Appendix 2

Mitigation Monitoring, Compliance, and Reporting Program

MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM FOR THE MANNING 500/230 kV SUBSTATION PROJECT

INTRODUCTION

The California Environmental Quality Act (CEQA) and the State CEQA Guidelines (Public Resources Code [PRC] Section 21081.6 and California Code of Regulations Sections 15091[d] and 15097) require public agencies to "adopt a reporting and monitoring program on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects." A Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) is required for the proposed project because the Initial Study/Mitigated Negative Declaration (IS/MND) identifies potential significant adverse impacts related to the project implementation, and applicant-proposed measures (APMs), construction measures (CMs), and mitigation measures have been identified to reduce those impacts. If the project is approved by the California Public Utilities Commission (CPUC), the CPUC would also adopt the MMCRP.

PURPOSE OF MITIGATION MONITORING, COMPLIANCE AND REPORTING PROGRAM

This MMCRP has been prepared to ensure that all required APMs, CMs, and mitigation measures are implemented and completed in a satisfactory manner prior to or during implementation of the proposed project. The CPUC will use this MMCRP to facilitate the implementation of APMs and mitigation measures by LS Power Grid California, LLC (LSPGC), and CMs by Pacific Gas and Electric (PG&E), as well as the monitoring, compliance, and reporting activities of the CPUC.

If the CPUC approves LSPGC's application to construct and operate the Manning Substation and 230 kV transmission line, LSPGC will be responsible for implementing all APMs that are incorporated into LSPGC's components of the proposed project and all mitigation measures applicable to construction, operation, and maintenance of the project. Although PG&E is not an applicant for the project, the PG&E project components and the LSPGC project components together constitute the project as the whole of an action being evaluated under CEQA in the IS/MND.

The PG&E facilities are not part of the application proceeding and will not be authorized under this specific CPUC decision. PG&E has determined that looping (i.e., interconnecting) the existing transmission lines into the new Manning Substation would constitute "extensions" of existing transmission facilities pursuant to Section III.A of General Order (GO) 131-E, while reconductoring the lines would constitute "modifications" of the existing transmission facilities. Therefore, PG&E plans to file its notice of construction as a Tier 2 advice letter under GO 131-E Section III.B instead of filing a separate application. PG&E has developed and incorporated CMs into PG&E's components of the proposed project. Because PG&E is not an applicant in this proceeding, PG&E has committed to additional CMs beyond those originally included in LSPGC's application, rather than mitigation measures, to reduce impacts pertinent to PG&E project components below the level of significance.

LSPGC, as the applicant and in accordance with State CEQA Guidelines Section 15070, has agreed to the mitigation measures included in this MMCRP. PG&E, as a non-applicant and reflecting the CPUC's authority under GO 131-E, has also agreed to the additional CMs. APMs and CMs are intended to be implemented and enforced in the same way as mitigation measures consistent with Section 15126.4 of the State CEQA Guidelines.

The table herein has been prepared to document APMs, CMs, and mitigation measures, applicable party, implementing actions, and provides space to confirm implementation of the measures. The numbering of measures follows the numbering sequence in the IS/MND.

ROLES AND RESPONSIBILITIES

Though other federal, State, and local agencies may have permit and approval authority over some aspects of the project, the CPUC would continue to act as the lead agency for monitoring compliance with all measures required by the adopted IS/MND. All approvals obtained by LSPGC and PG&E would be submitted to the CPUC prior to commencing the activity for which the approvals were obtained and as described further below.

Monitoring

As the lead agency under CEQA, the CPUC is responsible for monitoring the project to ensure that the required APMs, CMs, and mitigation measures are implemented, as described in the IS/MND. The CPUC will be responsible for ensuring full compliance with the provisions of the MMCRP and has responsibility for implementing all monitoring. The CPUC may delegate duties and responsibilities for monitoring to other mitigation monitors or consultants as deemed necessary. The CPUC and mitigation monitors designated by the CPUC shall constitute the CPUC Environmental Monitoring Team. The CPUC will ensure that the person(s) delegated any responsibilities are qualified to monitor for compliance. The CPUC will be responsible for enforcing the procedures for monitoring through the environmental monitor. The environmental monitor shall note any problems with monitoring, notifying appropriate agencies or individuals about any problems, and report the problems to the CPUC. The CPUC has the authority to halt any activity associated with the project if the activity is determined to be a deviation from the approved project or the adopted APMs, CMs, or mitigation measures. PG&E is not an applicant for this proceeding and has plans to file a notice of construction. Therefore, monitoring of LSPGC and PG&E will be conducted separately unless shared monitoring is coordinated by LSPGC and PG&E for project components in close proximity (e.g., where the LSPGC Manning-Tranquillity 230 kV line and PG&E Panoche-Manning loop-in line run parallel to one another east of the proposed Manning Substation).

Project Variances

The CPUC, along with the designated environmental monitor, will ensure that any variance process, which shall be designed specifically for the project, or any deviation from the procedures identified under the monitoring program, will remain consistent with the CEQA requirements. A project variance will not be approved by the CPUC if it creates a new significant environmental impact. As defined in the MMCRP, a variance should be strictly limited to minor project changes that will not trigger other permit requirements, that do not increase the severity of an impact or create a new impact, and that clearly and strictly comply with the intent of the measure. A change to the project that has the potential for creating significant environmental effects shall be evaluated to determine whether supplemental CEQA review is required pursuant to CEQA Section 21166. Any proposed deviation from the approved project and adopted measures, including correction of such deviation, shall be reported immediately by PG&E or LSPGC to the CPUC and the CPUC's mitigation monitor for review and CPUC approval. In some cases, a variance may require approval by a CEQA responsible agency.

Mitigation Compliance Responsibility

LSPGC is responsible for successfully implementing all the adopted APMs and mitigation measures in this MMCRP, while PG&E is responsible for implementing all CMs in this MMCRP. The designees from LSPGC and PG&E responsible for successfully implementing the measures shall respectively be known as the LSPGC Environmental Compliance Team and the PG&E Environmental Compliance Team. Standards for successful mitigation are contained in the measures that include such requirements as obtaining permits or avoiding a specific impact entirely.

Dispute Resolution Process

The MMCRP is expected to reduce or eliminate potential disputes between CPUC staff and LSPGC and/or PG&E concerning implementation of the adopted measures. Issues should first be addressed informally at the field level between the CPUC Environmental Monitoring Team and the LSPGC Environmental Compliance Team and/or PG&E Environmental Compliance Team with questions that may be raised to the LSPGC and/or PG&E Project Manager or Construction Manager, as necessary. Should the issue not be resolved at the field level, the following procedure will be observed for dispute resolution between CPUC staff and LSPGC and/or PG&E:

- Disputes and complaints should be directed to the CPUC's designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.
- Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviation from the approved project or MMCRP.

GENERAL MONITORING PROCEDURES

Mitigation Monitor

Many of the monitoring procedures will be conducted during the construction phase of the project. The CPUC and the CPUC mitigation monitor are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with LSPGC and PG&E. To oversee the monitoring procedures and to ensure success, the mitigation monitor assigned to the construction must be on site during that portion of construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The mitigation monitor is responsible for ensuring that all procedures specified in this MMCRP are followed.

Construction Personnel

A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures, APMs, and CMs require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific measures included in this MMCRP, will be taken:

- LSPGC and PG&E shall require all contractors to comply with the conditions of project approval, including all applicable mitigation measures, APMs, and CMs.
- One or more pre-construction meetings will be held to inform all and train construction personnel about the requirements of the MMCRP.
- A written summary of mitigation monitoring procedures will be provided by LSPGC and PG&E to construction supervisors for all APMs, CMs, and mitigation measures requiring their attention.

REPORTING PROCEDURES

Site visits and specified monitoring procedures performed by other individuals will be reported to the mitigation monitor assigned to the construction. A monitoring record form will be submitted to the mitigation monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the mitigation monitor. A checklist will be developed and maintained by the mitigation monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The mitigation monitor will note any problems that may occur and take appropriate action to rectify the problems. LSPGC and PG&E shall provide the CPUC with written quarterly reports of the project, which shall include progress of construction, resulting impacts, mitigation implemented, and all other noteworthy elements of the project. The first report shall be submitted before the

end of the first quarter in which construction begins. Quarterly reports shall be required as long as mitigation measures are applicable. PG&E reports shall be for portions of the project that require monitoring.

Inquiries related to this MMCRP should be directed to:

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CONDITION EFFECTIVENESS REVIEW

In order to fulfill its statutory mandates to mitigate or avoid significant effects on the environment and to design an MMCRP to ensure compliance during project implementation (CEQA Section 21081.6):

- The CPUC may conduct a comprehensive review of conditions which are not effectively mitigating impacts at any time it deems appropriate, including as a result of the Dispute Resolution procedure outlined above; and
- If, in its review, the CPUC determines that any conditions are not adequately mitigating significant environmental impacts caused by the project, or that recent proven technological advances could provide more effective mitigation, then the CPUC may impose additional reasonable conditions to effectively mitigate these impacts.

These reviews shall be conducted in a manner consistent with the CPUC's rules and practices.

MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM TABLES

The categories identified in the attached MMCRP tables are described below.

- Applicant-Proposed Measures, Construction Measures, and Mitigation Measures – This column provides the verbatim text of the adopted measure.
- Applicable Party – This column identifies if the measure applies to LSPGC, PG&E, or both.
- Monitoring/Reporting/Verification Requirements – This column identifies the monitoring and reporting requirements of each adopted measure.
- Timing – This column identifies the time frame in which the measure will be implemented.

MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM - LS POWER GRID CALIFORNIA, LLC

Table 1 Mitigation Monitoring, Compliance, and Reporting Program - LS Power Grid California, LLC

