</p> <p>Tree removal shall not be permitted until a detailed plan for restoration, including identification of planting location, or offsite mitigation lands, is approved by the CPUC, and in consultation with USFWS and CDFW. Replacement trees shall be planted before tree removal, or if not feasible or if potentially harmful to the replacement trees, as soon as possible after removal.</p> <p><b>MM BR-8: Restoration of Special-status Plants.</b> The applicant shall complete pre-construction surveys during the appropriate blooming period to identify special-status plants, including Coulter's Matilija poppy, Plummer's mariposa lily, intermediate mariposa lily, and Southern tarplant populations in the proposed project component areas where suitable habitat is present. Special-status plants shall be identified by a qualified biologist and flagged or surrounded with fencing in such a way that disturbance of the populations or individuals shall be avoided. In the event that populations or individuals of special-status plants (other than Southern California black walnut—see MM BR-7) cannot be avoided, the applicant shall develop and implement a restoration plan for each plant which will be submitted to CPUC and CDFW for review and comment no less than 60 days prior to construction activities within the work area where impacts would occur. The CPUC will coordinate with CDFW, and CPUC approval is required before the plan is implemented. In the case of Southern California black walnut trees, a restoration plan will be completed and approved as described in MM BR-7.</p> <p>For temporary impacts to special-status plants, restoration shall occur after construction at a minimum ratio of 1.5:1 for all special-status plants in the proposed project component areas. The number of plants at seven years will be a minimum of 1.5 times the number destroyed.</p> <p>Mitigation for temporary and permanent impacts shall be completed by:</p> <ol style="list-style-type: none"> <li>1. Establishing individual plants within the proposed project areas (onsite);</li> <li>2. Establishing individual plants outside the project areas (offsite); or</li> <li>3. Purchase of credits and/or mitigation lands at a ratio of 2.5:1 from an entity approved by CDFW.</li> </ol> <p>For Options 1 and 2 (establishing plants onsite or offsite), the plan shall include the following elements: planting/seeding palettes; monitoring and contingency program; monitoring schedule, including duration (seven years) and performance criteria (minimum of 1.5 times the number destroyed); and any specific measures that will be required to ensure success of the restoration effort. This mitigation measure may be coordinated with areas restored for MM BR-3 if appropriate.</p>		<p>monitoring report.</p> <p>CPUC shall approve a detailed plan for restoration, including identification of planting location, in consultation with USFWS and CDFW.</p>	<p>During Construction – Monitor construction around buffers.</p> <p>Prior to Construction – Complete black walnut tree evaluation surveys.</p> <p>During Construction – Monitor construction activities that take place within the driplines of black walnut trees.</p> <p>Post-construction – Replace those black walnut trees impacted or removed by construction activities.</p>	<p>All project locations where black walnut trees occur.</p>
<p>Tree removal shall not be permitted until a detailed plan for restoration, including identification of planting location, or offsite mitigation lands, is approved by the CPUC, and in consultation with USFWS and CDFW. Replacement trees shall be planted before tree removal, or if not feasible or if potentially harmful to the replacement trees, as soon as possible after removal.</p> <p><b>MM BR-8: Restoration of Special-status Plants.</b> The applicant shall complete pre-construction surveys during the appropriate blooming period to identify special-status plants, including Coulter's Matilija poppy, Plummer's mariposa lily, intermediate mariposa lily, and Southern tarplant populations in the proposed project component areas where suitable habitat is present. Special-status plants shall be identified by a qualified biologist and flagged or surrounded with fencing in such a way that disturbance of the populations or individuals shall be avoided. In the event that populations or individuals of special-status plants (other than Southern California black walnut—see MM BR-7) cannot be avoided, the applicant shall develop and implement a restoration plan for each plant which will be submitted to CPUC and CDFW for review and comment no less than 60 days prior to construction activities within the work area where impacts would occur. The CPUC will coordinate with CDFW, and CPUC approval is required before the plan is implemented. In the case of Southern California black walnut trees, a restoration plan will be completed and approved as described in MM BR-7.</p> <p>For temporary impacts to special-status plants, restoration shall occur after construction at a minimum ratio of 1.5:1 for all special-status plants in the proposed project component areas. The number of plants at seven years will be a minimum of 1.5 times the number destroyed.</p> <p>Mitigation for temporary and permanent impacts shall be completed by:</p> <ol style="list-style-type: none"> <li>1. Establishing individual plants within the proposed project areas (onsite);</li> <li>2. Establishing individual plants outside the project areas (offsite); or</li> <li>3. Purchase of credits and/or mitigation lands at a ratio of 2.5:1 from an entity approved by CDFW.</li> </ol> <p>For Options 1 and 2 (establishing plants onsite or offsite), the plan shall include the following elements: planting/seeding palettes; monitoring and contingency program; monitoring schedule, including duration (seven years) and performance criteria (minimum of 1.5 times the number destroyed); and any specific measures that will be required to ensure success of the restoration effort. This mitigation measure may be coordinated with areas restored for MM BR-3 if appropriate.</p>		<p>CPUC shall verify that pre-construction surveys occur during the appropriate blooming period and that any special-status plants are flagged or fenced for avoidance.</p> <p>In the event that populations or individuals cannot be avoided, the applicant shall develop and implement a restoration plan for each plant, which will be submitted to CPUC and CDFW for review and comment no less than 60 days prior to construction activities within the work area where impacts would occur. CPUC approval is required before the plan is implemented.</p>	<p>Prior to Construction – Conduct pre-construction surveys.</p> <p>Develop restoration for each special-status plant that cannot be avoided.</p>	<p>All project areas where suitable habitat is present for Plummer's mariposa lily, intermediate mariposa lily, and Southern California tarplant.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p><b>MM BR-9: Construction Monitoring.</b> The applicant shall ensure that a qualified biologist approved by the CPUC serves as a construction monitor during periods when construction activities occur near active nest areas, or within 100 feet of native vegetation or vegetation that has the potential, or is known, to provide habitat for special-status species. The monitor shall have the authority to temporarily stop work that they determine threatens a special-status species or sensitive resource. The monitor shall determine what appropriate action to take, and work will resume once the monitor determines there is no longer a threat to the special-status species or sensitive resource, or consultation has occurred with the appropriate wildlife agencies which determines appropriate steps have been taken and a threat is no longer present.</p>	<p>CPUC shall verify that a CPUC-approved biologist is present during construction activities occurring near active nest areas, or within 100 feet of native vegetation or vegetation that has the potential, or is known, to provide habitat for special-status species.</p>	<p>During Construction</p>	<p>All project areas near active nest areas, or within 100 feet of native vegetation or vegetation that has the potential, or is known, to provide habitat for special-status species.</p>
<p><b>MM BR-10: Open Trenches and Pipes.</b> To prevent entrapment of wildlife, SCE shall ensure that all steep-walled trenches, auger holes, open-ended piping, or other excavations are covered at the end of each day or completely fenced off at night in such a way that wildlife cannot become entrapped. For open trenches only, these may instead have wildlife escape ramps within the trench maintained at intervals of no greater than 100 feet. These ramps shall have a maximum slope not to exceed 2:1. SCE's biological monitor, approved by the CPUC, shall inspect all trenches, auger holes, or other excavations a minimum of three times per day and immediately prior to backfilling. During working hours, all construction materials with open-ended piping, including but not limited to pipe sections and fencing supports, shall be left capped when not planned for use the same day. During active construction, open piping shall be inspected for wildlife by SCE's biological monitor before the material is moved, buried, or capped. All non-special-status wildlife species found will be safely removed and relocated out of harm's way, through the use of suitable tools such as a pool net when applicable. For safety reasons, under no circumstance will biological monitors enter open excavations.</p>	<p>CPUC shall verify that all steep-walled trenches, auger holes, or other excavations are covered at the end of each day or completely fenced off at night in such a way that wildlife cannot become entrapped. Escape ramps are acceptable for open trenches only.</p>	<p>During Construction</p>	<p>All project areas containing steep-walled trenches, auger holes, or other excavations.</p>
<p><b>MM BR-11: Nesting Bird Management Plan.</b> To address potential conflicts between construction activities and the activities of nesting birds in the project component areas, SCE shall develop a nesting bird management plan in consultation with USFWS, CDFW, and CPUC, and shall submit the final plan to the CPUC no less than 60 days prior to construction. CPUC approval is required before the plan is implemented. The nesting bird management plan shall include measures and an adaptive management program to avoid and minimize impacts to special-status and MBTA- or California Fish and Game Code-protected bird species during nesting periods during project construction. Specifically, the nesting bird management plans shall contain:</p>	<p>SCE shall develop a Nesting Bird Management Plan in consultation with USFWS, CDFW, and CPUC, and shall submit the final plan to the CPUC no less than 60 days prior to construction. CPUC approval is required before the plan is implemented.</p> <p>Reporting of nesting bird activities, buffer reductions, and monitoring results shall be provided to the USFWS, CDFW, and the CPUC on a regular basis.</p>	<p>Prior to Construction – Conduct surveys during the appropriate nesting season.  During Construction – Perform monitoring and prepare reports.</p>	<p>All work areas in which any construction related activities are conducted.</p>
<ul style="list-style-type: none"> <li>• Appropriate survey timing, extents, methods, and surveyor qualifications; approved nest deterrent methods, including areas where vegetation will be cleared for the purpose of deterring nesting; monitoring and reporting protocols during construction; protocol for determining whether a nest is active; protocol for documenting, reporting, and protecting active nests within construction areas. If pre-construction survey protocols exist for a certain species, the plan shall identify the species-specific protocol that will be followed and outline how SCE will comply with the protocol.</li> <li>• Guidelines for determining appropriate and effective buffer distances that will account for specific project settings, bird species, stage of nesting cycle, and construction work type. Language for buffer reduction process will be included in the plan, which shall include coordination with the appropriate wildlife agencies and the CPUC if reducing the buffer of a special-status species.</li> <li>• Language specifying that the determination of appropriate and effective buffers between construction activities and identified nests shall be site- and species/guild-specific and data-driven, and will not be based on generalized assumptions regarding all nesting birds.</li> <li>• Language specifying that determinations of appropriate and effective buffers between construction activities and identified nests can be made in the project construction area by the CPUC-approved biological monitor (qualified in accordance with nesting bird plan standards, which will include specific requirements for education and experience in conducting biological surveys and with specific birds in the project area).</li> <li>• Vertical buffers shall be put in place in those areas where helicopters will be used, and they will be based on anticipated effects of rotor wash and noise for the class of helicopter being used by SCE. Surveys and monitoring of the active buffer areas will be performed by a CPUC-approved biologist before, during, and after helicopter use in the vicinity of active buffers.</li> <li>• Burrowing owl pre-construction surveys shall adhere to the current burrowing owl survey protocol identified by CDFW (i.e., CDFW's Staff Report on Burrowing Owl Mitigation [CDFG 2012]). If pre-construction burrowing owl surveys confirm the presence of burrowing owl, SCE shall submit a Burrowing Owl Compensation Plan, in consultation with CDFW and the CPUC, which is consistent with mitigation guidelines in the Staff Report, prior to construction. The final Burrowing Owl Compensation Plan shall be implemented, as specified, throughout construction and restoration. The plan shall describe the compensatory measures that will be undertaken to address the loss of burrowing owl burrows within the project area. This will include mitigation for permanent impacts on nesting, occupied, and satellite burrows and occupied burrowing owl habitat with (a) permanent conservation of similar vegetation communities comparable to or better than that of</li> </ul>			

Table 1-1 Final Mitigation Monitoring and Reporting Plan APWs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p>the impact area, and (b) sufficiently large acreage, and presence of fossorial mammals.</p> <p>SCE shall notify CDFW, USFWS, and the CPUC of all project-related bird injuries or mortalities within 12 hours of discovery and will follow the agencies' recommended actions, if any. Reporting of nesting bird activities, buffer reductions, and monitoring results shall be provided to the USFWS, CDFW, and the CPUC on a regular basis.</p> <p><b>MM BR-12: Gnatcatcher Surveys.</b> Prior to the start of construction, SCE shall ensure that protocol-level pre-construction surveys are conducted by a qualified biologist approved by the CPUC for the coastal California gnatcatcher in project component areas where suitable habitat exists in accordance with the Coastal California Gnatcatcher (<i>Pollipolia californica californica</i>) Presence/Absence Survey Guidelines (USFWS 1997). In the event that coastal California gnatcatchers are observed during pre-construction surveys, a qualified biologist must identify the boundaries of the pair's territory and SCE must not conduct construction activities within 500 feet of the territory, or as otherwise approved by the CPUC, in consultation with USFWS. SCE shall notify USFWS and the CPUC in the event gnatcatcher territory or nest sites are confirmed by surveys, immediately upon return from the field. If infeasible to maintain a buffer of 500 feet (or a distance otherwise approved by USFWS), by installing temporary flagging or fencing, from an active gnatcatcher territory, construction activities within or near these areas will be performed outside the breeding and nesting season (coastal California gnatcatcher breeding/nesting season is approximately February 1 through August 30). SCE may conduct construction activities in gnatcatcher habitat during the breeding and nesting season if protocol-level surveys (conducted within one year prior to construction activities per protocol) confirm the absence of breeding gnatcatchers, or if the 500-foot protective buffer from all active gnatcatcher territories can be maintained.</p> <p><b>MM BR-13: Pre-Construction Surveys for Least Bell's Vireo.</b> Prior to construction and within their breeding season (generally April 10-August 31), SCE shall complete protocol-level surveys for least Bell's vireo in areas of suitable or potentially suitable riparian and other habitat within the proposed component areas. Surveys will be conducted by a qualified biologist approved by the CPUC according to the survey protocol for least Bell's vireo (USFWS 2001). In the event that least Bell's vireo territory or nest sites are confirmed, SCE shall notify the USFWS and CDFW within 24 hours of returning from the field. If individuals or their nests are observed, biologists will establish and maintain a minimum 500-foot (or a distance otherwise approved by USFWS and CDFW) exclusionary buffer by installing temporary flagging or fencing between the nest territory and construction activities. If infeasible to maintain a buffer of 500 feet (or a distance otherwise approved by USFWS and CDFW), from an active vireo territory, construction activities within or near these areas will be performed outside the breeding and nesting season.</p> <p><b>MM BR-14: Minimize Impact on Riparian Habitat and Aquatic Features.</b> SCE shall complete the following:</p> <ol style="list-style-type: none"> <li>1. In those areas where riparian vegetation is required to be removed, SCE shall work with a qualified botanist to determine the minimum amount of vegetation required to be removed in order to accommodate project construction, and the correct trimming procedures to employ.</li> <li>2. Temporary impacts to riparian habitat or aquatic features shall be fully restored according to the Habitat Restoration and Mitigation Plan described in MM BR-3. All permanently impacted areas shall be mitigated using methods described in MM BR-3.</li> <li>3. Where riparian vegetation or aquatic features would be impacted by project construction activities, SCE shall also consult with USACE, RWQCB, and CDFW to determine if a CWA Section 404 permit, CWA Section 401 permit, and LSAA pursuant to California Fish and Game Code Section 1600 would be necessary, respectively. If USACE, RWQCB, or CDFW determines a permit is required, the permit will be obtained prior to impacts and SCE will comply with all terms and conditions of the agreement. In addition, the USACE, RWQCB, and CDFW shall be provided the opportunity to review and comment on the Habitat Restoration and Mitigation Plan if impacts will occur in an area that may be under their jurisdiction.</li> <li>4. Mitigation requirements described under number 2 above for impacts to riparian habitat or aquatic features may be satisfied by demonstrating compliance with equal or more effective permit conditions, with approval by the CPUC.</li> </ol>	<p>CPUC shall ensure that protocol-level surveys are conducted.</p> <p>CPUC shall ensure that protocol-level surveys are conducted.</p> <p>CPUC verifies that a qualified botanist has been consulted to determine the minimum amount of vegetation to be removed, temporary impacts are restored according to the Habitat Restoration and Monitoring Plan, and permanent impacts are mitigated according to methods described in MM BR-3. CPUC may also determine that the above mitigation requirements are satisfied by compliance with permit conditions.</p> <p>CPUC also verifies that USACE, RWQCB, and CDFW are consulted to determine if a permit is necessary.</p> <p>The plan shall be submitted for review to the CDFW, USFWS, and CPUC at least 60 days prior to construction. CPUC approval is required before the plan is implemented.</p>	<p>Prior to Construction – Conduct protocol-level surveys.</p> <p>During Construction – Perform monitoring and prepare monitoring reports.</p> <p>Prior to Construction – Conduct protocol-level surveys.</p> <p>During Construction – Perform monitoring and prepare monitoring reports.</p> <p>Prior to Construction – Consult with botanist to determine appropriate amount of vegetation removal.</p> <p>Post-Construction – Restore and/or mitigate temporary and permanent impacts.</p>	<p>All work areas where suitable coastal California gnatcatcher habitat exists.</p> <p>All work areas where suitable least Bell's vireo habitat exists.</p> <p>All project areas containing riparian habitat and aquatic features.</p> <p>Entire project area.</p>
<p><b>MM BR-15: Avian Protection Plan.</b> SCE shall adhere to recommendations published by APLIC (<i>Reducing Avian Collisions with Power Lines: The State of the Art in 2012</i>) (APLIC 2012). In addition, SCE shall develop and implement an Avian Protection Plan according to Avian Protection Plan Guidelines (APLIC and USFWS 2005). The plan shall include provisions to reduce impacts on avian species during operation of the proposed project, and shall provide for the adaptive management of project-related issues. The plan shall be submitted for review to CDFW, USFWS, and the CPUC at least 60 days prior to construction. CPUC approval is required before the plan is implemented.</p>	<p>The plan shall be submitted for review to the CDFW, USFWS, and CPUC at least 60 days prior to construction. CPUC approval is required before the plan is implemented.</p>	<p>Prior to Construction – Develop an Avian Protection Plan.</p> <p>During Construction – Implement the Avian Protection Plan.</p>	<p>Entire project area.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<p><b>Cultural and Paleontological Resources</b>  <b>APM-CUI-01: Paleontological Resources Management Plan.</b> A Paleontological Resources Management Plan would be developed for construction within areas that have been identified as having a moderate and high sensitivity for paleontological resources. The Paleontological Resources Management Plan would be prepared by a professional paleontologist in accordance with the recommendations of the Society of Vertebrate Paleontology.</p>	<p>CPUC verifies a Paleontological Resources Management Plan is developed by a professional paleontologist.</p>	<p>Prior to Construction – Develop a Paleontological Resources Management Plan.                      During Construction, Implement the Paleontological Resources Management Plan.</p>	<p>Project areas that have been identified as having a moderate or high sensitivity for paleontological resources.</p>	
<p><b>MM CR-1: Flag and Avoid Known Unevaluated Historic Sites.</b> Prior to commencement of any construction or construction-related activities within 50 feet of the mapped boundaries of (1) the historic-era debris and concrete structure at site P-19-186889 and (2) the concrete footings and shack at site SAY-S-1, a qualified CPUC-approved archaeologist shall erect flagging to create a 50-foot buffer around these resources. Flagging shall be in a bright, easily visible color, and signs shall be posted at the perimeter of the flagged areas on all sides to indicate that construction equipment, materials, and personnel shall stay out of the flagged areas. Flagging and signage shall stay in place until all construction activities within 50 feet of the resources has been completed.</p>	<p>CPUC verifies an archaeologist has erected flagging at appropriate locations.</p>	<p>Prior to Construction</p>	<p>All project areas where construction activities are occurring within 50 feet of the mapped boundaries of (1) the historic-era debris and concrete structure at site P-19-186889 and (2) the concrete footings and shack at site SAY-S-1.</p>	
<p><b>MM CR-2: Worker Training for Cultural and Paleontological Resources.</b> Prior to commencement of any project-related construction activities, all SCE, contractor, and subcontractor project personnel shall receive training regarding:</p> <ul style="list-style-type: none"> <li>• Appropriate work practices necessary to effectively implement the APMs and mitigation measures and to comply with the applicable environmental laws and regulations.</li> <li>• The potential for exposing subsurface cultural resources and paleontological resources.</li> <li>• How to recognize possible buried resources.</li> </ul>	<p>CPUC verifies all SCE, contractor, and subcontractor project personnel have received worker training for cultural and paleontological resources.</p>	<p>Prior to Construction</p>	<p>Entire project area.</p>	
<p>This training shall include a presentation of:</p> <ul style="list-style-type: none"> <li>• Procedures to be followed upon discovery or suspected discovery of historic or archaeological materials, including Native American remains and their treatment.</li> <li>• Procedures to be followed upon discovery or suspected discovery of paleontological resources.</li> <li>• Actions that may be taken in the case of violation of applicable laws.</li> </ul>				