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
Aesthetics			
APM AES-1: Staging Area Maintenance and Restoration. All Manning 500/230 Kilovolt Substation Project (Proposed Project) sites will be maintained in a clean and orderly state. Construction staging areas will be sited away from public view where possible. Temporary nighttime lighting will be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of Proposed Project construction, staging and temporary work areas will be returned to pre-Proposed Project conditions, including regrading of the site and reseeding or repaving of disturbed areas to match pre-existing contours and conditions	LSPGC	CPUC mitigation monitor to inspect compliance.	During project construction and upon completion of construction.
Agricultural and Forestry Resources			
APM AES-1: Landowner Coordination. LS Power Grid California, LLC (LSPGC) will coordinate with landowners prior to construction and during restoration efforts. Measures to be implemented may include, but are not limited to, the following: ▶ Provide notice to landowners outlining construction activities and restoration efforts. ▶ Restore areas disturbed by construction of the Proposed Project in accordance with lease agreements, applicable operation and maintenance (O&M) standards, and environmental permit requirements. ▶ In areas containing permanent crops (e.g., grapevines or orchard crops) that must be removed to gain access to pole sites for construction purposes, LSPGC may provide compensation to the farmer and/or landowner in coordination with the landowner.	LSPGC	LSPGC to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	Prior to construction and during post-construction restoration.
Air Quality			
Construction Measure AQ-A [PG&E] /Mitigation Measure AQ-1 [LSPGC]: The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APM AIR-1 and PG&E CM AIR-1 as presented in the PEA: Construction contractors for the project shall use engines that meet the EPA's Tier 4 emission standards, as defined in 40 CFR 1039, in at least 75 percent of construction equipment with a rating between 100 and 750 hp off-road construction equipment and shall comply with the appropriate test procedures and provisions contained in 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment, as it becomes available, for at least 75 percent of construction equipment and/or by using a combination of engines that meet the EPA's Tier 4 emission standards and battery-electric off-road construction equipment, as long as the total of Tier 4 and battery-electric construction equipment comprises 75 percent of construction equipment. Implementation of this measure shall be required in the contract the project applicant establishes with its construction contractors. LSPGC and PG&E shall separately demonstrate their plans to fulfill the requirements	LSPGC and PG&E	LSPGC and PG&E to maintain equipment list and provide upon request to CPUC, along with the memorandum. CPUC mitigation monitor to inspect compliance.	Prior to and during construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
of this measure in a memorandum that shall be submitted to the CPUC before the use of any off-road diesel-powered construction equipment on the site. Each memorandum shall include a list of the equipment and vehicles to be used during construction of LSPGC and PG&E project components with details including equipment/vehicle engine tiers and expected daily and annual usage hours to demonstrate adherence to the 75 percent requirement above			
APM AIR-2: Dust Control. Measures to control fugitive dust emissions will be implemented during construction. These measures will be included in a Fugitive Dust Control Plan that will be prepared in accordance with San Joaquin Valley Air Pollution Control District requirements. The measures will be implemented as needed to control dust emissions. These measures will include, but may not be limited to, the following: ▶ Surfaces disturbed by construction activities will be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance. ▶ Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles will be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or will be covered. ▶ Drop heights from excavators and loaders will be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material will be covered with tarps or maintain at least 6 inches of freeboard. ▶ Vehicles will adhere to a speed limit of 15 miles per hour (mph) on Proposed Project-specific construction routes and within temporary work areas.	LSPGC	LSPGC to provide Fugitive Dust Control Plan. CPUC mitigation monitor to inspect compliance and verify report.	Dust control plan to be prepared prior to and implemented during construction.
Biological Resources			
Construction Measure BIO-A [PG&E] / Mitigation Measure BIO-1 [LSPGC]: Conduct Protocol-Level Surveys for Special-Status Plants and Compensate for Impacts Special-status plant surveys described in APM BIO-4 and CM BIO-2 shall follow the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). The surveys will be conducted within suitable habitat during the typical blooming period for the 10 species determined to have potential to occur in the project alignment area as described in Table 3.4-1. If plant species protected under ESA (i.e., San Joaquin woollythreads) are found during surveys for special-status plants conducted pursuant to APM BIO-4 and CM BIO-2, following the CDFW protocol described above, a protective buffer of at least 50 feet will be established around individual plants, and the plants will be avoided. If plant species considered special-status under CEQA (i.e., plants with a CRPR of 1 or 2) are found during surveys for special-status plants conducted pursuant to APM BIO-4 and CM BIO-2, following the CDFW protocol described above, a protective buffer of at least 50 feet will be established around individual plants, and the plants will be avoided, if feasible. The size and shape of the protective buffer may be adjusted if a CPUC-approved biologist determines that a smaller buffer will be sufficient to avoid loss of or damage to special-status plants or that a larger buffer is necessary to sufficiently protect plants from project activities. The appropriate size and shape of the protective buffer will be determined by the CPUC-approved biologist and will depend on the plant's	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance.	Prior to and during project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
growth form (e.g., annual, perennial), plant phenology at the time of implementation of project activities, the individual species' vulnerability to the project activity, and environmental conditions and terrain. Where avoidance of plants considered special-status under CEQA is not feasible, and the only plants present in a work area are annual plants (see Table 3.4-1), initial disturbances associated with temporary construction work activities will be scheduled to occur after seed set and prior to seedling emergence and when soil is dry. If special-status perennial plants (i.e., recurved larkspur) are present in a work area, this method would not avoid impacts, and these plants would be avoided as described above. When permanent ground disturbing activities cannot be avoided in known annual special-status plant locations the top 4 inches of soil will be collected and retained onsite prior to disturbance and replaced in the same approximate location following completion of project activities. If the surface topography is altered by the work, the surface will be re-contoured to existing conditions and the salvaged topsoil will be replaced.			
Construction Measure BIO-B [PG&E] /Mitigation Measure BIO-2 [LSPGC]: Conduct Protocol-Level Surveys for Blunt-Nosed Leopard Lizard and Implement Avoidance Measures The following measure shall supersede and replace LSPGC APM BIO-15 for LSPGC project components and PG&E CM BIO-5 for PG&E project components, as presented in the PEA, for blunt-nosed leopard lizard: ▶ Prior to construction of project components in habitats suitable for blunt-nosed leopard lizard (i.e., annual grassland), at least two qualified biologists approved by the CPUC shall conduct surveys following measures in the Approved Survey Methodology for the Blunt-Nosed Leopard Lizard (CDFW 2019) between April and September, including spring adult surveys and fall hatchling surveys. Biologists shall conduct visual search surveys while walking in parallel on adjacent transects that cover all areas within the project site with potential blunt-nosed leopard lizard habitat. Biologists shall stop periodically to scan the transect for blunt-nosed leopard lizard using close-focusing binoculars. The survey methods applied shall be commensurate with the anticipated level of disturbance, as described below. ▶ For project activities that could result in habitat removal: ▪ A total of 12 adult surveys shall take place during the optimal survey period (April 15 to July 15) with a maximum of 4 survey days per week and 8 days within any 30-day time period. At least one survey session shall be conducted for 4 consecutive days, weather permitting. ▪ A total of 5 additional hatchling surveys shall take place during the hatchling optimal survey period (August 1 to September 15). ▶ For operation and maintenance activities that would not result in habitat removal: ▪ A total of 8 adult surveys shall take place during the optimal survey period (April 15 to July 15) with a maximum of 3 survey days per week and 6 days within any 30-day time period. ▪ Fall hatchling surveys are not required for activities in this category. ▶ If blunt-nosed leopard lizards are observed, biologists shall record the location (UTM coordinates) of individuals and the presence of habitat features important for blunt-nosed leopard lizard (e.g., washes, playas, relative abundance of small mammal burrows). Because this species is designated as Fully Protected	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW, as applicable, regarding presence of blunt-nosed leopard lizard.	Prior to and during project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
under the California Fish and Game Code, complete avoidance of take (i.e., hunting, pursuing, catching, capturing, or killing) is required, unless PG&E and/or LSPGC consult with CDFW and obtain an Incidental Take Permit pursuant to SB 147 (Statutes of 2023) and Fish and Game Code Section 2081.15. PG&E and/or LSPGC will adhere to the provisions and conditions of the Incidental Take Permit that may include compensatory mitigation and would fully mitigate impacts on the species. In the event Fish and Game Code Section 2081.15 is deemed by CDFW to be inapplicable such that incidental take is not permissible, PG&E and/or LSPGC shall initiate consultation with CDFW to determine how the project can be designed to completely avoid take of blunt-nosed leopard lizards and potentially occupied habitat. ▶ All blunt-nosed leopard lizard observations shall be reported to the CNDDB within 30 days. ▶ If no blunt-nosed leopard lizards are observed during the survey period, then further mitigation for this species is not required. Surveys shall be accepted for one year from the date of completion.			
Construction Measure BIO-C [PG&E] / Mitigation Measure BIO-3 [LSPGC]: Conduct Focused Surveys for Special-Status Reptiles and Implement Avoidance Measures ▶ Within 14 days before the initiation of any construction activity, a qualified biologist approved by the CPUC shall conduct a focused visual survey of habitat suitable (i.e., annual grassland, scrub) for California glossy snake, coast horned lizard, and/or San Joaquin coachwhip in the project alignment area and a 100-foot buffer surrounding the project alignment area, which shall include walking linear transects. ▶ If California glossy snake, coast horned lizard, or San Joaquin coachwhip are not detected during the focused survey, the qualified biologist shall submit a report summarizing the results of the survey to LSPGC, PG&E, and the CPUC, and further mitigation shall not be required. ▶ If California glossy snake, coast horned lizard, or San Joaquin coachwhip are detected, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground-disturbance activities and shall inspect the project site before initiation of project activities. If California glossy snake, coast horned lizard, or San Joaquin coachwhip are detected, the qualified biologist shall move individuals into nearby suitable habitat that will not be disturbed by project activities or will allow the individual to move out of the project area of its own volition if it is not in immediate danger.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance.	Up to 14 days prior to the start of construction and during construction, if applicable.
Construction Measure BIO-D [PG&E] / Mitigation Measure BIO-4 [LSPGC]: Conduct Focused Surveys for Western Spadefoot Toads and Implement Avoidance Measures The following measure shall apply for LSPGC project components and shall supersede and replace PG&E CM BIO-6 for PG&E project components, as presented in the PEA, for western spadefoot toads: ▶ Within 48 hours prior to project implementation within areas containing habitat suitable for western spadefoot toad, a qualified biologist approved by the CPUC shall conduct focused surveys within identified work and access areas that are located in aquatic (i.e., vernal pool, wetland) and upland (i.e., annual grassland) habitats within approximately 860 feet (262 meters) of aquatic habitat (Baumberger et al. 2019) suitable for the species. Burrows that are unavoidable and considered potentially occupied by western	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USFWS if western spadefoot toad is listed under the ESA.	Within 48 hours prior to the start of construction and during construction, if applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
spadefoot toads shall be identified and further examined by a qualified biologist (e.g., with a burrow scope, through hand excavation) to determine whether an adult toad is present in the burrow. ▶ If western spadefoot toads are not found, the qualified biologist shall submit a report summarizing the results of the survey to LSPGC, PG&E, and the CPUC, and further mitigation will not be required. ▶ If western spadefoot toads are detected during focused surveys, then adults, tadpoles, and egg masses shall be relocated by a qualified biologist with a valid CDFW scientific collecting permit to nearby suitable habitat that will not be disturbed by project activities. This relocation is considered adequate to reduce impacts below the level of significance under CEQA. Because western spadefoot is proposed for listing under the ESA, if the species is listed before construction activities begin, LSPGC and PG&E shall consult with the USFWS to determine whether additional measures or permitting is required to comply with the ESA.			
Construction Measure BIO-E [PG&E] / Mitigation Measure BIO-5 [LSPGC]: Implement Survey Area Minimums, Survey Timing Standards, and Applicable Protocols for Special-Status and Other Native Birds The following measure shall supplement the requirements in APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components), as presented in the PEA, for special-status and other native birds: ▶ Pre-construction nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components) shall be conducted within work areas and accessible areas (i.e., existing LSPGC or PG&E rights-of-way, public land, private land with existing access permission) in the following buffers surrounding the work area: ■ 0.5 miles for Swainson's hawk; ■ 500 feet for northern harrier, short-eared owl, and other native raptors; and ■ 250 feet for other native bird species. ▶ To avoid trespassing, inaccessible areas (e.g., private land) shall be surveyed using binoculars or spotting scopes as feasible (i.e., to the maximum distance achievable using these tools). As a result, it may not be feasible to complete surveys in the full survey buffer in all cases; however, LSPGC and PG&E shall implement the full survey buffer wherever feasible. ▶ Nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components) shall be conducted no more than 10 days prior to the start of construction activities during the nesting bird season (February 1 to September 15). Continuous construction within an area following a nesting bird survey will negate the need to repeat additional nesting bird surveys. If there is a five day or more lapse in project construction within an area, the nesting bird survey shall be repeated. ▶ Focused surveys for Swainson's hawk shall follow the protocols found in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). ▶ If an active nest is discovered during nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and construction activities would occur during the nesting bird season, no-	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance.	Prior to project construction and during construction, as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
disturbance buffers shall be established, within which no ground-disturbing construction activities would occur until the nest is no longer active as determined by a CPUC-approved biologist. No-disturbance buffers shall be at least 0.5 miles for Swainson's hawk, 500 feet for northern harrier, short-eared owl, or other native raptors, 250 feet for non-raptor special-status birds, and 20 feet for other native birds (i.e., without special status). No-disturbance buffer sizes for other native birds (non-raptors) without special status may be increased at the discretion of the CPUC-approved biologist depending on factors including species, nest height, topography, existing vegetative or other barriers between the nest and project activities, and disturbance level surrounding the nest. Any reduction in the no-disturbance buffer for special-status bird species shall require consultation with the CPUC-approved biologist, and would require additional measures, including biological monitoring to determine whether nesting birds are exhibiting disturbance behaviors, after which the no-disturbance buffer size shall be increased. ▶ No-disturbance buffers described in CM BIO-8 (for PG&E components) that would follow the most recent PG&E Nesting Bird Management Plan would be sufficient to maintain impacts on nesting birds at less than significant under CEQA. ▶ If an active Swainson's hawk nest is detected, and implementation of the 0.5-mile no-disturbance buffer is not feasible, LSPGC or PG&E shall consult with CDFW to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.			
Construction Measure BIO-F [PG&E] / Mitigation Measure BIO-6 [LSPGC]: Conduct Protocol-Level Surveys for Burrowing Owl and Implement Avoidance Measures The following measure shall supersede and replace APMs BIO-6 and APM BIO-10 (for LSPGC components) and CM BIO-7 (for PG&E components), as presented in the PEA, for burrowing owl. LSPGC and PG&E Construction Activities and LSPGC O&M Operational Activities ▶ A qualified biologist approved by the CPUC shall conduct surveys for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet of the work area. Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas. A minimum of four surveys shall be conducted to determine whether burrowing owls occupy the site. Surveys shall be conducted according to Appendix D of the 2012 Staff Report on Burrowing Owl Mitigation prepared by the California Department of Fish and Game (now CDFW) (CDFW 2012) or any subsequent updated guidance. If feasible, at least one survey should be conducted between February 15 and April 15, and the remaining surveys should be conducted between April 15 and July 15, at least three weeks apart. Because burrowing owls may recolonize a site after only a few days, one of the surveys, or an additional survey, shall be conducted no less than 14 days before initiating ground disturbance activities to verify that take of burrowing owl would not occur. ▶ If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to LSPGC or PG&E and the CPUC, and no further mitigation shall be required.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW, as applicable, regarding presence of burrowing owl.	Prior to project construction and during construction, as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▶ If an active burrow is found within 1,640 feet of pending construction activities, LSPGC or PG&E shall establish and maintain a buffer around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls. ▪ If an active burrow is found within 1,640 feet of pending construction activities, LSPGC or PG&E shall establish and maintain a buffer around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls. ▪ The buffer may be adjusted if, in consultation with the CDFW, the qualified biologist determines that an alternative buffer shall not result in take of burrowing owl adults, young, or eggs because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, the qualified biologist shall monitor the behavior of the burrowing owls during all project activities within 1,640 feet of the burrow. If the owls are disturbed or agitated (e.g., vocalizations, bill snaps, fluffing feathers to increase body size appearance, drooping wings and rotating them forward, crouching and weaving back and forth) by the project activities, the biologist shall have the authority to halt the activities and reestablish a buffer consistent with the first item above until the agitated behavior ceases and normal behavior resumes. ▪ The buffer shall remain in place around the occupied burrow and associated satellite burrows until the qualified biologist has determined through noninvasive methods that the burrows are no longer occupied by burrowing owl. A previously occupied burrow will be considered unoccupied if surveys demonstrate that no owls have used the burrow for seven consecutive days. ▪ Locations of burrowing owls detected during surveys shall be reported to the CNDDB within 30 days. PG&E O&M Activities ▶ PG&E shall consult with CDFW to determine the appropriate protective buffer distance for active burrowing owl burrows detected in or within 1,640 feet of the project alignment area to avoid take of burrowing owls from O&M activities.			
Construction Measure BIO-G [PG&E] / Mitigation Measure BIO-7 [LSPGC]: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee The following measure shall supersede APMs BIO-16 and BIO-17 for LSPGC components and apply for PG&E project components and for Crotch's bumble bee: ▶ Initial ground-disturbing work (e.g., grading, vegetation removal, staging) in grassland habitat or edges of agricultural areas that contain grasses or forbs shall take place between August 15 and March 15, if feasible to avoid impacts on nesting Crotch's bumble bees. ▶ If the above limited operating period is not feasible (i.e., if limiting ground disturbance to the period between August 15 and March 15 would preclude achieving most of all of the project objectives) as determined by LSPGC or PG&E with concurrence from the CPUC, a qualified biologist approved by the	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW, as applicable, regarding presence of Crotch's bumble bee.	Prior to project construction and during construction, as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
CPUC, familiar with bumble bees of California and experienced using survey methods for bumble bees, shall conduct a habitat assessment and focused survey for Crotch's bumble bee before the start of any ground-disturbing activities in grassland habitat or edges of agricultural areas that contain grasses or forbs. Surveys shall be performed when Crotch's bumble bee is most likely to be identified, typically from April through August (i.e., the colony active period) when floral resources and ideal weather conditions are present, and shall follow the methods in Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). Surveys shall be conducted during the colony active period the same year as the start of planned construction activities. ▶ LSPGC and PG&E shall submit a survey report to the CDFW and the CPUC within 1 month of survey completion and shall notify the CDFW and the CPUC within 24 hours if Crotch's bumble bees are detected. ▶ If Crotch's bumble bees are detected during the focused survey, appropriate avoidance measures shall be implemented. Avoidance measures shall include, but not be limited to, the following: ▪ Protective buffers shall be implemented around active nesting colonies until these sites are no longer active. A qualified biologist, in coordination with the CDFW, shall determine the appropriate buffer size to protect nesting colonies. ▪ If nesting colonies are detected, avoidance areas shall be implemented in areas near the colony location that contain significant floral resources for the colony, if present. A qualified biologist shall determine the appropriate avoidance area size to protect foraging resources. ▪ If project activities involving temporary disturbance (e.g., staging) would occur where a nesting colony was detected after the nesting colony is no longer active, the area shall be restored to original conditions after the temporary disturbance is complete such that habitat for Crotch's bumble bee would be available. ▶ If take of Crotch's bumble bee cannot be avoided, LSPGC and PG&E shall obtain an Incidental Take Permit (ITP) from the CDFW and shall implement all avoidance measures included in the ITP. The CDFW may also require compensatory mitigation through on-site habitat restoration or purchase of credits at an appropriate mitigation bank. Avoidance measures included in the ITP would reduce the likelihood of take of Crotch's bumble bees such that impacts on the species would be fully mitigated. These measures would include but not be limited to: ▪ specifications for construction timing and sequencing requirements to avoid impacts on nesting Crotch's bumble bees; ▪ pre-construction surveys conducted within 30 days prior to the start of ground-disturbing activities; ▪ establishment of seasonal no-disturbance buffers around nest sites; ▪ construction monitoring; ▪ restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., BMPs to minimize the spread of invasive plant species); and			