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p><b>MM CR-3: Previously Unidentified Cultural Resources.</b> If a previously unknown cultural resource is discovered during project construction activities, work shall be halted within 100 feet of the resource, and protective barriers shall be installed along with signage identifying the area as an "environmentally sensitive area." Entry into the area shall be limited to authorized personnel, and the CPUC-approved cultural resources specialist/qualified archaeologist, SCE, and the CPUC shall be notified immediately.</p> <p>Preservation in place (i.e., avoidance) is the preferred method of mitigation for impacts on cultural resources and shall be required to mitigate impacts to previously undiscovered resources unless the CPUC-approved cultural resources specialist/qualified archaeologist and SCE determine that another method would provide superior mitigation of impacts to the resource. If the resource can be completely avoided, no additional mitigation is necessary. If the resource cannot be completely avoided, the CPUC-approved cultural resources specialist/qualified archaeologist and SCE shall follow the procedures delineated below for resources where it is not known whether the resource is historical. If an unanticipated resource is avoided, it shall nonetheless be recorded on DPR 523 forms, which shall be filed at the Eastern Information Center.</p> <ul style="list-style-type: none"> <li>• <b>Determination if a resource is an historical resource.</b> The CPUC-approved cultural resources specialist/qualified archaeologist and SCE, in consultation with the CPUC, shall determine if there is a potential for the resource to be a historical resource. If there is no potential for the resource to qualify as a historical resource, work shall resume after CPUC concurrence. If there is a potential for the resource to be a historical resource, the qualified archaeologist and SCE shall prepare an Evaluation Plan.</li> <li>• <b>Evaluation Plan.</b> The resource-specific Evaluation Plan shall detail the procedures to be used to determine if the discovery is an historical resource. The Evaluation Plan shall include sufficient discussion of background and context to allow the evaluation of the resource against the historical resource criteria. It shall include a description of procedures to be used in the gathering of information to allow the evaluation. These techniques may include (but are not limited to): excavation, written documentation, interviews, and/or photography. For archaeological resource testing, the Evaluation Plan shall describe the archaeological testing procedures, including, but not limited to: surface collection (if surface artifacts are discovered), test excavations (including type, number, and location of test pits and/or trenches), analysis methods, and reporting procedure. The Evaluation Plan shall be submitted to CPUC for review. Once approved, the Evaluation Plan shall be implemented in the field. The report resulting from this work shall include evaluation of the discovery, based on the significance criteria set forth in the Evaluation Plan, indicating if it is an historical resource. If the discovery is not found to be an historical resource, and CPUC concurs with that determination, protective barriers may be removed, and work may proceed in the area of the discovery. If the discovery is determined to be an historical resource, SCE shall prepare a Data Recovery Plan.</li> <li>• <b>Data Recovery Plan.</b> Data Recovery Plans for historical resources that cannot be fully avoided shall be prepared in accordance with CEQA Guidelines section 15.126.4(b)(3)(C) and PRC section 2.1083.2, as applicable. The Data Recovery Plan shall outline how the recovery of data from the resource will mitigate impacts to that resource to below a level of significance. The Data Recovery Plan shall describe the level of effort, including numbers and kinds of excavation units to be dug, excavation procedures, laboratory methods, samples (e.g., pollen, sediment, as appropriate) to be collected and analyzed, analysis techniques that will yield information relevant to the aspects of the site that make it an historical resource, and reporting procedure. This plan shall be submitted to the CPUC for review and approval. Once approved, the applicant shall implement the approved plan. Once the data recovery field work is complete, a Data Recovery Field Memo shall be prepared.</li> <li>• <b>Data Recovery Field Memo.</b> Following implementation of the Data Recovery Plan, the Data Recovery Field Memo shall be prepared. The Data Recovery Field Memo shall briefly describe the data recovery procedures in the field and summarize (at a field catalog level) the materials recovery. The Data Recovery Field Memo shall also identify the number and kind of samples recovered that are appropriate for special analyses, including radiocarbon dating, obsidian sourcing, pollen analysis, microbotanical analysis, and others, as applicable. The Data Recovery Field Memo shall be submitted to CPUC for review and approval. Once the Data Recovery Field Memo has been approved, protective barriers may be removed, and work may proceed in the area of the discovery. A Data Recovery Report shall then be prepared.</li> <li>• <b>Data Recovery Report.</b> Within 90 days of submittal of the Data Recovery Field Memo, a Data Recovery Report shall be prepared presenting the results of the data recovery program, including a description of field methods, location and size of excavation units, analysis of materials recovered (including results of any special analyses conducted), and conclusions drawn from the work. The Data Recovery Report shall also indicate where artifacts, samples, and documentation resulting from the data recovery program will be curated. The curation facility shall meet the requirements of 36 Code of Federal Regulations 79. The Data Recovery Report shall be submitted to the CPUC for review and approval. Once approved, the Data Recovery Report shall be filed with the Eastern Information Center. All impacted known resources and all unanticipated resources shall be recorded on DPR 523 forms that shall be filed at the Eastern Information Center with the Data Recovery Report.</li> </ul>	<p>CPUC verifies that work has been halted and that protective barriers have been installed. CPUC verifies that a Data Recovery Field Memo is prepared and a Data Recovery Report is prepared and submitted to CPUC for review and approval. CPUC shall also verify that all impacted known resources and all unanticipated resources shall be recorded on DPR 523 forms that shall be filed at the Eastern Information Center with the Data Recovery Report. If an Evaluation Plan is needed, CPUC shall verify it has been prepared with appropriate measures.</p>	<p>During Construction</p>	<p>Entire project area.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<p><b>MM CR-4: Paleontological Resources Monitoring.</b> Prior to the start of construction, the applicant shall retain a qualified paleontologist. The qualified paleontologist shall be approved by the CPUC and shall monitor all ground-disturbing activities that take place within areas that have a moderate to high potential to contain paleontological resources, consistent with designations shown in Table 4.4-7. The Paleontological Resources Management Plan (APM-CUJ-01) shall show a map of areas requiring monitoring consistent with Table 4.4-7. The paleontological monitor shall have the authority to halt construction in the vicinity of any potential paleontological resource finds to begin implementation of MM CR-5.</p>	<p>SCE shall retain a qualified paleontologist, approved by the CPUC.</p>	<p>During Construction</p>	<p>Construction areas with a moderate to high potential to contain paleontological resources.</p>	
<p><b>MM CR-5: Follow Paleontological Resource Discovery Protocol.</b> In the case that a previously unknown paleontological resource is discovered during construction activities, all work within 15 meters of the resource shall be stopped, and the CPUC-approved paleontologist shall determine, after consulting with SCE, whether the resource can be avoided. If the discovery can be avoided and no further impacts will occur, no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, the paleontologist shall determine whether the resource is unique under Part V of CEQA Guidelines Appendix G. A paleontological resource shall be considered unique if it meets the definition of a significant paleontological resource under the 2010 Society of Vertebrate Paleontology <i>Standard Procedures for the Assessment of Adverse Impacts to Paleontological Resources</i> definition:</p> <p>Significant paleontological resources are fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).</p> <p>Substantiation of the uniqueness conclusion shall be provided to the CPUC for review and approval. If the resource is determined not to be unique, work may commence in the area.</p> <p>If the resource is unique, then work shall remain stopped, and the approved paleontologist shall consult with the applicant and the CPUC regarding methods to ensure that no substantial adverse change would occur to the significance of the resource pursuant to CEQA. Preservation in place, i.e., avoidance, is the preferred method of mitigation for impacts to paleontological resources and shall be required to mitigate impacts to previously undiscovered resources unless the CPUC-approved paleontologist determines that another method would provide superior mitigation of impacts to the resource. Other methods include ensuring that the fossils are recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. Methods of recovery, testing, and evaluation shall adhere to current professional standards for recovery, preparation, identification, analysis, and curation, such as the 2010 Society of Vertebrate Paleontology <i>Standard Procedures for the Assessment of Adverse Impacts to Paleontological Resources</i>. Work can commence following recovery and CPUC approval.</p>	<p>CPUC verifies that the Paleontological Resource Discovery Protocol is followed, including CPUC review and approval of the uniqueness conclusion for the resource and the methods for recovery of the resource.</p>	<p>During Construction</p>	<p>Entire project area.</p>	
<p><b>MM CR-6: Unanticipated Discovery of Human Remains.</b> In the event that human remains or suspected human remains are identified, SCE shall comply with California law, including, but not limited to, the following provisions: CEQA Guidelines section 15064.5(e); PRC sections 5097.94, 5097.98, and 5097.99; and California Health and Safety Code section 7050.5. These laws require Native American consultation for Native American burial sites.</p> <p>The area where the remains are identified shall be flagged off, and all construction activities within 165 feet (50 meters) of the find shall immediately cease. The CPUC, the CPUC-approved cultural resources specialist/archaeologist, SCE, and any other appropriate agency shall be immediately notified, and the cultural resources specialist/archaeologist shall examine the find. If the cultural resources specialist/archaeologist determines that there may be human remains, SCE shall immediately contact the Medical Examiner at the Los Angeles County Coroner's office. The Medical Examiner has two working days to examine the remains after being notified by SCE. If the Medical Examiner believes the remains are Native American, he/she shall notify the NAHC within 24 hours.</p> <p>The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains, and the MLD has 48 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the human remains and any associated grave goods. If the MLD does not make recommendations within 48 hours, the area of the property shall be secured from further disturbance. If there are disputes between the landowners and the MLD, the NAHC shall mediate the dispute and attempt to find a solution. If the mediation fails to provide measures acceptable to the landowner, the landowner or their representative shall reinter the remains and associated grave goods and funerary objects in an area of the property secure from further disturbance. The location of any reburial of Native American human remains shall not be disclosed to the public and shall not be governed by public disclosure requirements of the California Public Records Act, California Government Code § 6250 et seq, unless otherwise required by law. The Medical Examiner shall withhold public disclosure of information related to such reburial pursuant to the specific exemption set forth in California Government Code Section 6254(f).</p>	<p>In the event that human remains are identified, the CPUC, the CPUC-approved cultural resources specialist/archaeologist, SCE, and any other appropriate agency shall be immediately notified. CPUC shall verify that SCE immediately contacts the medical examiner at the Los Angeles County Coroner's Office.</p>	<p>During Construction</p>	<p>Entire project area.</p>	