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▪ provisions to avoid Crotch's bumble bees or potential Crotch's bumble bees if observed away from a nest during project activity (e.g., ceasing of project activities until the animal has left the work area). ▶ Documentation of compliance with this mitigation measure and any required coordination with the CDFW or acquisition of an ITP shall be provided to the CPUC before commencement of any project construction activities.			
Construction Measure BIO-I [PG&E] / Mitigation Measure BIO-8 [LSPGC]: Conduct Focused Surveys for American Badger and Implement Avoidance Measures The following measure shall supplement the requirements in APMs BIO-6 and BIO-10 (for LSPGC project components) and shall apply for PG&E project components for American badger: ▶ For LSPGC project components, pre-construction wildlife and burrow surveys conducted pursuant to APM BIO-6 and burrow and den avoidance implemented pursuant to APM BIO-10 shall also incorporate American badger. ▶ For PG&E components, the following measures shall be implemented. ▪ Within 14 days before commencement of project activities, a qualified wildlife biologist approved by the CPUC familiar with American badger and experienced using survey methods for the species shall conduct focused surveys of habitat suitable for the species in the project alignment area to identify any American badger dens. ▪ If occupied dens are not found, the qualified biologist shall submit a report summarizing the results of the survey to PG&E and the CPUC, and further mitigation shall not be required. ▪ If occupied dens are found, then dens shall be monitored to determine if occupation is by an adult badger only or if it is a natal den. Impacts on active badger dens shall be avoided by establishing exclusion zones around all active badger dens. If the qualified biologist determines that the den is a natal den, an exclusion zone of 200 feet shall be maintained around the den until the qualified biologist determines that the den has been vacated. If the den is occupied by an adult badger only, the size of the buffer shall be determined by a qualified biologist. No project activities (e.g., vegetation removal, ground disturbance, staging) shall occur within the exclusion zone until denning activities are complete (i.e., the adult badger and young have left the area) or the den is abandoned, as confirmed by a qualified biologist. The qualified biologist shall monitor each den once per week to track the status of the den and to determine when it is no longer occupied. When the den is no longer occupied, project activities within the exclusion zone may occur. Monitoring reports shall be submitted to the CPUC.	LSPGC and PG&E	LSPGC and PG&E to provide survey results.	Prior to project construction and during construction.
Construction Measure BIO-J [PG&E] / Mitigation Measure BIO-9 [LSPGC]: Conduct Focused Surveys for San Joaquin Kit Foxes and Implement Avoidance Measures The following measures, in accordance with the *USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), shall supersede the	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW	Prior to project construction and during construction, and during

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
requirements in APMs BIO-8 (for LSPGC components) and CM BIO-4 (for PG&E components) as presented in the PEA for San Joaquin kit fox: ▶ Preconstruction surveys shall be conducted by a qualified biologist no less than 14 days and no more than 30 days prior to the beginning of ground disturbance or construction activities or any project activity likely to adversely affect the San Joaquin kit fox. Surveys shall identify San Joaquin kit fox habitat features in the project alignment area (e.g., dens), evaluate use by kit fox, and assess the potential impacts on the kit fox by the proposed activity. Survey methods shall include thoroughly inspecting suitable habitat in the project alignment area for kit fox dens using walking line transects. The status of all dens shall be determined and mapped. ▪ If no San Joaquin kit foxes or potential dens (i.e., a burrow at least four inches in the diameter that opens within two feet) are found, the qualified biologist shall document the findings in a letter report to USFWS, CDFW, the CPUC, and LSPGC or PG&E, and no further mitigation will be required. ▪ If potential or known San Joaquin kit fox dens are found, exclusion zones shall be established for all dens within the project alignment area, and construction activity and other ground disturbance shall be prohibited within these zones. Potential dens shall be marked with flagged stakes 50 feet from the den entrance. A 100-foot exclusion zone will be established and demarcated using USFWS-approved fencing around the entrance of known dens. ▪ If a natal/pupping den is discovered within the project alignment area or within 200 feet of the project boundary, USFWS, CDFW, and the CPUC shall be immediately notified and the den shall not be disturbed or destroyed without prior authorization or a take permit. ▪ If potential dens are identified (i.e., a burrow at least four inches in the diameter that opens within two feet), the den entrances shall be dusted, and camera and scent stations shall be deployed for three calendar days to register and track activity of any San Joaquin kit fox present. If no San Joaquin kit fox activity is identified after three days, the den may be removed. Den removal must be appropriately monitored and conducted by a qualified wildlife biologist. ▪ Written results of preconstruction surveys must be received by the CPUC within five days after survey completion and prior to the start of ground disturbance or construction activities. ▶ During construction, LSPGC and PG&E shall observe the following measures throughout the project alignment area to minimize impacts on San Joaquin kit fox: ▪ Artificial lighting of construction sites in the project alignment area during nighttime shall be limited to the extent feasible. ▪ Holes or trenches shall be inspected daily to ensure that no animal has become trapped despite covers. All holes or trenches shall be thoroughly inspected before filling. ▪ All pipes, culverts, or similar structures with a diameter of 4 inches or greater shall be inspected for kit foxes before they are buried, capped, used, or moved in any way. ▪ All trash shall be properly disposed of and removed from the construction site at least once a week.		and USFWS, as applicable, regarding presence of San Joaquin kit fox.	construction as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▪ No firearms shall be allowed on the construction site. ▪ No pets shall be permitted on the construction site. ▪ Use of rodenticides and herbicides in project areas shall be restricted. ▪ Plastic mono-filament matting shall not be used for erosion control or other purposes. Instead, tightly woven fiber or similar material shall be used. ▪ If a kit fox is trapped: • Personnel shall immediately report the incident to the project biologist. • Escape ramps or structures shall be installed immediately. • If the fox cannot escape, USFWS and CDFW shall be contacted for guidance. • The project biologist shall notify USFWS and CDFW by telephone or email within 24 hours. ▪ If a kit fox is injured or killed: • Personnel shall immediately report the incident to the project biologist. • Project activities shall cease until USFWS and CDFW provide guidance. • The project biologist shall notify USFWS and CDFW immediately with the date, time, and location of the incident. • Consultation with USFWS shall be reinitiated.			
Construction Measure BIO-K [PG&E] / Mitigation Measure BIO-10 [LSPGC]: Implement Avoidance Measures for State or Federally Protected Wetlands and Obtain Permits for Impacts on Wetlands ▶ If potential state or federally protected wetlands identified in the project alignment area can be avoided, a qualified biologist approved by the CPUC shall establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone shall be determined in coordination with the qualified biologist and will depend on the type of wetland present (e.g., seasonal wetland, seep, pond), the timing of project activities (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the project activities, environmental conditions and terrain, and the project activity being implemented. ▪ Project activities (e.g., ground disturbance, vegetation removal, staging) shall be prohibited within the established buffer. The qualified biologist shall periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. ▶ If it is determined that disturbance or fill of potential state or federally protected wetlands or waters cannot be avoided, LSPGC and/or PG&E shall submit the appropriate permit applications to the relevant regulatory agencies (e.g., USACE, RWQCB).	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USACE and RWQCB, as applicable, regarding presence of state or federally protected wetlands.	Prior to project construction and during construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▶ If it is determined that fill of waters of the United States would result from project implementation, LSPGC and/or PG&E shall secure authorization for such fill from the USACE through the Section 404 permitting process. Any waters of the United States that would be affected by the project shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE mitigation guidelines in place at the time of construction. In association with the Section 404 permit (if applicable) and prior to the issuance of any grading permit, a Section 401 Water Quality Certification shall be obtained from the Central Valley RWQCB. For impacts on waters of the state that are not also waters of the United States and are therefore not covered by the 401 Water Quality Certification, the applicant shall apply to the RWQCB for Waste Discharge Requirements following the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). Any waters of the United States or waters of the state that are to be affected by the project shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE and SWRCB mitigation standards in place at the time of construction. If it is determined that disturbance or fill of state protected waters cannot be avoided, LSPGC and/or PG&E shall notify the CDFW before commencing activity that may divert the natural flow or otherwise alter the bed, or bank of any 1602 jurisdictional waterway. If project activities trigger the need for a Lake or Streambed Alteration Agreement, LSPGC and/or PG&E shall obtain such an agreement from the CDFW before the activity commences. LSPGC and/or PG&E shall conduct project construction activities in accordance with the agreement, including implementing reasonable measures in the agreement necessary to protect fish and wildlife resources, when working within the bed or bank of a lake or stream. These measures may include but shall not be limited to demarcation of the construction area, biological monitoring, environmental awareness training for construction crews, and compensatory measures (e.g., restoration, long-term habitat management) such that there would be no net loss.			
Construction Measure BIO-L [PG&E] / Mitigation Measure BIO-11 [LSPGC]: Develop and Implement an Avian Protection Plan ▶ PG&E shall implement its Avian Protection Plan, PG&E's Program to Address Avian Electrocutions, Collisions, and Nesting Birds (PG&E 2018), including all risk reduction measures and training and reporting requirements therein. ▶ LSPGC must follow the recommendations outlined in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012 or the most current version). In addition, LSPGC shall develop and implement an Avian Protection Plan according to the Avian Protection Plan Guidelines (APLIC and USFWS 2005). The plan shall include measures to minimize collision and electrocution risk to avian species during project operation. The plan shall be submitted for review to the CDFW and USFWS at least 60 days before construction begins.	LSPGC and PG&E	LSPGC to provide Avian Protection Plan. CPUC mitigation monitor to inspect compliance through quarterly reports and verify report. LSPGC coordination with CDFW and USFWS for plan approval.	Prior to project construction (LSPGC) and during project construction (LSPGC and PG&E).
APM BIO-1: Avoid Environmentally Sensitive Areas. Biological field surveys will be performed for any portion of the Proposed Project area not yet surveyed (e.g., areas that did not have landowner access, new or modified staging areas, pull sites, or other work areas). Sensitive biological resources or areas discovered during surveys will be subject to a buffer from construction activities in accordance with the applicable Proposed Project	LSPGC	LSPGC to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	Prior to and during project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
applicant-proposed measures (APMs). The findings of all biological field surveys on portions of the Proposed Project area not yet surveyed will be provided to the California Public Utilities Commission (CPUC) prior to construction commencing within those areas.			
APM BIO-2: Develop and Implement Restoration Plan. A Proposed Project-specific restoration plan will be prepared for areas to be temporarily disturbed by the Proposed Project. Actively cultivated agricultural fields, developed areas, or habitats disturbed as a result of activities not related to the Proposed Project will not be subject to the restoration plan. The restoration plan will include procedures for restoration activities, including plant species to be reseeded, procedures to reduce weed encroachment, and expected timeframes for restoration. Reseeding activities will be conducted in accordance with the Proposed Project Storm Water Pollution Prevention Plan. The restoration plan will be submitted to the CPUC for approval prior to the start of construction activities.	LSPGC	LSPGC to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance and approve the report.	Restoration Plan to be developed prior to project construction. Restoration Plan to be implemented following project construction.
APM BIO-3: Worker's Environmental Awareness Program. A Worker's Environmental Awareness Program (WEAP) will be designed, implemented, and provided to all Proposed Project personnel, including construction supervisors and field personnel, prior to personnel commencing work on the Proposed Project. The WEAP will inform all construction personnel of the resource protection and avoidance measures, as well as procedures to be followed upon the discovery of environmental resources. Additionally, the WEAP will train all construction personnel on hazardous materials management, hazardous wastes and stained or odiferous soils identification, and applicable regulations. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations: ▶ A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to environmental and biological resource protection; ▶ Training on how to identify sensitive or special-status biological resources, environmentally sensitive area (ESA) boundaries, housekeeping (i.e., trash and equipment cleaning), safety, work stoppage, and communication protocol; ▶ A discussion of procedures to be followed in the event that unanticipated sensitive or special-status biological resources are discovered during implementation of the Proposed Project; ▶ A discussion of disciplinary and other actions that could be taken against persons violating environmental and biological resource protection laws and applicant policies; ▶ Training on the handling, storage, and disposal of hazardous materials and wastes in accordance with applicable regulations; ▶ Training on the identification of potentially hazardous wastes and stained or odiferous soils; and ▶ A statement by the construction company or applicable employer agreeing to abide by the WEAP and other applicable laws and regulations. The WEAP will be submitted to and approved by the CPUC prior to construction.	LSPGC	LSPGC to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	Prior to project construction. To be completed for all new personnel.
APM BIO-4: Pre-Construction Plant Surveys. Prior to initial vegetation clearing and ground-disturbing activities in annual grassland habitat, a qualified biologist will conduct pre-construction surveys of the Proposed Project	LSPGC	LSPGC to provide survey results. CPUC mitigation	Prior to project construction. During

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
work area for special-status plants. Surveys will be conducted during the appropriate bloom period for Lost Hills crownscale and Panoche pepper-grass (i.e., April to September and February to June, respectively). No surveys will be conducted in actively cultivated agricultural fields, bare ground, or developed areas. In the event of the discovery of a previously unknown special-status plant, the area will be marked as a sensitive area and will be avoided to the maximum extent practicable. If avoidance of species listed under the federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) is not possible, the United States Fish and Wildlife Service (USFWS) and/or the California Department of Fish and Wildlife (CDFW) will be consulted. Any other construction activities that may impact sensitive biological resources, including movement of construction equipment and other activities outside of the fenced/paved areas, will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources.		monitor to inspect compliance. Coordination with USFWS and/or CDFW, as appropriate, if listed species are present.	project construction, if appropriate.
APM BIO-5: Vehicle Cleaning. Prior to their initial arrival on the Proposed Project site, all construction equipment and vehicles that will travel or operate within annual grassland habitats and/or outside of approved access roads/designated parking areas (e.g., staging yards) within these habitats will be cleaned to avoid spread of noxious weeds and non-native invasive plant species.	LSPGC	CPUC mitigation monitor to inspect compliance.	Prior to project construction.
APM BIO-7: Pre-Construction Giant Kangaroo Rat Surveys. Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the Proposed Project work area for giant kangaroo rat. Surveys will be confined to Proposed Project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the San Joaquin Kangaroo Rat Trapping Protocol (USFWS 2013). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.	LSPGC	LSPGC to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USFWS and/or CDFW, as appropriate, if giant kangaroo rat is present.	Prior to project construction.
APM BIO-8: Pre-Construction San Joaquin Kit Fox Surveys. Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the Proposed Project work area for San Joaquin kit fox. Surveys will be confined to Proposed Project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.	LSPGC	LSPGC to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USFWS and/or CDFW, as appropriate, if San Joaquin kit fox is present.	Prior to project construction.
APM BIO-9: Pre-Construction San Joaquin Antelope Squirrel Surveys. Prior to the initiation of construction, a qualified biologist will conduct focused surveys of the Proposed Project work area for San Joaquin antelope squirrel in annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. If species presence is determined through these surveys, the CDFW will be	LSPGC	LSPGC to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination	Prior to project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
consulted to ensure compliance with the CESA, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.		with CDFW, as appropriate, if San Joaquin antelope squirrel is present.	
APM BIO-10: Burrow and Den Avoidance. If occupied burrows or dens are found during pre-construction wildlife and burrow surveys, adequate buffers will be established around burrows. Adequate buffers will be determined by a qualified biologist based on field conditions and resource agency guidelines. If avoidance of species listed under the FESA or CESA is not possible, the USFWS and/or CDFW will be consulted, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval, as appropriate. These plans may include, but will not be limited to the following: ▶ Detailed description of trapping methodology, ▶ Detailed burrow excavation methods, ▶ Release location(s), ▶ Detailed release methods, ▶ Artificial burrow design and installation methods, ▶ Description of exclusion fencing type and implementation, and ▶ Identification of a wildlife rehabilitation center or veterinary facility capable of and willing to treat injured special-status species. Any other construction activities that may impact burrows occupied by special-status species (including movement of construction equipment and other activities outside of the fenced/paved areas within wildlife habitat) will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources.	LSPGC (note APM BIO-10 has been superseded by Mitigation Measure BIO-6 for burrowing owl)	CPUC mitigation monitor to inspect compliance. Coordination with USFWS and/or CDFW, as appropriate, if species are present.	Prior to project construction and during construction.
APM BIO-11: Vehicle Travel. Vehicles will adhere to a speed limit of 15 mph on Proposed Project-specific unpaved construction routes where no posted speed limit exists and within temporary work areas. In addition, construction and maintenance employees will be required to stay on established and clearly marked and existing roads and within the limits of disturbance except when not feasible due to physical or safety constraints and will be advised that care should be exercised when commuting to and from the Proposed Project area to reduce accidents and animal road mortality.	LSPGC	CPUC mitigation monitor to inspect compliance.	During project construction.
APM BIO-12: Trapped Animal Prevention. All excavated holes/trenches that are not filled at the end of a workday will be covered, or a wildlife escape ramp will be installed to prevent the inadvertent entrapment of wildlife species.	LSPGC	CPUC mitigation monitor to inspect compliance.	During project construction.
APM BIO-13: Delineation of Work Areas. All work areas within the Proposed Project area will be clearly delineated with fencing, staking, or flags prior to construction commencing. Construction activities will be restricted to delineated work areas, and all delineation will be maintained in working order until completion of construction.	LSPGC	CPUC mitigation monitor to inspect compliance.	Prior to and during project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
APM BIO-14: Project Lighting. The use of outdoor lighting during construction and O&M will be minimized whenever practicable. Photocell-controlled lighting (i.e., motion detection) will be provided at a level sufficient to provide safe entry and exit to the proposed LSPGC Manning Substation and control enclosures. All lighting will be selectively placed, shielded, and directed downward and away from sensitive habitat and resources to the maximum extent practicable.	LSPGC	CPUC mitigation monitor to inspect compliance.	During project construction and operation.
APM BIO-18: Nesting Bird Avoidance. If feasible, construction and vegetation trimming/removal will be avoided during the migratory bird nesting or breeding season (i.e., February 15 to August 31). When it is not feasible to avoid construction during the nesting or breeding season, a survey will be performed in the area where the work is to occur. This survey will be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified, a suitable construction buffer (which will differ based on species and location of nest) will be implemented to ensure that the nesting or breeding activities are not substantially adversely affected. If the nesting or breeding activities are being conducted by a federally or state-listed species, the USFWS and CDFW will be consulted as necessary. Monitoring of the nest will continue until the birds fledge or construction is no longer occurring on the site.	LSPGC	LSPGC to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USFWS and CDFW, as appropriate, if breeding activities are being conducted.	Prior to project construction. During construction, if appropriate.
APM BIO-19: Vegetation. Vegetation and tree removal will be limited to the minimum area necessary to allow construction to proceed.	LSPGC	CPUC mitigation monitor to inspect compliance.	Prior to and during project construction.
APM BIO-20: Raptor Nests. If a raptor nest is observed during pre-construction surveys, a qualified biologist will determine if it is active. If the nest is determined to be active, the biological monitor will monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated with the Proposed Project are disturbing or disrupting nesting or breeding activities, the biological monitor will make recommendations to reduce noise or disturbance in the vicinity of the nest, such as temporarily suspending work in the area. If the nest is determined to be inactive, the nest will be removed under direct supervision of the qualified biologist.	LSPGC	LSPGC to provide survey results. CPUC mitigation monitor to inspect compliance.	Prior to project construction. During construction, if appropriate.
Cultural and Tribal Cultural Resources			
Construction Measure CR-A [PG&E] / Mitigation Measure CR-1 [LSPGC]: Conduct Built Environment Historical Resources Surveys for Built Environment Resources The following measure shall apply to LSPGC project and PG&E components and shall supersede and replace LSPGC APM CUL-2 and PG&E CM CUL-2, as presented in the PEA, for historic resources: Prior to the start of construction, a qualified architectural historian who meets the U.S. Secretary of the Interior Professional Qualifications Standards for History or Architectural History and approved by the CPUC shall perform historical resources surveys for built environment features for any portion of the project alignment area not yet surveyed (e.g., private properties with access restrictions) within PG&E or LSPGC project component areas. PG&E and LSPGC shall be responsible for ensuring that historical resources surveys for built environment features are conducted throughout all portions of their respective project component areas. For the purposes of this mitigation measure, built-environment features 50 years and older discovered during surveys shall be assumed to be historical resources as defined by State CEQA Guidelines Section 15064.5, and	LSPGC and PG&E	LSPGC and PG&E to provide survey results.	Prior to project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
depending on whether the location of the resource is in LSPGC's or PG&E's project area, either LSPGC or PG&E shall be required to comply with Mitigation Measure CR-B. All such resources will be recorded on a California Department of Parks and Recreation DPR 523 primary form or equivalent documentation by a qualified architectural historian.			
Construction Measure CR-B [PG&E] / Mitigation Measure CR-2 [LSPGC]: Protect Historical Built Environment Resources The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APM CUL-2 and PG&E CM CUL-2, as presented in the PEA, for built environment historic resources: ▶ If a built environment historical resource is identified in the project area, PG&E or LSPGC (as applicable, depending on whether the location of the resource is in LSPGC's or PG&E's project area) shall redesign the project to avoid direct or indirect impacts to the building or structure.	LSPGC and PG&E	LSPGC and PG&E to provide project redesign plans, if applicable. CPUC to review and approve revised plans.	Prior to project construction.
Construction Measure CR-C [PG&E] /Mitigation Measure CR-3 [LSPGC]: Conduct Archaeological Resources Surveys and Avoid Archaeological Resources The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APMs CUL-2 and CUL-3 and PG&E CMs CUL-2 and CUL-3, as presented in the PEA, for archaeological resources: Prior to the start of construction, a qualified archeologist who meets the U.S. Secretary of the Interior Professional Qualifications Standards for Archaeology and approved by the CPUC shall perform archeological resources surveys for any portion of the project alignment area not yet surveyed (e.g., private properties with access restrictions) within PG&E or LSPGC project component areas. PG&E and LSPGC shall be responsible for ensuring that archeological resources surveys are conducted throughout all portions of their respective project component areas. For the purposes of this mitigation measure, all archaeological resources discovered during surveys shall be assumed to be unique archaeological resources or historical resources as defined by State CEQA Guidelines Section 15064.5 and will be recorded by a qualified archaeologist on a California Department of Parks and Recreation DPR 523 primary form or equivalent documentation. Each such resource will be indicated, such as via a GIS device, through environmentally sensitive areas (ESA) mapping, with flagging tape, safety fencing, and/or signage designating it as an ESA to ensure that PG&E or LSPGC construction crews and heavy equipment will not intrude on these sites during construction. Mapping or GIS marking will be preferred in locations where there is a higher risk of site looting (e.g., near public roads, on land where the owner appears to be an artifact collector). At the discretion of PG&E or LSPGC, monitoring may be done in lieu of or in addition to marking. If it is determined that the project, as currently designed, cannot avoid impacts on one or more of the sites, then PG&E or LSPGC (as applicable) shall redesign the project so that the archaeological sites will be completely avoided.	LGPGC and PG&E	LSPGC and PG&E to provide survey results. LSPGC and PG&E to provide project redesign plans, if applicable. CPUC mitigation monitor to inspect compliance and review and approve revised plans.	Prior to project construction. During project construction, if appropriate.
APM CUL-1: Cultural Resources Awareness Training. In accordance with this measure, the Proposed Project's WEAP will include, at a minimum:	LSPGC	LSPGC to provide/report evidence of compliance.	Prior to project construction. To be