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<p><b>Geology, Soils, and Minerals</b></p> <p><b>MM GEO-1: Geotechnical Investigation.</b> The applicant will conduct a geotechnical investigation for the proposed project and prepare a geotechnical report documenting the results of the investigation. The geotechnical investigation shall assess the potential for liquefaction, landslides, lateral spreading, seismic ground shaking, and expansive soil. The geotechnical report shall make recommendations of engineering and design measures to incorporate into the proposed project, determined appropriate by a California-licensed Geotechnical Engineer or Certified Engineering Geologist, to mitigate impacts associated with liquefaction, landslides, lateral spreading, seismic ground shaking, and expansive soils. Measures that may be used to minimize impacts could include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• <i>Liquefaction:</i> stabilization of fills, retaining walls, slope coverings, removal of unstable materials, avoidance of highly unstable areas, construction of pile foundations, and/or ground improvements of liquefiable zones.</li> <li>• <i>Landslides and lateral spreading:</i> retaining walls, excavation of unstable materials, avoidance of highly unstable areas.</li> <li>• <i>Seismic ground shaking:</i> energy dissipating devices, bracing, bolting of foundations.</li> <li>• <i>Expansive soil:</i> excavation of expansive soil, draining water away from expansive soils, ground-treatment processes.</li> </ul> <p>SCE shall provide documentation to the CPUC prior to construction that demonstrates these measures have been incorporated into project design.</p>	<p>SCE shall provide documentation to the CPUC prior to construction that demonstrates these measures have been incorporated into project design.</p>	<p>Prior to Construction</p>	<p>Entire project area.</p>	
<p><b>Hazards and Hazardous Materials</b></p> <p><b>MM HZ-1: Hazardous Materials Business Plan.</b> A Hazardous Materials Business Plan (HMBP) shall be submitted to the CPUC and electronically through the California Environmental Reporting System (CERS) for any hazardous materials stored on-site over threshold quantities (55 gallons, 200 cubic feet, or 500 pounds). The plan shall include information on:</p> <ul style="list-style-type: none"> <li>• Hazardous materials stored at the Mesa Substation over threshold quantities.</li> <li>• A site map with key emergency information, including internal access roads, adjacent public streets, sewer drains, emergency response equipment, and access/egress points.</li> <li>• Emergency response plans for release and threatened release of the covered materials.</li> </ul> <p>The HMBP must be submitted at least 30 days prior to storage of covered hazardous materials via the CERS. A receipt, showing that the agency received the plan must be submitted to the CPUC no less than 15 days prior to storage of covered hazardous materials.</p>	<p>The Hazardous Materials Business Plan and its approval by the Los Angeles Certified Unified Program Agency must be submitted to the CPUC at least 30 days prior to storage of covered hazardous materials.</p>	<p>Prior to Construction</p>	<p>Wherever hazardous materials over 55 gallons, 200 cubic feet, or 500 pounds are stored.</p>	
<p><b>MM HZ-2: Hazardous Materials Training.</b> Prior to construction, the applicant will prepare and implement a worker environmental awareness program (WEAP) for CPUC review and approval that includes:</p> <ul style="list-style-type: none"> <li>• Instruction regarding the location of Material Safety Data Sheets, as well as proper labeling, storage, use, transport, and disposal of hazardous materials.</li> <li>• Information on common contaminants that could be uncovered in the proposed project area and instruction regarding appropriate procedures if potentially contaminated soil is present.</li> <li>• Procedures for spill response under the SPCC (MM HZ-3) including notification to appropriate personnel, including the Spill Response Coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination.</li> <li>• Instruction on individual responsibilities under the Clean Water Act, the project SPCC, the project SWPPP, and site-specific BMPs.</li> <li>• Instruction on compliance with OSHA regulations and procedures if landfill gas is encountered during excavations.</li> </ul> <p>The applicant will maintain records documenting attendees at each training.</p>	<p>CPUC verifies Hazardous Materials Training has been prepared and administered, and that SCE maintains records documenting attendees at each training.</p>	<p>Prior to Construction.</p>	<p>Entire project area.</p>	