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▶ Training on how to identify potential cultural resources and human remains during the construction process; ▶ A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to historic preservation; ▶ A discussion of procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Proposed Project; ▶ A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and policies; and ▶ A statement by the construction company or applicable employer agreeing to abide by the WEAP, and other applicable laws and regulations. The WEAP will be provided to all Proposed Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. No construction worker will be involved in ground-disturbing activities without having participated in the WEAP.		CPUC mitigation monitor to inspect compliance.	repeated for all new personnel.
APM CUL-3: Inadvertent Discoveries. In the event that previously unidentified cultural resources are uncovered during implementation of the Proposed Project, all work within 50 feet of the discovery will be halted and redirected to another location. A qualified archaeologist(s) will inspect the discovery and determine whether further investigation is required. The qualifications of the archaeologist(s) will be approved by the CPUC. If the discovery can be avoided and no further impacts will occur, the resource will be documented on California Department of Parks and Recreation cultural resources records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, the significance and NRHP and CRHR eligibility of the resource will be evaluated and, in consultation with the CPUC, appropriate treatment measures will be determined. All work will remain halted until a Secretary of the Interior-qualified archaeologist approves the treatment measures. Preservation in place will be the preferred means to avoid impacts to significant historical resources. Consistent with California Environmental Quality Act (CEQA) Guidelines Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, and if the unearthed resource is prehistoric or Native American in nature, a Native American representative, in consultation with the CPUC, will develop additional treatment measures, such as data recovery consistent with CEQA Guidelines Section 15126.4(b)(3)(C-D). Archaeological materials recovered during any investigation will be curated at an accredited curation facility or transferred to the appropriate tribal organization.	LSPGC	LSPGC to provide treatment measures, if applicable. CPUC mitigation monitor to inspect compliance and verify treatment measures.	During project construction.
Geology and Soils			
APM GEO-1: Geological Hazards and Disturbance to Soils. The following measures will be implemented during construction to minimize impacts from geological hazards and disturbance to soils: ▶ Keep vehicles and construction equipment within the limits of the Proposed Project and in approved construction work areas to reduce disturbance to topsoil.	LSPGC	CPUC mitigation monitor to inspect compliance.	During project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▶ Prior to grading in temporary work areas, salvage topsoil to a depth of 6 inches or to the actual depth if shallower (as identified in a site-specific geotechnical investigation report) to avoid the mixing of soil horizons. ▶ Avoid construction in areas with saturated soils whenever practical to reduce impacts to soil structure and allow safe access. Similarly, avoid topsoil salvage in saturated soils to maintain soil structure. ▶ Keep topsoil material on site in the immediate vicinity of the temporary disturbance or at a nearby approved work area to be used in restoration of temporarily disturbed areas. Recontour temporarily disturbed areas following construction to match pre-construction grades. Site and manage on-site material storage in accordance with all required permits and approvals. ▶ Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Dispose of removed vegetation off site at an appropriate licensed facility, or it can be chipped on site to be used as mulch during restoration.			
Greenhouse Gas Emissions and Climate Change			
APM GHG-1: Greenhouse Gas Emissions Reduction During Construction. The following measures will be implemented during construction to minimize greenhouse gas emissions: ▶ If suitable park-and-ride facilities are available in the Proposed Project vicinity, construction workers will be encouraged to carpool to the job site. ▶ On-road and off-road vehicle tire pressures will be inflated to manufacturer specifications; tires will be checked and reinflated at regular intervals. ▶ Demolition debris will be recycled for reuse to the extent feasible. ▶ Line power, instead of diesel generators, will be used at all construction sites where feasible. ▶ Construction equipment will be maintained per the manufacturer's specifications.	LSPGC	CPUC mitigation monitor to inspect compliance.	During project construction.
Hazards and Hazardous Materials			
APM HAZ-1: Air Transit Coordination. LSPGC will implement the following protocols related to helicopter use during construction and air traffic: ▶ LSPGC will comply with all applicable Federal Aviation Administration regulations regarding air traffic within 2 miles of the Proposed Project alignment. ▶ LSPGC's helicopter operator will coordinate all Proposed Project helicopter operations with local airports before and during Proposed Project construction. ▶ Helicopter use and landing zones will be managed to minimize impacts on local residents.	LSPGC	CPUC mitigation monitor to inspect compliance.	Prior to and during project construction.
Noise and Vibration			
Mitigation Measure N-1 [LSPGC]: Implement Measures to Reduce Exposure of Noise-Sensitive Receptors to Construction-Generated Nighttime Noise	LGPGC	CPUC mitigation monitor to inspect compliance.	During project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
Construction noise at Sensitive Receptor 1 (R1) (3,400 feet from the substation site) shall not exceed the County's nighttime noise threshold of 45 dBA between the hours of 9:00 p.m. and 7:00 a.m. To minimize noise levels during nighttime construction activities and maintain nighttime noise below the abovementioned County threshold, LSPGC could implement the following measures during nighttime construction work at the Manning Substation site: ▶ Maintain construction equipment and equip with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation. ▶ Shut down motorized construction equipment when not in use to prevent idling. ▶ Locate construction equipment and staging areas as far as possible from nearby noise-sensitive land uses. ▶ Equip construction equipment with back-up alarms with either audible self-adjusting backup alarms or alarms that sound only when an object is detected. ▶ Install noise control devices on construction equipment, which may include but are not limited to: high-efficiency mufflers; acoustic dampening; protected internal noise absorption layers; enclosures; alternatively powered equipment; and electric motors. ▶ LSPGC shall notify R1, the single-family residence on Manning Avenue near the proposed Manning Substation, of the expected nighttime work schedule at least 7 days in advance by mail, email, phone call, personal visit, or door hanger. The notice shall contain a contact and telephone number for receipt of any public complaints and questions. The contact shall be responsible for determining the cause of the complaint and implementing any possible measures to alleviate the problem. If unanticipated work, including in emergency situations, extends to the hours of 9:00 p.m. to 7:00 a.m., LSPGC will immediately notify the CPUC and notify R1 via mail, email, phone call or personal visit.			
Utilities and Service Systems			
APM UTIL-1: Conduct an Induction Study. An induction study will be conducted to evaluate the potential effects of the Proposed Project on pipelines in its vicinity. The study will comply with all national and international standards in addition to the following standards: ▶ Pipeline Company Standards and Standard Operating Procedures; ▶ Federal Department of Transportation Part 192 Regulations; ▶ National Association of Corrosion Engineers (NACE) SP0177-2014 Standard Practice; ▶ NACE SP21424-2018 Standard Practice; and ▶ Institute of Electrical and Electronics Engineers Standard 80 Guide. The study will model the electrical interference effects on pipelines during different electrical conditions, such as maximum load and fault conditions. Additionally, the study will perform a coating stress voltage and alternating current (AC) density analysis on the pipelines. The induction study will recommend AC mitigation	LSPGC	LSPGC to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance and verify final engineering and design.	Prior to project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
methods based on the findings. Recommendations of the study will be incorporated into the final engineering and design for the Proposed Project as needed to ensure compliance with applicable standards.			
Wildfire			
APM FIRE-1: Construction Fire Prevention Plan. A Proposed Project-specific Construction Fire Prevention Plan (CFPP) will be prepared and submitted to the CPUC for review prior to initiation of construction. The CFPP will be fully implemented throughout the construction period and will include, at a minimum, the following: ▶ The purpose and applicability of the plan; ▶ Responsibilities and duties; ▶ Preparedness training and drills; ▶ Procedures for fire reporting, response, and prevention that include the following: ▪ Identification of daily site-specific risk conditions, ▪ The tools and equipment needed on vehicles and to be on hand at sites, ▪ Reiteration of fire prevention and safety considerations during tailboard meetings, and ▪ Daily monitoring of the red flag warning system with appropriate restrictions on types and levels of permissible activity; ▶ Coordination procedures with federal and local fire officials; ▶ Crew training, including fire safety practices and restrictions; and ▶ Method(s) for verifying that all Plan protocols and requirements are being followed. A Proposed Project Fire Marshal or similarly qualified position will be established to enforce all provisions of the CFPP, as well as perform other duties related to fire detection, prevention, and suppression for the Proposed Project. Construction activities will be monitored to ensure implementation and effectiveness of the CFPP.	LSPGC	LSPGC to provide final Construction Fire Prevention Plan. CPUC mitigation monitor to inspect compliance and review final plan.	Prior to and during project construction.

MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM – PACIFIC GAS AND ELECTRIC

Table 2 Mitigation Monitoring, Compliance, and Reporting Program – Pacific Gas and Electric