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures			
Monitoring Requirements	Timing	Location	
<p><b>MM HZ-3: Spill Prevention, Control, and Countermeasure Plan.</b> SCE shall prepare a site-specific SPCC plan that identifies spill response and prevention measures and BMPs. SCE shall indicate site-specific physical conditions that could exacerbate spills, such as drainages to the nearest water bodies. SCE shall name a representative that will be responsible for verifying that construction and operation activities adhere to the SPCC, including implementation of BMPs. SCE shall submit the SPCC to CPUC at least 30 days prior to delivery of any additional transformer oil to the site.</p>	<p>Prior to Construction – Prepare a SPCC plan. During and Post-construction – Implement the SPCC plan.</p>	<p>Entire project area.</p>	
<p><b>MM HZ-4: Contaminated Soil Contingency Plan.</b> Prior to construction, the applicant will submit a Contaminated Soil Contingency Plan to the CPUC for review and approval. The plan will include practices that are consistent with the California Title 8 and Occupational Safety and Health Administration (Cal-OSHA) regulations and will outline steps that would be implemented if contaminated soils are encountered. The objective of the plan will be to minimize risk to the public and to the environment resulting from exposure to and disturbance of contaminated soils. At a minimum, the plan would include procedures for the following steps:</p> <ul style="list-style-type: none"> <li>• Identifying potentially impacted soil;</li> <li>• Establishing a no-work zone for potentially contaminated areas;</li> <li>• Assessing potentially impacted soil;</li> <li>• Notifying appropriate agencies,</li> <li>• Cleanup procedures;</li> <li>• Impacted soil storage;</li> <li>• Verification sampling; and,</li> <li>• Impacted soil characterization and disposal.</li> </ul> <p>During construction an appropriately trained construction personnel, under the supervision of a California licensed registered geologist or professional engineer, will be present to monitor soil conditions during all earthmoving activities. If potentially contaminated soils are encountered during construction, the applicant would implement the Contaminated Soil Contingency Plan to assess the soils and to determine appropriate procedures based on the nature of the contamination, which may include avoidance or collection and analysis to determine appropriate disposal or treatment options.</p>	<p>Prior to construction – Develop a Contaminated Soil Contingency Plan. During Construction – Implement the Contaminated Soil Contingency Plan.</p>	<p>Entire project area.</p>	
<p><b>MM HZ-5: Well Management Plan.</b> Prior to construction, the applicant will prepare and submit to CPUC a Well Management Plan in coordination with OII Landfill and the U.S. EPA in order to prevent contamination of groundwater and subsurface soil. The plan will include procedures for well decommissioning or protection for all monitoring wells located within the footprint of the proposed project. The plan will be reviewed and approved by CPUC prior to construction. Proper well decommissioning or protection/avoidance measures would be implemented prior to beginning other ground disturbing activities within the proposed Mesa Substation site area. The Well Management Plan would address the following:</p> <ul style="list-style-type: none"> <li>• Identification of wells that would be avoided during construction and wells that would be decommissioned,</li> <li>• Well decommissioning schedule,</li> <li>• Well decommissioning procedures,</li> <li>• Procedures for the protection of wells that are to be avoided during construction,</li> <li>• Procedures for granting access to OII Landfill’s monitoring wells during construction activities. Procedures should address compliance to the proposed project’s APMs and MMs.</li> </ul>	<p>Prior to Construction</p>	<p>All project areas containing monitoring wells.</p>	

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures			
Hydrology and Water Quality	Monitoring Requirements	Timing	Location
<p><b>MM HY-1: Stormwater Pollution Prevention Plan.</b> The applicant will obtain coverage for the project under the Construction General Permit (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). The applicant will prepare a SWPPP to reduce the potential for water pollution and sedimentation from construction. BMPs to be included in the SWPPP that must be submitted to the SWRCB shall include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• The applicant shall not stockpile brush, loose soils, excavation spoils, or other similar debris material within sensitive habitats.</li> <li>• If visible dust is present during construction activities, standard dust suppression techniques (e.g., water spraying) will be used in all ground disturbance areas.</li> <li>• During construction activities, measures would be in place to ensure that contaminants are not discharged from construction sites. The SWPPP would define areas where hazardous materials and trash would be stored; where vehicles would be parked, fueled and serviced; and where construction materials would be stored.</li> <li>• Runoff, sedimentation, and erosion would be minimized through the use of BMPs such as water bars, silt fences, staked straw bales, wattles, and mulching and seeding of all disturbed areas. These measures will be designed to minimize ponding, eliminate flood hazards, and avoid erosion and siltation into any creeks, streams, rivers, or bodies of water, and to preserve roadways and adjacent properties. BMPs would be included for areas where helicopters would be landed, fueled, and serviced or used for construction activities.</li> <li>• Equipment storage, fueling, and staging areas would be located in upland sites away from riparian areas or other sensitive habitats. These designated areas would be located in such a manner as to prevent any runoff from entering sensitive habitat. Where vehicle maintenance (excluding fueling) cannot be avoided in areas outside those previously specified, these maintenance activities shall be performed at least 150 feet from all aquatic resources or as specified by agency permits, on an impermeable bladder or tarp specified for such maintenance activities. Project-related spills of hazardous materials would be cleaned up immediately and contaminated soils removed to approved disposal areas.</li> <li>• Implement measures such as sandbags, silt screens, cleanup of spills of hazardous materials, and cleanup of sediment to prevent polluted (with sediment or hazardous materials) runoff from work areas in paved streets from entering the storm drain system</li> <li>• Implement measures such as silt screens, cleanup of spills of hazardous materials, cleanup of sediment, secondary containment for hazardous materials, and avoidance of activities that disturb sediment or have a high potential for hazardous materials spills immediately before or during rain to prevent polluted (with sediment or hazardous materials) runoff from staging areas from draining into water ways such as washes, drainages, and ditches and from entering municipal storm drain systems.</li> </ul> <p>Verification of Construction General Permit obtained from the State Water Resources Control Board will be provided to the California Public Utilities Commission (CPUC) at least 30 days prior to start of construction. Updated SWPPPs will be kept onsite during construction and provided to the CPUC on request during construction.</p> <p><b>MM HY-2: Compliance with WDRs.</b> Work in waters of the state shall be conducted in conformance with WDRs obtained for the proposed project. Mitigation measures shall be implemented in accordance with WDRs, and they may include avoidance, reduction, or compensatory measures.</p> <p>Groundwater extracted as a result of dewatering during construction shall not be discharged to Waters of the State unless such activities are covered by a WDR. Extracted groundwater shall be disposed of in one of the following manners in the absence of a WDR:</p> <ul style="list-style-type: none"> <li>• Discharge to an upland area where it will not enter Waters of the State but would instead evaporate or infiltrate.</li> <li>• Use for dust control.</li> <li>• Use for irrigation water.</li> <li>• Use for other construction needs.</li> <li>• Dispose of at a licensed facility if water is suspected of being contaminated or degraded.</li> </ul>	<p>Verification of Construction General Permit coverage approval and the approved SWPPP(s) will be provided to the CPUC at least 30 days prior to start of construction.</p>	<p>Prior to Construction – Prepare an SWPPP. During Construction – Implement the SWPPP.</p>	<p>Entire project area.</p>
	<p>CPUC verifies that all work within waters of the state are conducted in conformance with WDRs, and that appropriate mitigation measures are implemented in accordance with WDRs.</p>	<p>During Construction</p>	<p>All areas where construction would occur within waters of the state.</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<p><b>MM HY-3: Construction Drainage Plan.</b> SCE shall prepare and implement a Drainage Plan, or incorporate the requirements of this mitigation measure into the SWPPP, which ensures runoff during construction activities at the Mesa Substation site will not exceed drainage capacity of the storm water system and other drainage facilities. Measures that can be employed can include:</p> <ul style="list-style-type: none"> <li>Constructing the detention basin earlier in construction.</li> <li>Constructing temporary detention basins on site.</li> <li>Creating infiltration areas to limit runoff that enters the storm water system.</li> </ul> <p>If the SWPPP is not used to satisfy the conditions of this mitigation measure, SCE shall submit the plan to Monterey Park and CPUC for review and approval prior to beginning construction activities at the substation site.</p> <p><b>MM HY-4: Detention Basin Design.</b> SCE shall design the detention basin on the proposed Mesa Substation site in accordance with the Los Angeles County Department of Public Works Hydrology Manual and in compliance with the City of Monterey Park's requirements (LACDPW 2006). The Hydrology Manual contains techniques to calculate runoff flow rates and volumes based on Los Angeles County's historic precipitation and runoff. As applicable, the detention basin shall be designed in accordance with the Los Angeles County Department of Public Works Low Impact Development Standards Manual (LACDPW 2014).</p>	<p><b>MM HY-5: Dam Failure Evacuation Training.</b> As part of the Worker Environmental Awareness Program, SCE shall train construction workers on evacuation routes in the event of dam failure. Workers to be trained shall include those located in the dam inundation areas of the Garvey Reservoir south dam, Eaton Canyon Dam, Garvey Reservoir north dam, and Santa Fe Dam.</p>	<p>SCE shall submit the plan to Monterey Park and CPUC for review and approval prior to beginning construction activities at the substation site.</p> <p>CPUC shall verify that the detention basin is designed in accordance with the Los Angeles County Department of Public Works Hydrology Manual prior to beginning construction of the proposed project.</p> <p>CPUC shall verify that SCE trains all construction workers located in the dam inundation areas of the Garvey Reservoir south dam, Eaton Canyon Dam, Garvey Reservoir north dam, and Santa Fe Dam on evacuation routes in the event of dam failure prior to construction of the proposed project.</p>	<p>Prior to Construction - Prepare a Drainage Plan. During Construction - Implement the Drainage Plan.</p> <p>Prior to Construction</p> <p>Prior to Construction</p>	<p>Mesa Substation site</p> <p>Mesa Substation site</p> <p>Work located within dam inundation areas of the Garvey Reservoir south dam, Eaton Canyon Dam, Garvey Reservoir north dam, and Santa Fe Dam.</p>
<p><b>Noise and Vibration</b></p> <p><b>MM NV-1: Noise Control Plan.</b> Prior to the start of construction, the applicant shall prepare a Noise Control Plan to ensure that project construction noise does not:</p> <ul style="list-style-type: none"> <li>Increase ambient noise levels by more than 10 dBA (8-hour <math>L_{eq}</math>), or</li> <li>Exceed the noise level specified in the applicable jurisdiction's noise ordinance.</li> </ul> <p>The Noise Control Plan measures shall be selected based on the specific equipment used activity conducted in specific locations, and proximity to sensitive receptors. The applicant shall submit the Noise Control Plan to the CPUC at least 30 days prior to the start of construction for review and approval. Measures that may be included in the Noise Control Plan to reduce noise levels by 10 dBA or to the noise level specified in the applicable jurisdiction's noise ordinance are:</p> <ul style="list-style-type: none"> <li>Temporarily and safely install and maintain absorptive noise control barriers in the perimeter of construction sites and/or between stationary construction equipment and sensitive noise receptors when located within 200 feet of noise-intensive equipment operating more than 4 hours a day. The applicant shall notify all residents located within 50 feet of the absorptive barriers.</li> <li>Limit heavy-equipment activity adjacent to residences or other sensitive receptors to the shortest possible period required to complete the work activity.</li> <li>Ensure that proper mufflers, intake silencers, and other noise reduction equipment are in place and in good working condition.</li> <li>Maintain construction equipment according to manufacturer recommendations.</li> <li>Minimize unnecessary construction equipment idling.</li> </ul>	<p>Verify identification of a Construction Relations Officer and mailing of notices at least 30 days prior construction. Review monthly reports to the CPUC.</p> <p>Verify implementation of noise control measures.</p>	<p>Prior to Construction - Prepare a Noise Control Plan. During Construction - Implement the Noise Control Plan.</p>	<p>Entire project area.</p>	

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<ul style="list-style-type: none"> <li>Reduce noise from back-up alarms (alarms that signal vehicle travel in reverse) in construction vehicles and equipment by providing a layout of construction sites that minimizes the need for back-up alarms and use flagmen to minimize the time needed to back up vehicles.</li> <li>When possible, use construction equipment specifically designed for low noise emissions (e.g., equipment that is powered by electric or natural gas engines instead of diesel or gasoline reciprocating engines).</li> <li>Where practical, locate stationary equipment such as compressors, generators, and welding machines away from sensitive receptors.</li> </ul> <p>The Noise Control Plan shall detail the frequency, location, and methodology for noise modeling and monitoring prior to and during various construction and restoration activities to ensure that generated noise levels do not exceed 10 dBA above existing ambient noise levels or the applicable jurisdiction noise standards. These methods shall include monitoring noise levels at the boundary of construction areas and using industry-standard noise modeling techniques to predict noise levels at adjacent sensitive receptors. If modeled levels exceed the greater than 10 dBA above existing ambient noise or applicable ordinance threshold, noise monitoring will be conducted to verify model results. The Noise Control Plan shall detail the actions and procedures that the applicant shall implement to mitigate impacts in the event that monitoring detects noise levels that have exceeded the criteria specified in this EIR. Noise level measurements shall be conducted in compliance with the City of Monterey Park, City of Montebello, City of Commerce, City of Bell Gardens, City of Pasadena, and Los Angeles County requirements, as applicable.</p> <p>The Noise Control Plan shall designate a Construction Relations Officer who is readily available to answer questions or respond to complaints during periods of construction or restoration. The applicant shall send pre-construction notifications to sensitive receptors located within 100 feet of construction activities at least 30 days prior to construction. The notification shall include a phone number for the public to contact the Construction Relations Officer. Additionally, each construction site shall include clearly visible signs with the Construction Relations Officer's public phone number. The applicant shall submit monthly reports to the CPUC summarizing the complaints submitted to the Construction Relations Officer. The summary reports shall describe how each complaint was addressed, if and when it was resolved, and available contact information for the member of the public who submitted the complaint.</p>	<p>SCE must submit the noise measurements in the form of a memorandum to the CPUC within two weeks of measurement. Reports shall be submitted until the CPUC verifies that operation noise does not exceed the City of Monterey Parks' nighttime threshold.</p> <p>The CPUC shall verify that notice to all property owners within 660 feet of the proposed helicopter operation areas is provided at least one week prior to helicopter operation.</p> <p>SCE must submit helicopter locations to the CPUC for review and approval at least 30 days prior to use of the helicopter location.</p> <p>SCE shall provide documentation of the notice and coordination to the CPUC at least 20 days prior to construction. The CPUC shall verify that notice has been provided to Whittier Narrows at least 30 days prior to</p>	<p>Post-construction</p> <p>Prior to Construction – provide notice at least 7 days prior to helicopter operation.</p> <p>Prior to Construction</p> <p>Prior to Construction</p>	<p>Mesa Substation site</p> <p>All project areas in which helicopter operations would occur.</p> <p>Helicopter take-off and landing areas.</p> <p>Whittier Narrow Natural Area</p>
<p><b>MM NV-2: Operational Substation Noise Monitoring</b> As soon as Mesa Substation is fully operational, the applicant shall conduct noise measurements to ensure that the operational noise levels from the substation transformers do not exceed the City of Monterey Park's nighttime noise standard (50 dBA or actual measured median ambient noise level, whichever is greater) at the closest receptor. If the nighttime noise standard is exceeded, the applicant shall implement engineering solutions, including, but not limited to, barrier walls around the transformer, sound absorbing panels, and/or noise cancellation methods until the project does not exceed the nighttime noise standard. SCE must submit the noise measurements in the form of a memorandum to the CPUC within two weeks of measurement. Reports shall be submitted until the CPUC verifies that operation noise does not exceed the City of Monterey Park's nighttime noise standard.</p>	<p>The CPUC shall verify that notice to all property owners within 660 feet of the proposed helicopter operation areas is provided at least one week prior to helicopter operation.</p> <p>SCE shall provide at least one week's advance notice to all property owners within 660 feet of the proposed helicopter operation areas. The announcement would state that the use of helicopters is anticipated and would provide the start date, anticipated completion dates, hours of helicopter usage, and a telephone contact number for questions or complaints during construction. In addition, helicopters would maintain a height of at least 500 feet when passing over residential areas, as well as a lateral distance of at least 500 feet from all schools and hospital buildings, except when they are at construction areas or actively assisting with construction activities.</p>	<p>Prior to Construction</p> <p>Prior to Construction</p>	<p>Mesa Substation site</p> <p>All project areas in which helicopter operations would occur.</p> <p>Helicopter take-off and landing areas.</p> <p>Whittier Narrow Natural Area</p>
<p><b>MM NV-4: Positioning of Helicopter Landing and Takeoff Areas.</b> SCE shall position helicopter landing and takeoff areas in Staging Yards 1, 2, and 3 as far away as feasible from sensitive receptors, while not sacrificing the safety of helicopter operations due to hazards (e.g., transmission lines) in and around the staging yards. SCE must submit helicopter locations to the CPUC for review and approval at least 30 days prior to use of the helicopter location.</p>	<p>SCE shall provide documentation of the notice and coordination to the CPUC at least 20 days prior to construction. The CPUC shall verify that notice has been provided to Whittier Narrows at least 30 days prior to</p>	<p>Prior to Construction</p>	<p>Whittier Narrow Natural Area</p>
<p><b>MM NV-5: Noise Notification and Coordination for Whittier Narrows Natural Area.</b> The applicant shall provide notice to the Whittier Narrows Natural Area at least 30 days prior to construction activities occurring in that area to alert nearby users of the construction activities and give them the opportunity to avoid the noise. The notice shall include dates, times, and descriptions of construction activities, in addition to directions to at least two comparable alternative nearby recreational facilities. The applicant shall also coordinate with the Whittier Narrows Natural Area to ensure that activities causing an increase in noise of over 10 dBA above ambient noise levels do not occur in the Whittier Narrows Natural Area during any planned special events. SCE shall provide documentation of the notice and coordination to the CPUC at least 20 days prior to construction.</p>	<p>SCE shall provide documentation of the notice and coordination to the CPUC at least 20 days prior to construction. The CPUC shall verify that notice has been provided to Whittier Narrows at least 30 days prior to</p>	<p>Prior to Construction</p>	<p>Whittier Narrow Natural Area</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<p><b>Public Services and Utilities</b></p> <p><b>MM PS-1: Relocation Agreement with Metropolitan Water District.</b> Prior to construction that would take the MWD's 72-inch Middle Feeder Pipeline out of service, the applicant shall reach an agreement with the MWD that will identify an alternate alignment that crosses the project site. This relocation agreement will enable the MWD to maintain reliable deliveries of treated water to its member agencies during relocation of the pipeline. SCE shall submit to the CPUC information from the MWD confirming that relocation of the pipeline will not result in inability to adequately serve customers. SCE shall submit this documentation at least 30 days prior to the pipeline being taken out of service.</p>		<p>construction and that coordination has occurred such that noise levels do not violate identified maximums.</p> <p>SCE shall submit to the CPUC information from the MWD confirming that relocation of the pipeline will not result in inability to adequately serve customers. SCE shall submit this documentation at least 30 days prior to the pipeline being taken out of service.</p>	<p>Prior to Construction</p>	<p>Main project area.</p>
<p><b>Traffic and Transportation</b></p> <p><b>MM TT-1: Traffic Control Plan.</b> SCE shall prepare and implement a Traffic Control Plan consistent with the California Joint Utility Traffic Control Manual. SCE shall submit the Traffic Control Plan to Caltrans, the City of Monterey Park, and the City of Montebello for review and comment prior to submitting it to the CPUC for review and approval at least 60 days prior to the start of construction. The Traffic Control Plan shall include at a minimum, measures to ensure that:</p> <ol style="list-style-type: none"> <li>1. Significant impacts to affected intersections during the AM or PM peak hours (and during the specified phase) are reduced to less than significant levels, i.e., reduce the V/C increase resulting from the proposed project at each identified intersection to at or below the applicable threshold. Primary measures may include: <ul style="list-style-type: none"> <li>• Limiting project-related heavy truck trips during peak hours (e.g., through scheduling deliveries outside of peak hours) so as to reduce trips occurring during peak hours; and</li> <li>• Limiting project construction worker vehicle trips during peak hours (e.g., through requiring carpooling) so as to reduce trips occurring during peak hours.</li> </ul> </li> <li>2. Significant impacts on SR 60, Greenwood Avenue, Loveland Street, and other nearby roadways are reduced to less than significant levels, i.e., reduce excessive interruptions in traffic flow resulting from temporary lane closures. Primary measures may include the following: <ul style="list-style-type: none"> <li>• SCE shall follow recommended considerations of the California Manual on Uniform Traffic Control Devices (CA MUTCD) latest edition, including proper signage, avoiding abrupt changes in geometrics, reducing traffic volume by using alternate routes scheduling work in off-peak hours, and complying with the Americans with Disabilities Act of 1990; and</li> <li>• No work shall occur in Caltrans ROW until Caltrans issues the encroachment permit and approves the Traffic Control Plan.</li> </ul> </li> <li>3. Significant impacts on Potrero Grande Drive, East Markland Drive, and other nearby roadways are reduced to less than significant levels, i.e., reduce hazards from slow moving vehicles entering and exiting the substation site. Primary measures may include the following: <ul style="list-style-type: none"> <li>• SCE shall post slow truck warning signage at appropriate locations during truck delivery and exit hours (e.g., along Potrero Grande Drive) when there is a possibility for slow trucks to exit the substation site to warn drivers of slow trucks exiting the substation site onto East Markland Drive and Potrero Grande Drive. Signage shall adhere to the CA MUTCD.</li> </ul> </li> <li>4. Significant impacts to affected roadways used by overweight or oversized vehicles are reduced to less than significant levels, i.e., repair to pre-project conditions any roads or road infrastructure (e.g., curbs and medians) damaged by project-related vehicle traffic. SCE shall comply with local permit conditions related to road damage to reduce impacts to less than significant. Primary measures may include the following: <ul style="list-style-type: none"> <li>• Documenting roadway conditions with photographs prior to the project along roads identified for heavy vehicle use in the project's</li> </ul> </li> </ol>		<p>A project-specific Traffic Management Plan is prepared by SCE according to provisions identified in this mitigation measure. SCE shall submit the plan for CPUC review and approval at least 60 days prior to the start of construction.</p> <p>Prior to Construction – Prepare a Peak Period Traffic Management Plan. During Construction – Implement the Peak Period Traffic Management Plan. Post Construction – Repair Roadway Damage</p>	<p>Entire project area.</p>	