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
Aesthetics			
CM GNE-1: Standard Construction Practices. The following standard construction practices will be implemented, as feasible, to reduce the potential for environmental impacts. ▶ Vehicle parking: vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable. ▶ Work hours: work will occur only during daylight hours, unless required to occur at night due to line clearances for worker safety. ▶ Vehicle access: the development of new access and right-of-way (ROW) roads will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable. ▶ Speed limit: vehicles will not exceed a speed limit of 15 miles per hour (mph) in the ROWs or on unpaved roads within sensitive land-cover types. ▶ Restoration and erosion control: on completion of any Proposed Project component, all areas that are significantly disturbed and not necessary for future operations, shall be stabilized to resist erosion, and revegetated and recontoured if necessary, to promote restoration of the area to pre-disturbance conditions. ▶ Dead or injured listed species: personnel will be required to report any accidental death or injury of a listed species or the finding of any dead or injured listed species to a qualified Biologist. Notification of the California Department of Fish and Wildlife (CDFW) and/or United States Fish and Wildlife Service (USFWS) of any accidental death or injury of a listed species shall be done in accordance with standard reporting procedures. ▶ Staging Area Maintenance: Work sites will be maintained in a clean and orderly state. ▶ Environmentally Sensitive Areas: Biological field surveys will be performed for areas not yet surveyed. Sensitive biological resources or areas discovered during surveys may be subject to a buffer from construction activities. ▶ Aquatic resources: All aquatic resources will be clearly marked prior to construction within the work areas. If deemed necessary by lead biologist, a buffer from construction activities might be established around these areas. ▶ Vegetation: Vegetation and tree removal will be limited to the minimum area necessary to allow construction to proceed and to meet operational requirements. ▶ Trapped Animals: All excavated holes/trenches that are not filled at the end of the workday will be covered, or a wildlife escape ramp will be installed to prevent the inadvertent entrapment of wildlife.	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction and upon completion of construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▶ Delineation of Work Areas: Work areas will be clearly delineated prior to construction commencing with fencing, staking, or flags.			
Agricultural and Forestry Resources			
CM AG-1: Landowner Coordination. Pacific Gas and Electric Company (PG&E) will coordinate with landowners prior to construction and during restoration efforts. Measures to be implemented may include, but are not limited to, the following: ▶ Provide notice to landowners outlining construction activities and restoration efforts. ▶ Areas disturbed by construction of the Proposed Project restored in accordance with lease and easement conditions, applicable operation and maintenance standards, and environmental permit requirements. ▶ In areas containing permanent crops (i.e., grapevines, orchard crops, etc.) that must be removed to gain access to pole sites for construction purposes, PG&E may compensate the farmer and/or landowner in coordination with the landowner.	PG&E	PG&E to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	Prior to construction and during post-construction restoration.
Air Quality			
Construction Measure AQ-A [PG&E] /Mitigation Measure AQ-1 [LSPGC]: The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APM AIR-1 and PG&E CM AIR-1 as presented in the PEA: Construction contractors for the project shall use engines that meet the EPA's Tier 4 emission standards, as defined in 40 CFR 1039, in at least 75 percent of construction equipment with a rating between 100 and 750 hp off-road construction equipment and shall comply with the appropriate test procedures and provisions contained in 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment, as it becomes available, for at least 75 percent of construction equipment and/or by using a combination of engines that meet the EPA's Tier 4 emission standards and battery-electric off-road construction equipment, as long as the total of Tier 4 and battery-electric construction equipment comprises 75 percent of construction equipment. Implementation of this measure shall be required in the contract the project applicant establishes with its construction contractors. LSPGC and PG&E shall separately demonstrate their plans to fulfill the requirements of this measure in a memorandum that shall be submitted to the CPUC before the use of any off-road diesel-powered construction equipment on the site. Each memorandum shall include a list of the equipment and vehicles to be used during construction of LSPGC and PG&E project components with details including equipment/vehicle engine tiers and expected daily and annual usage hours to demonstrate adherence to the 75 percent requirement above	LSPGC and PG&E	LSPGC and PG&E to maintain equipment list and provide upon request to CPUC, along with the memorandum. CPUC mitigation monitor to inspect compliance.	Prior to and during construction.
CM AIR-2: Fugitive Dust Control. The following actions will be taken, as applicable and feasible, to control fugitive dust during construction. San Joaquin Valley Air Pollution Control District notifications will be made in accordance with any requirements in effect at the time of construction.	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▶ Applying water to disturbed areas and to storage stockpiles. ▶ Applying water in sufficient quantities to prevent dust plumes during activities such as clearing and grubbing, backfilling, trenching, and other earth-moving activities. ▶ Limit vehicle speed to 15 mph. ▶ Load haul trucks with a freeboard (space between top of truck and load) of 6 inches or greater. ▶ Cover the top of the haul truck load. ▶ Clean up track-out at least daily.			
Biological Resources			
Construction Measure BIO-A [PG&E] / Mitigation Measure BIO-1 [LSPGC]: Conduct Protocol-Level Surveys for Special-Status Plants and Compensate for Impacts Special-status plant surveys described in APM BIO-4 and CM BIO-2 shall follow the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). The surveys will be conducted within suitable habitat during the typical blooming period for the 10 species determined to have potential to occur in the project alignment area as described in Table 3.4-1. If plant species protected under ESA (i.e., San Joaquin woollythreads) are found during surveys for special-status plants conducted pursuant to APM BIO-4 and CM BIO-2, following the CDFW protocol described above, a protective buffer of at least 50 feet will be established around individual plants, and the plants will be avoided. If plant species considered special-status under CEQA (i.e., plants with a CRPR of 1 or 2) are found during surveys for special-status plants conducted pursuant to APM BIO-4 and CM BIO-2, following the CDFW protocol described above, a protective buffer of at least 50 feet will be established around individual plants, and the plants will be avoided, if feasible. The size and shape of the protective buffer may be adjusted if a CPUC-approved biologist determines that a smaller buffer will be sufficient to avoid loss of or damage to special-status plants or that a larger buffer is necessary to sufficiently protect plants from project activities. The appropriate size and shape of the protective buffer will be determined by the CPUC-approved biologist and will depend on the plant's growth form (e.g., annual, perennial), plant phenology at the time of implementation of project activities, the individual species' vulnerability to the project activity, and environmental conditions and terrain. Where avoidance of plants considered special-status under CEQA is not feasible, and the only plants present in a work area are annual plants (see Table 3.4-1), initial disturbances associated with temporary construction work activities will be scheduled to occur after seed set and prior to seedling emergence and when soil is dry. If special-status perennial plants (i.e., recurved larkspur) are present in a work area, this method would not avoid impacts, and these plants would be avoided as described above. When permanent ground disturbing activities cannot be avoided in known annual special-status plant locations the top 4 inches of soil will be collected and retained onsite prior to disturbance and replaced in the same approximate location following completion of project activities. If the surface topography is altered by the work, the surface will be re-contoured to existing conditions and the salvaged topsoil will be replaced.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance.	Prior to and during project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
Construction Measure BIO-B [PG&E]/Mitigation Measure BIO-2 [LSPGC]: Conduct Protocol-Level Surveys for Blunt-Nosed Leopard Lizard and Implement Avoidance Measures The following measure shall supersede and replace LSPGC APM BIO-15 for LSPGC project components and PG&E CM BIO-5 for PG&E project components, as presented in the PEA, for blunt-nosed leopard lizard: ▶ Prior to construction of project components in habitats suitable for blunt-nosed leopard lizard (i.e., annual grassland), at least two qualified biologists approved by the CPUC shall conduct surveys following measures in the Approved Survey Methodology for the Blunt-Nosed Leopard Lizard (CDFW 2019) between April and September, including spring adult surveys and fall hatchling surveys. Biologists shall conduct visual search surveys while walking in parallel on adjacent transects that cover all areas within the project site with potential blunt-nosed leopard lizard habitat. Biologists shall stop periodically to scan the transect for blunt-nosed leopard lizard using close-focusing binoculars. The survey methods applied shall be commensurate with the anticipated level of disturbance, as described below. ▶ For project activities that could result in habitat removal: ▪ A total of 12 adult surveys shall take place during the optimal survey period (April 15 to July 15) with a maximum of 4 survey days per week and 8 days within any 30-day time period. At least one survey session shall be conducted for 4 consecutive days, weather permitting. ▪ A total of 5 additional hatchling surveys shall take place during the hatchling optimal survey period (August 1 to September 15). ▶ For operation and maintenance activities that would not result in habitat removal: ▪ A total of 8 adult surveys shall take place during the optimal survey period (April 15 to July 15) with a maximum of 3 survey days per week and 6 days within any 30-day time period. ▪ Fall hatchling surveys are not required for activities in this category. ▶ If blunt-nosed leopard lizards are observed, biologists shall record the location (UTM coordinates) of individuals and the presence of habitat features important for blunt-nosed leopard lizard (e.g., washes, playas, relative abundance of small mammal burrows). Because this species is designated as Fully Protected under the California Fish and Game Code, complete avoidance of take (i.e., hunting, pursuing, catching, capturing, or killing) is required, unless PG&E and/or LSPGC consult with CDFW and obtain an Incidental Take Permit pursuant to SB 147 (Statutes of 2023) and Fish and Game Code Section 2081.15. PG&E and/or LSPGC will adhere to the provisions and conditions of the Incidental Take Permit that may include compensatory mitigation and would fully mitigate impacts on the species. In the event Fish and Game Code Section 2081.15 is deemed by CDFW to be inapplicable such that incidental take is not permissible, PG&E and/or LSPGC shall initiate consultation with CDFW to determine how the project can be designed to completely avoid take of blunt-nosed leopard lizards and potentially occupied habitat. ▶ All blunt-nosed leopard lizard observations shall be reported to the CNDDB within 30 days. ▶ If no blunt-nosed leopard lizards are observed during the survey period, then further mitigation for this species is not required. Surveys shall be accepted for one year from the date of completion.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW, as applicable, regarding presence of blunt-nosed leopard lizard.	Prior to and during project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
Construction Measure BIO-C [PG&E] / Mitigation Measure BIO-3 [LSPGC]: Conduct Focused Surveys for Special-Status Reptiles and Implement Avoidance Measures ▶ Within 14 days before the initiation of any construction activity, a qualified biologist approved by the CPUC shall conduct a focused visual survey of habitat suitable (i.e., annual grassland, scrub) for California glossy snake, coast horned lizard, and/or San Joaquin coachwhip in the project alignment area and a 100-foot buffer surrounding the project alignment area, which shall include walking linear transects. ▶ If California glossy snake, coast horned lizard, or San Joaquin coachwhip are not detected during the focused survey, the qualified biologist shall submit a report summarizing the results of the survey to LSPGC, PG&E, and the CPUC, and further mitigation shall not be required. ▶ If California glossy snake, coast horned lizard, or San Joaquin coachwhip are detected, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground-disturbance activities and shall inspect the project site before initiation of project activities. If California glossy snake, coast horned lizard, or San Joaquin coachwhip are detected, the qualified biologist shall move individuals into nearby suitable habitat that will not be disturbed by project activities or will allow the individual to move out of the project area of its own volition if it is not in immediate danger.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance.	Up to 14 days prior to the start of construction and during construction, if applicable.
Construction Measure BIO-D [PG&E] / Mitigation Measure BIO-4 [LSPGC]: Conduct Focused Surveys for Western Spadefoot Toads and Implement Avoidance Measures The following measure shall apply for LSPGC project components and shall supersede and replace PG&E CM BIO-6 for PG&E project components, as presented in the PEA, for western spadefoot toads: ▶ Within 48 hours prior to project implementation within areas containing habitat suitable for western spadefoot toad, a qualified biologist approved by the CPUC shall conduct focused surveys within identified work and access areas that are located in aquatic (i.e., vernal pool, wetland) and upland (i.e., annual grassland) habitats within approximately 860 feet (262 meters) of aquatic habitat (Baumberger et al. 2019) suitable for the species. Burrows that are unavoidable and considered potentially occupied by western spadefoot toads shall be identified and further examined by a qualified biologist (e.g., with a burrow scope, through hand excavation) to determine whether an adult toad is present in the burrow. ▶ If western spadefoot toads are not found, the qualified biologist shall submit a report summarizing the results of the survey to LSPGC, PG&E, and the CPUC, and further mitigation will not be required. ▶ If western spadefoot toads are detected during focused surveys, then adults, tadpoles, and egg masses shall be relocated by a qualified biologist with a valid CDFW scientific collecting permit to nearby suitable habitat that will not be disturbed by project activities. This relocation is considered adequate to reduce impacts below the level of significance under CEQA. Because western spadefoot is proposed for listing under the ESA, if the species is listed before construction activities begin, LSPGC and PG&E shall consult with the USFWS to determine whether additional measures or permitting is required to comply with the ESA.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USFWS if western spadefoot toad is listed under the ESA.	Within 48 hours prior to the start of construction and during construction, if applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
Construction Measure BIO-E [PG&E] / Mitigation Measure BIO-5 [LSPGC]: Implement Survey Area Minimums, Survey Timing Standards, and Applicable Protocols for Special-Status and Other Native Birds The following measure shall supplement the requirements in APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components), as presented in the PEA, for special-status and other native birds: ▶ Pre-construction nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components) shall be conducted within work areas and accessible areas (i.e., existing LSPGC or PG&E rights-of-way, public land, private land with existing access permission) in the following buffers surrounding the work area: ▪ 0.5 miles for Swainson's hawk; ▪ 500 feet for northern harrier, short-eared owl, and other native raptors; and ▪ 250 feet for other native bird species. ▶ To avoid trespassing, inaccessible areas (e.g., private land) shall be surveyed using binoculars or spotting scopes as feasible (i.e., to the maximum distance achievable using these tools). As a result, it may not be feasible to complete surveys in the full survey buffer in all cases; however, LSPGC and PG&E shall implement the full survey buffer wherever feasible. ▶ Nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components) shall be conducted no more than 10 days prior to the start of construction activities during the nesting bird season (February 1 to September 15). Continuous construction within an area following a nesting bird survey will negate the need to repeat additional nesting bird surveys. If there is a five day or more lapse in project construction within an area, the nesting bird survey shall be repeated. ▶ Focused surveys for Swainson's hawk shall follow the protocols found in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). ▶ If an active nest is discovered during nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and construction activities would occur during the nesting bird season, no-disturbance buffers shall be established, within which no ground-disturbing construction activities would occur until the nest is no longer active as determined by a CPUC-approved biologist. No-disturbance buffers shall be at least 0.5 miles for Swainson's hawk, 500 feet for northern harrier, short-eared owl, or other native raptors, 250 feet for non-raptor special-status birds, and 20 feet for other native birds (i.e., without special status). No-disturbance buffer sizes for other native birds (non-raptors) without special status may be increased at the discretion of the CPUC-approved biologist depending on factors including species, nest height, topography, existing vegetative or other barriers between the nest and project activities, and disturbance level surrounding the nest. Any reduction in the no-disturbance buffer for special-status bird species shall require consultation with the CPUC-approved biologist, and would require	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance.	Prior to project construction and during construction, as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
additional measures, including biological monitoring to determine whether nesting birds are exhibiting disturbance behaviors, after which the no-disturbance buffer size shall be increased. ▶ No-disturbance buffers described in CM BIO-8 (for PG&E components) that would follow the most recent PG&E Nesting Bird Management Plan would be sufficient to maintain impacts on nesting birds at less than significant under CEQA. ▶ If an active Swainson's hawk nest is detected, and implementation of the 0.5-mile no-disturbance buffer is not feasible, LSPGC or PG&E shall consult with CDFW to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.			
Construction Measure BIO-F [PG&E] / Mitigation Measure BIO-6 [LSPGC]: Conduct Protocol-Level Surveys for Burrowing Owl and Implement Avoidance Measures The following measure shall supersede and replace APMs BIO-6 and APM BIO-10 (for LSPGC components) and CM BIO-7 (for PG&E components), as presented in the PEA, for burrowing owl. LSPGC and PG&E Construction Activities and LSPGC O&M Operational Activities ▶ A qualified biologist approved by the CPUC shall conduct surveys for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet of the work area. Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas. A minimum of four surveys shall be conducted to determine whether burrowing owls occupy the site. Surveys shall be conducted according to Appendix D of the 2012 Staff Report on Burrowing Owl Mitigation prepared by the California Department of Fish and Game (now CDFW) (CDFW 2012) or any subsequent updated guidance. If feasible, at least one survey should be conducted between February 15 and April 15, and the remaining surveys should be conducted between April 15 and July 15, at least three weeks apart. Because burrowing owls may recolonize a site after only a few days, one of the surveys, or an additional survey, shall be conducted no less than 14 days before initiating ground disturbance activities to verify that take of burrowing owl would not occur. ▶ If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to LSPGC or PG&E and the CPUC, and no further mitigation shall be required. ▶ If an active burrow is found within 1,640 feet of pending construction activities, LSPGC or PG&E shall establish and maintain a buffer around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls. ▪ If an active burrow is found within 1,640 feet of pending construction activities, LSPGC or PG&E shall establish and maintain a buffer around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW, as applicable, regarding presence of burrowing owl.	Prior to project construction and during construction, as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▪ The buffer may be adjusted if, in consultation with the CDFW, the qualified biologist determines that an alternative buffer shall not result in take of burrowing owl adults, young, or eggs because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, the qualified biologist shall monitor the behavior of the burrowing owls during all project activities within 1,640 feet of the burrow. If the owls are disturbed or agitated (e.g., vocalizations, bill snaps, fluffing feathers to increase body size appearance, drooping wings and rotating them forward, crouching and weaving back and forth) by the project activities, the biologist shall have the authority to halt the activities and reestablish a buffer consistent with the first item above until the agitated behavior ceases and normal behavior resumes. ▪ The buffer shall remain in place around the occupied burrow and associated satellite burrows until the qualified biologist has determined through noninvasive methods that the burrows are no longer occupied by burrowing owl. A previously occupied burrow will be considered unoccupied if surveys demonstrate that no owls have used the burrow for seven consecutive days. ▪ Locations of burrowing owls detected during surveys shall be reported to the CNDDB within 30 days. PG&E O&M Activities ▪ PG&E shall consult with CDFW to determine the appropriate protective buffer distance for active burrowing owl burrows detected in or within 1,640 feet of the project alignment area to avoid take of burrowing owls from O&M activities.			
Construction Measure BIO-G [PG&E] / Mitigation Measure BIO-7 [LSPGC]: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee The following measure shall supersede APMs BIO-16 and BIO-17 for LSPGC components and shall apply for PG&E project components and for Crotch's bumble bee: ▶ Initial ground-disturbing work (e.g., grading, vegetation removal, staging) in grassland habitat or edges of agricultural areas that contain grasses or forbs shall take place between August 15 and March 15, if feasible to avoid impacts on nesting Crotch's bumble bees. ▶ If the above limited operating period is not feasible (i.e., if limiting ground disturbance to the period between August 15 and March 15 would preclude achieving most of all of the project objectives) as determined by LSPGC or PG&E with concurrence from the CPUC, a qualified biologist approved by the CPUC, familiar with bumble bees of California and experienced using survey methods for bumble bees, shall conduct a habitat assessment and focused survey for Crotch's bumble bee before the start of any ground-disturbing activities in grassland habitat or edges of agricultural areas that contain grasses or forbs. Surveys shall be performed when Crotch's bumble bee is most likely to be identified, typically from April through August (i.e., the colony active period) when floral resources and ideal weather conditions are present, and shall follow the methods in Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). Surveys shall be conducted during the colony active period the same year as the start of planned construction activities.	PG&E and LSPGC	PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW, as applicable, regarding presence of Crotch's bumble bee.	Prior to project construction and during construction, as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▶ LSPGC and PG&E shall submit a survey report to the CPUC within 1 month of survey completion and shall notify CDFW and the CPUC within 24 hours if Crotch's bumble bees are detected. ▶ If Crotch's bumble bees are detected during the focused survey, appropriate avoidance measures shall be implemented. Avoidance measures shall include, but not be limited to, the following: ■ Protective buffers shall be implemented around active nesting colonies until these sites are no longer active. A qualified biologist, in coordination with the CDFW, shall determine the appropriate buffer size to protect nesting colonies. ■ If nesting colonies are detected, avoidance areas shall be implemented in areas near the colony location that contain significant floral resources for the colony, if present. A qualified biologist shall determine the appropriate avoidance area size to protect foraging resources. ■ If project activities involving temporary disturbance (e.g., staging) would occur where a nesting colony was detected after the nesting colony is no longer active, the area shall be restored to original conditions after the temporary disturbance is complete such that habitat for Crotch's bumble bee would be available. ▶ If take of Crotch's bumble bee cannot be avoided, LSPGC and PG&E shall obtain an Incidental Take Permit (ITP) from the CDFW and shall implement all avoidance measures included in the ITP. The CDFW may also require compensatory mitigation through on-site habitat restoration or purchase of credits at an appropriate mitigation bank. Avoidance measures included in the ITP would reduce the likelihood of take of Crotch's bumble bees such that impacts on the species would be fully mitigated. These measures would include but not be limited to: ■ specifications for construction timing and sequencing requirements to avoid impacts on nesting Crotch's bumble bees; ■ pre-construction surveys conducted within 30 days prior to the start of ground-disturbing activities; ■ establishment of seasonal no-disturbance buffers around nest sites; ■ construction monitoring; ■ restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., BMPs to minimize the spread of invasive plant species); and ■ provisions to avoid Crotch's bumble bees or potential Crotch's bumble bees if observed away from a nest during project activity (e.g., ceasing of project activities until the animal has left the work area). ▶ Documentation of compliance with this mitigation measure and any required coordination with the CDFW or acquisition of an ITP shall be provided to the CPUC before commencement of any project construction activities.			
Construction Measure BIO-H [PG&E]: Conduct Focused Surveys for Giant Kangaroo Rat and San Joaquin Antelope Squirrel and Implement Avoidance Measures	PG&E	PG&E to provide survey results and documentation of measure compliance.	Prior to the start of construction. During