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p>Traffic Impact Analysis; and</p> <ul style="list-style-type: none"> <li>Taking photographs after the project and after any repairs that document restoration of pre-project pavement conditions. Documentation of original conditions and repair shall be submitted to the CPUC for review and verification within 30 days of repair completion.</li> </ul> <p>5. Significant impacts to local emergency service providers are reduced to less than significant levels, i.e., maintain access for emergency service vehicles. Primary measures may include the following:</p> <ul style="list-style-type: none"> <li>Maintaining good public relations by assessing the needs of road users, abutting property owners, and emergency service providers (law enforcement, fire fighters, and medical medical) and cooperating with various news media;</li> <li>SCE shall notify local emergency service providers (i.e., police departments, ambulance services, and fire departments) of road closures at least one week prior to the closure;</li> <li>SCE shall notify the emergency service provider of the location, date, time, and duration of closure; and</li> <li>SCE shall also make provisions to maintain emergency vehicle access at all times in coordination with local emergency service providers, such as keeping metal plates available to cover open trenches.</li> </ul> <p>6. Significant impacts to public transit, pedestrians, and bicyclists are reduced to less than significant levels, i.e., maintain safe conditions for pedestrians and bicyclists during construction of the proposed project. The project shall allow for safe vehicle, bicyclist, and pedestrian passage through construction zones in consideration of basic safety principles to route roadway users through construction zones using roadway geometrics and features and traffic control devices comparable to normal roadway situation as possible. The Traffic Control Plan's level of detail shall be appropriate to the complexity of the project work, and primary measures may include:</p> <ul style="list-style-type: none"> <li>Notifying LA Metro and other public transit providers of construction along existing public transit routes. SCE shall work with transit providers to temporarily relocate transit stops during construction, if needed;</li> <li>Providing pedestrians with reasonably safe, convenient, and accessible paths that replicate as nearly as possible the most desirable characteristics of the existing paths (e.g., maintaining sidewalk and bicycle access on at least one side of affected streets during construction);</li> <li>Laying out plans for notifications and a process for communication with affected transit riders, pedestrians, and bicyclists prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which transit routes, bus stops, sidewalks, and bicycle routes would be affected on which days and for how long), and a toll-free telephone number for receiving questions or complaints;</li> <li>Posting detour signs during construction of alternative routes for pedestrians and bicyclists, applying the CA MUTCD principles for proper marking, signing, and flagging; and</li> <li>Installing steel plates over open trenches in inactive construction areas to maintain existing bicycle and pedestrian access after construction hours.</li> </ul> <p>7. Significant impacts to the Whittier Narrows park-and-ride lot are reduced to less than significant levels, i.e., maintain safe entrance and egress from the Santa Anita Avenue entrance. Primary measures may include the following:</p> <ul style="list-style-type: none"> <li>SCE shall coordinate with Los Angeles County and the Whittier Narrows Recreation Area so that SCE can provide traffic control for two-way traffic at the Santa Anita Avenue entrance to the Whittier Narrows park-and-ride lot during the Durfee Avenue exit closure.</li> </ul> <p>In addition, the Traffic Control Plan shall ensure that:</p> <ul style="list-style-type: none"> <li>Acceptable levels of operation for all transportation modes are provided and routine day and night inspections of the plan's elements are implemented;</li> </ul>			