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
The following measure shall supersede and replace CM BIO-3 (for PG&E components), as presented in the PEA, for giant kangaroo rat and San Joaquin antelope squirrel: ▶ Prior to the initiation of any construction activity, a CPUC-approved biologist shall conduct a habitat assessment in the project alignment area to identify habitat suitable for giant kangaroo rat and San Joaquin antelope squirrel. The habitat assessment shall consider land cover types associated with these species (e.g., grassland), presence of burrows potentially suitable for the species, and incidental sightings of giant kangaroo rats or San Joaquin antelope squirrels. Where habitat determined to be potentially suitable for these species is identified, the following measures shall apply: ▪ Prior to the initiation of any construction activity, a qualified biologist approved by the CPUC, and with a valid USFWS Section 10(a)1(A) recovery permit (for giant kangaroo rat) and valid CDFW scientific collecting permit (for giant kangaroo rat and San Joaquin antelope squirrel), shall conduct surveys of the proposed project work area for giant kangaroo rat and San Joaquin antelope squirrel. Surveys shall be confined to proposed project work areas that overlap the habitat determined to be potentially suitable during the habitat assessment described above, as well as disturbed habitats and agricultural areas within a 500-foot radius of these areas (referred to below as the "survey area"). Surveys for giant kangaroo rat shall conform to the methodology outlined in the San Joaquin Kangaroo Rat Trapping Protocol (USFWS 2013). Surveys for San Joaquin antelope squirrels shall consist of walking transects and visually inspecting the survey area for squirrels and potential burrows • If giant kangaroo rats or San Joaquin antelope squirrels or potential burrows are determined to be absent during surveys, the qualified biologist shall submit a report summarizing the results of the survey to PG&E and the CPUC, and further mitigation will not be required. • If giant kangaroo rats or San Joaquin antelope squirrels or potential San Joaquin antelope squirrel burrows are determined to be present through these surveys, a qualified biologist shall map all burrows suitable for giant kangaroo rat and San Joaquin antelope squirrels in the survey area. A minimum 50-foot no-disturbance buffer shall be established around all burrows determined to be occupied by giant kangaroo rat or San Joaquin antelope squirrels, within which no project activities shall occur. • If the 50-foot no-disturbance buffers cannot be fully implemented, PG&E shall consult with USFWS and CDFW prior to initiating project activities to determine whether other measures are required to ensure compliance with ESA and CESA, respectively. If additional avoidance is not feasible and take is reasonably certain to occur, PG&E shall obtain an ITP from CDFW (for giant kangaroo rat and San Joaquin antelope squirrel) and USFWS (for giant kangaroo rat) and shall implement all avoidance measures included in the ITP. CDFW may also require compensatory mitigation through on-site habitat restoration or purchase of credits at an appropriate mitigation bank. Avoidance measures included in the ITP would reduce the likelihood of take of giant kangaroo rats and San Joaquin antelope squirrels such that impacts on the species would be fully mitigated. These measures would include but not be limited to:		CPUC mitigation monitor to inspect compliance. Coordination with CDFW and USFWS, as applicable, regarding presence of giant kangaroo rat and San Joaquin Antelope Squirrel.	project construction, as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
• construction monitoring; • restrictions associated with construction practices, equipment, or materials that may harm giant kangaroo rats or San Joaquin antelope squirrels; and • provisions to avoid giant kangaroo rats and San Joaquin antelope squirrels if observed away from a burrow during project activity (e.g., ceasing of project activities until the animal has left the work area). • Documentation of compliance with this mitigation measure and any required coordination with the USFWS and CDFW, including but not limited to the acquisition of an ITP, shall be provided to the CPUC before commencement of any project construction activities.			
Construction Measure BIO-I [PG&E] / Mitigation Measure BIO-8 [LSPGC]: Conduct Focused Surveys for American Badger and Implement Avoidance Measures The following measure shall supplement the requirements in APMs BIO-6 and BIO-10 (for LSPGC project components) and shall apply for PG&E project components for American badger: ▶ For LSPGC project components, pre-construction wildlife and burrow surveys conducted pursuant to APM BIO-6 and burrow and den avoidance implemented pursuant to APM BIO-10 shall also incorporate American badger. ▶ For PG&E components, the following measures shall be implemented. ▪ Within 14 days before commencement of project activities, a qualified wildlife biologist approved by the CPUC familiar with American badger and experienced using survey methods for the species shall conduct focused surveys of habitat suitable for the species in the project alignment area to identify any American badger dens. ▪ If occupied dens are not found, the qualified biologist shall submit a report summarizing the results of the survey to PG&E and the CPUC, and further mitigation shall not be required. If occupied dens are found, then dens shall be monitored to determine if occupation is by an adult badger only or if it is a natal den. Impacts on active badger dens shall be avoided by establishing exclusion zones around all active badger dens. If the qualified biologist determines that the den is a natal den, an exclusion zone of 200 feet shall be maintained around the den until the qualified biologist determines that the den has been vacated. If the den is occupied by an adult badger only, the size of the buffer shall be determined by a qualified biologist. No project activities (e.g., vegetation removal, ground disturbance, staging) shall occur within the exclusion zone until denning activities are complete (i.e., the adult badger and young have left the area) or the den is abandoned, as confirmed by a qualified biologist. The qualified biologist shall monitor each den once per week to track the status of the den and to determine when it is no longer occupied. When the den is no longer occupied, project activities within the exclusion zone may occur. Monitoring reports shall be submitted to the CPUC.	LSPGC and PG&E	LSPGC and PG&E to provide survey results.	Prior to project construction and during construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
Construction Measure BIO-J [PG&E] / Mitigation Measure BIO-9 [LSPGC]: Conduct Focused Surveys for San Joaquin Kit Foxes and Implement Avoidance Measures The following measures, in accordance with the *USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), shall supersede the requirements in APMs BIO-8 (for LSPGC components) and CM BIO-4 (for PG&E components) as presented in the PEA for San Joaquin kit fox: ▶ Preconstruction surveys shall be conducted by a qualified biologist no less than 14 days and no more than 30 days prior to the beginning of ground disturbance or construction activities or any project activity likely to adversely affect the San Joaquin kit fox. Surveys shall identify San Joaquin kit fox habitat features in the project alignment area (e.g., dens), evaluate use by kit fox, and assess the potential impacts on the kit fox by the proposed activity. Survey methods shall include thoroughly inspecting suitable habitat in the project alignment area for kit fox dens using walking line transects. The status of all dens shall be determined and mapped. ▪ If no San Joaquin kit foxes or potential dens (i.e., a burrow at least four inches in the diameter that opens within two feet) are found, the qualified biologist shall document the findings in a letter report to USFWS, CDFW, the CPUC, and LSPGC or PG&E, and no further mitigation will be required. ▪ If potential or known San Joaquin kit fox dens are found, exclusion zones shall be established for all dens within the project alignment area, and construction activity and other ground disturbance shall be prohibited within these zones. Potential dens shall be marked with flagged stakes 50 feet from the den entrance. A 100-foot exclusion zone will be established and demarcated using USFWS-approved fencing around the entrance of known dens. ▪ If a natal/pupping den is discovered within the project alignment area or within 200 feet of the project boundary, USFWS, CDFW, and the CPUC shall be immediately notified and the den shall not be disturbed or destroyed without prior authorization or a take permit. ▪ If potential dens are identified (i.e., a burrow at least four inches in the diameter that opens within two feet), the den entrances shall be dusted, and camera and scent stations shall be deployed for three calendar days to register and track activity of any San Joaquin kit fox present. If no San Joaquin kit fox activity is identified after three days, the den may be removed. Den removal must be appropriately monitored and conducted by a qualified wildlife biologist. ▪ Written results of preconstruction surveys must be received by the CPUC within five days after survey completion and prior to the start of ground disturbance or construction activities. ▶ During construction, LSPGC and PG&E shall observe the following measures throughout the project alignment area to minimize impacts on San Joaquin kit fox: ▪ Artificial lighting of construction sites in the project alignment area during nighttime shall be limited to the extent feasible.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with CDFW and USFWS, as applicable, regarding presence of San Joaquin kit fox.	Prior to project construction and during construction, and during construction as applicable.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▪ Holes or trenches shall be inspected daily to ensure that no animal has become trapped despite covers. All holes or trenches shall be thoroughly inspected before filling. ▪ All pipes, culverts, or similar structures with a diameter of 4 inches or greater shall be inspected for kit foxes before they are buried, capped, used, or moved in any way. ▪ All trash shall be properly disposed of and removed from the construction site at least once a week. ▪ No firearms shall be allowed on the construction site. ▪ No pets shall be permitted on the construction site. ▪ Use of rodenticides and herbicides in project areas shall be restricted. ▪ Plastic mono-filament matting shall not be used for erosion control or other purposes. Instead, tightly woven fiber or similar material shall be used. ▪ If a kit fox is trapped: • Personnel shall immediately report the incident to the project biologist. • Escape ramps or structures shall be installed immediately. • If the fox cannot escape, USFWS and CDFW shall be contacted for guidance. • The project biologist shall notify USFWS and CDFW by telephone or email within 24 hours. ▪ If a kit fox is injured or killed: • Personnel shall immediately report the incident to the project biologist. • Project activities shall cease until USFWS and CDFW provide guidance. • The project biologist shall notify USFWS and CDFW immediately with the date, time, and location of the incident. • Consultation with USFWS shall be reinitiated.			
Construction Measure BIO-K [PG&E] / Mitigation Measure BIO-10 [LSPGC]: Implement Avoidance Measures for State or Federally Protected Wetlands and Obtain Permits for Impacts on Wetlands ▶ If potential state or federally protected wetlands identified in the project alignment area can be avoided, a qualified biologist approved by the CPUC shall establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone shall be determined in coordination with the qualified biologist and will depend on the type of wetland present (e.g., seasonal wetland, seep, pond), the timing of project activities (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the project activities, environmental conditions and terrain, and the project activity being implemented.	LSPGC and PG&E	LSPGC and PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USACE and RWQCB, as applicable, regarding presence of state or federally protected wetlands.	Prior to project construction and during construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
▪ Project activities (e.g., ground disturbance, vegetation removal, staging) shall be prohibited within the established buffer. The qualified biologist shall periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. ▶ If it is determined that disturbance or fill of potential state or federally protected wetlands or waters cannot be avoided, LSPGC and/or PG&E shall submit the appropriate permit applications to the relevant regulatory agencies (e.g., USACE, RWQCB). ▶ If it is determined that fill of waters of the United States would result from project implementation, LSPGC and/or PG&E shall secure authorization for such fill from the USACE through the Section 404 permitting process. Any waters of the United States that would be affected by the project shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE mitigation guidelines in place at the time of construction. In association with the Section 404 permit (if applicable) and prior to the issuance of any grading permit, a Section 401 Water Quality Certification shall be obtained from the Central Valley RWQCB. For impacts on waters of the state that are not also waters of the United States and are therefore not covered by the 401 Water Quality Certification, the applicant shall apply to the RWQCB for Waste Discharge Requirements following the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). Any waters of the United States or waters of the state that are to be affected by the project shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE and SWRCB mitigation standards in place at the time of construction. ▶ If it is determined that disturbance or fill of state protected waters cannot be avoided, LSPGC and/or PG&E shall notify the CDFW before commencing activity that may divert the natural flow or otherwise alter the bed, or bank of any 1602 jurisdictional waterway. If project activities trigger the need for a Lake or Streambed Alteration Agreement, LSPGC and/or PG&E shall obtain such an agreement from the CDFW before the activity commences. LSPGC and/or PG&E shall conduct project construction activities in accordance with the agreement, including implementing reasonable measures in the agreement necessary to protect fish and wildlife resources, when working within the bed or bank of a lake or stream. These measures may include but shall not be limited to demarcation of the construction area, biological monitoring, environmental awareness training for construction crews, and compensatory measures (e.g., restoration, long-term habitat management) such that there would be no net loss.			
Construction Measure BIO-L [PG&E]/ Mitigation Measure BIO-11 [LSPGC]: Develop and Implement an Avian Protection Plan ▶ PG&E shall implement its Avian Protection Plan, PG&E's Program to Address Avian Electrocutions, Collisions, and Nesting Birds (PG&E 2018), including all risk reduction measures and training and reporting requirements therein. ▶ LSPGC must follow the recommendations outlined in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012 or the most current version). In addition, LSPGC shall develop and implement an Avian Protection Plan according to the Avian Protection Plan Guidelines (APLIC and USFWS 2005). The plan shall include measures to minimize collision and electrocution risk to avian species during project	LSPGC and PG&E	LSPGC to provide Avian Protection Plan. CPUC mitigation monitor to inspect compliance through quarterly reports and verify report. LSPGC coordination with CDFW and USFWS for plan approval.	Prior to project construction (LSPGC) and during project construction (LSPGC and PG&E).