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures	Monitoring Requirements	Timing	Location
<p>• Roadside safety is maintained during the life of the project to accommodate disabled vehicles, run-off-the-road incidents, and emergency situations; and</p> <p>• Appropriate field workers and management personnel receive training appropriate to the job decisions each individual is required to make.</p> <p>Specific measures would depend on the final construction schedule and residing location of construction workers. Measures implemented as part of the plan shall not result in exceedance of applicable thresholds as described in this document at other impacted intersections. The plan shall also demonstrate that mitigation would not result in V/C to exceed thresholds at significantly impacted and non-significantly impacted roads and intersections. Roadway, highway, and lane closure plans shall be prepared and implemented as required and in coordination with the applicable local and Caltrans jurisdictions. Appropriate advance notifications shall be made to the affected jurisdictions and affected property owners; copies of all coordination and notification shall be provided to the CPUC.</p> <p>The plan shall describe locations and durations of:</p> <ul style="list-style-type: none"> <li>• Full road closures</li> <li>• Lane closures</li> <li>• Bicycle lane closures</li> <li>• Sidewalk or pedestrian path closures</li> <li>• Transit stop closures</li> <li>• Parking lot and Park-N-Ride lot closures</li> </ul> <p>To the extent that compliance with applicable permit requirements, e.g., obtaining required encroachment permits from Caltrans and/or other agencies with jurisdiction over work done within roadways, would reduce identified significant traffic impact(s) consistent with the performance standards set forth in MM TT-1, SCE may submit such permit(s) in lieu of addressing that impact or impacts in the Traffic Control Plan, subject to review and approval by the CPUC prior to the start of construction.</p> <p><b>MM TT-2: Helicopter Lift Plan.</b> SCE's helicopter contractor shall coordinate with FAA and obtain FAA-required approvals for helicopter operations. SCE's contractor's submittal shall include a Helicopter Lift Plan for operations within 1,500 feet (457 meters) of a congested area or within 1,500 feet (457 meters) of residences in compliance with 14 CFR 133.33, which requires that flights be conducted so emergency landings and release of external load can be accomplished without safety risks to people or property when operating over congested areas. Measures may include:</p> <ul style="list-style-type: none"> <li>• Designating who is responsible for equipment inspections</li> <li>• Communication procedures</li> <li>• Establishment of exclusion zones where pedestrians will not be allowed</li> <li>• Training of personnel in safety requirements and procedures</li> </ul> <p>The Plan and record of FAA approval shall be provided to the CPUC prior to commencing helicopter operations.</p> <p><b>MM TT-3: FAA No-Hazard Determination.</b> SCE shall obtain a determination of no-hazard from the FAA when notification under 14 CFR 77 is required for:</p> <ul style="list-style-type: none"> <li>• Use of construction equipment, such as cranes; and</li> <li>• Installation of structures, such as lattice steel towers.</li> </ul> <p>SCE shall provide documentation of the FAA finding to the CPUC prior to the use of equipment or installation of structures that require notification under 14 CFR 77.</p> <p><b>MM TT-4: Pasadena City College Community Education Center Parking.</b> If proposed project work at the Goodrich Substation would result in parking spot closures at the Pasadena City College Community Education Center parking lot, SCE shall coordinate scheduled closures with the Pasadena City College Community Education Center on the following:</p>	<p>The Plan and record of FAA approval shall be provided to the CPUC prior to commencing helicopter operations.</p>	<p>Prior to Construction</p>	<p>Areas where helicopters will be used within 1,500 feet of residences.</p>
	<p>SCE shall provide documentation of the FAA finding to the CPUC prior to the use of equipment or installation of structures that require notification under 14 CFR 77.</p> <p>SCE shall submit the letter to the CPUC 30 days prior to Community Education Center</p>	<p>Prior to Construction</p> <p>During Construction</p>	<p>All project areas where construction equipment, such as cranes, and structures, such as steel lattice towers, are being installed.</p> <p>Community Education Center parking lot</p>

Table 1-1 Final Mitigation Monitoring and Reporting Plan APMs and Mitigation Measures		Monitoring Requirements	Timing	Location
<ul style="list-style-type: none"> <li>The dates of parking spot closures; and</li> <li>The number of parking spots that would be closed.</li> </ul> <p>SCE shall submit documentation to the CPUC 30 days prior to Community Education Center parking spot closure demonstrating coordination with the Pasadena City College Community Center and concurrence from the Pasadena City College Community Education Center that there will be sufficient parking spots to accommodate SCE's work and the Pasadena City College Community Education Center's parking needs.</p>		parking spot closure.		

(End of Attachment 2)

# **ATTACHMENT 3**

## **NTP-1 Checklist – Guidance Document – Potential Permits and Plans Required Prior to NTP-1 Issuance**

### Mitigation Plans Required

- Landscape and Aesthetic Treatment Plan<sup>1</sup> prepared per MM AES-3
- Habitat Restoration and Mitigation Plan<sup>2</sup> prepared per MM BR-3
- Noxious and Invasive Weed Control Plan prepared per MM BR-4
- Workers Environmental Awareness Program prepared per MM BR-5, MM CR-2, MM HZ-2, and MM HY-5
- Southern California Black Walnut Restoration Plan prepared per MM BR-7
- Nesting Bird Management Plan<sup>3</sup> prepared per MM BR-11
- Avian Protection Plan<sup>4</sup> prepared per MM BR-15
- Hazardous Materials Business Plan prepared per MM HZ-1
- Spill Prevention, Control, and Countermeasures Plan prepared per MM HZ-3
- Contaminated Soil Contingency Plan prepared per MM HZ-4
- Well Management Plan<sup>5</sup> prepared per MM HZ-5
- Construction Drainage Plan prepared per MM HY-3
- Noise Control Plan prepared per MM NV-1
- Traffic Control Plan<sup>6</sup> prepared per MM TT-1
- Paleontological Resource Management Plan prepared per APM CUL-1

### Surveys, documentation, and additional requirements per mitigation measures

- Provide estimate of NO<sub>x</sub> emissions and evidence of NO<sub>x</sub> credit purchased for anticipated exceedance of daily thresholds per MM AQ-4
- Pre-construction surveys for special status plants; if plants cannot be avoided then Restoration Plan will be prepared per APM BIO-1
- Pre-construction protocol level surveys for least Bell's vireo and coastal California gnatcatcher per MM BR-12 and MM BR-13
- Provide geotechnical investigation documentation per MM GEO-1

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<sup>1</sup> City of Monterey Park review

<sup>2</sup> USFWS and CDFW review

<sup>3</sup> USFWS and CDFW review and comment

<sup>4</sup> USFWS and CDFW review and comment

<sup>5</sup> Coordinate with OII Landfill and US EPA

<sup>6</sup> Caltrans, City of Monterey Park, and City of Montebello review

- Calculate the total amount of VOC/ROG ETCs to be purchased per MM AQ-2
- Provide documentation from MWD regarding relocation of pipeline per MM PS-1
- Provide verification that the detention basin design is in accordance with LADPW Low Impact Development Standards Manual per MM HY-4

Permits or consultation required<sup>7</sup>

- State Water Resources Control Board - NPDES coverage and SWPPP, Section 401 Permit, Section 404 Permit/Coverage
- USFWS take authorization (if required)
- CDFW take authorization (if required)
- CDFW Section 1600/Lake and Streambed Alteration Agreement
- Caltrans encroachment permit for work within, under, or above a state or interstate highway ROW
- South Coast Air Quality Management District Rule 403 Permit for fugitive dust
- Los Angeles County Department of Regional Planning consultation for Regional Habitat Linkages and Wildlife Corridors
- Los Angeles County Department of Public Works (LADPW) - Construction and Encroachment Permit, Joint Trench Utility Permit, Service Cut Permit
- LADPW - permits required for tree removal and grading for access roads or work areas within Los Angeles County jurisdiction
- LAPDW - encroachment permit for flood control channels/storm drains
- Cities of Monterey Park, Montebello, Commerce, Pasadena, and Bell Gardens - encroachment, tree removal, and grading permits

(End of Attachment 3)

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<sup>7</sup> Receipt of permit is in part dependent on the agency