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
operation. The plan shall be submitted for review to the CDFW and USFWS at least 60 days before construction begins.			
CM BIO-1: Worker Environmental Awareness Training. A qualified biologist will develop an environmental awareness training program that is specific to the Proposed Project. All on-site construction personnel will attend the training before they begin work on the Proposed Project. Training will include a discussion of the construction management practices that are being implemented to protect biological resources as well as the terms and conditions of any Proposed Project permits.	PG&E	PG&E to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	Prior to project construction.
CM BIO-2: Special-Status Plants. Prior to initial vegetation clearing and ground-disturbing activities in annual grassland habitat, a qualified biologist will conduct pre-construction surveys of the Proposed Project work area for special-status plants. If a covered plant species is present following special-status plant surveys, a qualified biologist will stake and flag exclusion zones of 100 feet around plant occupied habitat (both the standing individuals and the seed bank individuals) of the covered species prior to performing the activities. If an exclusion zone cannot extend the specified distance from the habitat, the biologist will stake and flag a restricted activity zone of the maximum practicable distance from the exclusion zone around the habitat. This exclusion zone distance is a guideline that may be modified by a qualified biologist, based on site-specific conditions (including habituation by the species to background disturbance levels). If avoidance of plant species listed under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) is not possible, the USFWS and/or CDFW will be consulted.	PG&E	PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USFWS and CDFW, as appropriate, if special status species are present.	Prior to project construction. During construction, if appropriate.
CM BIO-4: San Joaquin Kit Fox. Prior to the initiation of ground-disturbing activities in grassland habitat suitable for foraging and denning, a qualified biologist will conduct pre construction surveys of the Proposed Project work area for San Joaquin kit fox. If San Joaquin kit fox dens are present, their disturbance and destruction will be avoided. Exclusion zones for kit fox will be implemented following USFWS procedures (USFWS 1999) or the latest USFWS procedures. The radius of these zones will follow current standards or will be determined on a case-by-case basis in coordination with the USFWS and CDFW. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. If dens are located within the proposed work area and cannot be avoided during construction, qualified biologists will determine if the dens are occupied. If unoccupied, the qualified biologist will remove these dens by hand-excavating them in accordance with USFWS procedures for kit fox (USFWS 1999). If occupied, work activities will be delayed until the den is determined to no longer be active.	PG&E	PG&E to provide survey results. CPUC mitigation monitor to inspect compliance. Coordination with USFWS and CDFW, as appropriate, if San Joaquin kit fox is present.	Prior to project construction. During construction, if appropriate.
CM BIO-8: Migratory Birds. Prior to work activities conducted during the nesting bird season (February 1 to August 31), the work area will be inspected for nests. If a nest is discovered, a biologist will be contacted to determine the nest status, the species of the nesting birds, and if work activities are likely to impact the nest. If a nest is confirmed active (i.e., the nest contains eggs or young or the adults are exhibiting nesting behaviors such as siting in the nest, carrying food to the nest, etc.), designated avoidance buffers will be required and implemented according to the most recent PG&E Nesting Bird Management Plan and guidance available. The established buffers will remain in effect until the young have fledged or the nest is no longer active, as confirmed by the biologist. The biologist will have authority to order the cessation of nearby work activities or	PG&E	PG&E to provide survey results. CPUC mitigation monitor to inspect compliance.	Prior to project construction. During construction, if appropriate.

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adjust buffers if nesting pairs exhibit signs of disturbance. Buffer sizes may be reduced if the biologist determines that a reduced buffer size will not result in the abandonment of the nest or failure based on compelling biological and ecological reasoning (e.g., the biology of the bird species, concealment of the nest by topography, land use type, vegetation, and the level of project activity). Inactive nests may be removed in accordance with PG&E's approved avian permits.			
Cultural and Tribal Cultural Resources			
Construction Measure CR-A [PG&E] / Mitigation Measure CR-1 [LSPGC]: Conduct Built Environment Historical Resources Surveys for Built Environment Resources The following measure shall apply to LSPGC project and PG&E components and shall supersede and replace LSPGC APM CUL-2 and PG&E CM CUL-2, as presented in the PEA, for historic resources: Prior to the start of construction, a qualified architectural historian who meets the U.S. Secretary of the Interior Professional Qualifications Standards for History or Architectural History and approved by the CPUC shall perform historical resources surveys for built environment features for any portion of the project alignment area not yet surveyed (e.g., private properties with access restrictions) within PG&E or LSPGC project component areas. PG&E and LSPGC shall be responsible for ensuring that historical resources surveys for built environment features are conducted throughout all portions of their respective project component areas. For the purposes of this mitigation measure, built-environment features 50 years and older discovered during surveys shall be assumed to be historical resources as defined by State CEQA Guidelines Section 15064.5, and depending on whether the location of the resource is in LSPGC's or PG&E's project area, either LSPGC or PG&E shall be required to comply with Mitigation Measure CR-B. All such resources will be recorded on a California Department of Parks and Recreation DPR 523 primary form or equivalent documentation by a qualified architectural historian.	LSPGC and PG&E	LSPGC and PG&E to provide survey results.	Prior to project construction.
Construction Measure CR-B [PG&E] / Mitigation Measure CR-2 [LSPGC]: Protect Historical Built Environment Resources The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APM CUL-2 and PG&E CM CUL-2, as presented in the PEA, for built environment historic resources: ▶ If a built environment historical resource is identified in the project area, PG&E or LSPGC (as applicable, depending on whether the location of the resource is in LSPGC's or PG&E's project area) shall redesign the project to avoid direct or indirect impacts to the building or structure.	LSPGC and PG&E	LSPGC and PG&E to provide project redesign plans, if applicable. CPUC to review and approve revised plans.	Prior to project construction.
Construction Measure CR-C [PG&E] /Mitigation Measure CR-3 [LSPGC]: Conduct Archaeological Resources Surveys and Avoid Archaeological Resources The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APMs CUL-2 and CUL-3 and PG&E CMs CUL-2 and CUL-3, as presented in the PEA, for archaeological resources: Prior to the start of construction, a qualified archeologist who meets the U.S. Secretary of the Interior Professional Qualifications Standards for Archaeology and approved by the CPUC shall perform archeological resources surveys for any portion of the project alignment area not yet surveyed (e.g., private properties with	LGPGC and PG&E	LSPGC and PG&E to provide survey results. LSPGC and PG&E to provide project redesign plans, if applicable. CPUC mitigation monitor to inspect compliance and	Prior to project construction. During project construction, if appropriate.

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access restrictions) within PG&E or LSPGC project component areas. PG&E and LSPGC shall be responsible for ensuring that archeological resources surveys are conducted throughout all portions of their respective project component areas. For the purposes of this mitigation measure, all archaeological resources discovered during surveys shall be assumed to be unique archaeological resources or historical resources as defined by State CEQA Guidelines Section 15064.5 and will be recorded by a qualified archaeologist on a California Department of Parks and Recreation DPR 523 primary form or equivalent documentation. Each such resource will be indicated, such as via a GIS device, through environmentally sensitive areas (ESA) mapping, with flagging tape, safety fencing, and/or signage designating it as an ESA to ensure that PG&E or LSPGC construction crews and heavy equipment will not intrude on these sites during construction. Mapping or GIS marking will be preferred in locations where there is a higher risk of site looting (e.g., near public roads, on land where the owner appears to be an artifact collector). At the discretion of PG&E or LSPGC, monitoring may be done in lieu of or in addition to marking. If it is determined that the project, as currently designed, cannot avoid impacts on one or more of the sites, then PG&E or LSPGC (as applicable) shall redesign the project so that the archaeological sites will be completely avoided.		review and approve revised plans.	
CM CUL-1: Worker Awareness Training. PG&E will provide environmental awareness training on archaeological and paleontological resources protection. This training may be administered by the PG&E cultural resources specialist (CRS) or a designee as a stand-alone training or included as part of the overall environmental awareness training as required by the Proposed Project and will at minimum include: types of cultural resources or fossils that could occur at the Proposed Project site; types of soils or lithologies in which the cultural resources or fossils could be preserved; procedures that should be followed in the event of a cultural resource, human remain, or fossil discovery; and penalties for disturbing cultural or paleontological resources.	PG&E	PG&E to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	Prior to project construction. To be repeated for all new personnel.
CM CUL-3: Unanticipated Cultural Resources and Paleontological Discoveries. a. Unanticipated Cultural Resources. If unanticipated cultural resources are inadvertently discovered during site preparation or construction activities, work will stop in that area and within 50 feet of the find until the CRS or their qualified designee can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with PG&E and other appropriate agencies. Work may continue on other portions of the site with the CRS's approval. PG&E will implement the CRS's or their designee's recommendations for treatment of discovered cultural resources. b. Human Remains. In the unlikely event that human remains or suspected human remains are uncovered during pre-construction testing or during construction, all work within 50 feet of the discovery will be halted and redirected to another location. The find will be secured, and the CRS or designated representative will be contacted immediately to inspect the find and determine whether the remains are human. If the remains are not human, the CRS will determine whether the find is an archaeological deposit and whether paragraph (a) of this APM should apply. If the remains are human, the CRS will immediately implement the	PG&E	PG&E to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	During project construction.

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applicable provisions in Public Resources Code (PRC) Sections 5097.9 through 5097.994, beginning with the immediate notification to the affected county coroner. The coroner has two working days to examine human remains after being notified. If the coroner determines that the remains are Native American, California Health and Safety Code 7050.5 and PRC Section 5097.98 require that the CRS contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC, as required by PRC Section 5097.98, will determine and notify the Most Likely Descendant. c. Paleontological Discoveries. If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with the qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted in consultation with the landowner, PG&E, and California Public Utilities Commission (CPUC). The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.			
Geology and Soils			
CM GEO-1: Minimize Construction in Soft or Loose Soils. Where soft or loose soils are encountered during Proposed Project construction, several actions are available, feasible, and can be implemented to avoid, accommodate, replace, or improve such soils. Depending on site-specific conditions and permit requirements, one or more of these actions may be implemented to eliminate impacts from soft or loose soils: ▶ Locating construction facilities and operations away from areas of soft and loose soil. ▶ Over-excavating soft or loose soils and replacing them with engineered backfill materials. ▶ Increasing the density and strength of soft or loose soils through mechanical vibration and/or compaction. ▶ Installing material, such as aggregate rock, steel plates, or timber mats, over access roads. ▶ Treating soft or loose soils in place with binding or cementing.	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction.
CM PALEO-1: Unanticipated Paleontological Discoveries. If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with the qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be	PG&E	PG&E to provide/report evidence of compliance CPUC mitigation monitor to inspect compliance.	During project construction.

Applicant-Proposed Measures, Construction Measures, and Mitigation Measures	Applicable Party	Monitoring/Reporting/ Verification Requirements	Timing
conducted in consultation with the landowner, PG&E, and the CPUC. The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.			
Greenhouse Gas Emissions and Climate Change			
CM GHG-1: Greenhouse Gas Emissions Reduction During Construction. The following actions will be taken, as feasible, to minimize greenhouse gas emissions. ▶ Encourage construction workers to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Proposed Project will depend upon the proximity of carpool facilities to the area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the project's construction schedule. ▶ Minimize unnecessary construction vehicle idling time for on-road and off-road vehicles. The ability to limit construction vehicle idling time will depend on the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use, so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use. ▶ Maintain construction equipment in proper working conditions in accordance with PG&E standards. ▶ Minimize construction equipment exhaust by using low-emission or electric construction equipment, where feasible. Portable diesel fueled construction equipment with engines 50 hp or larger and manufactured in 2000 or later will be registered under the California Air Resources Board Statewide Portable Equipment Registration Program. ▶ Minimize welding and cutting by using compression of mechanical applications (utilizing mechanical pressure to create a secure connection between metal components) where practical and within standards. ▶ Encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available. ▶ Encourage recycling construction waste where feasible.	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction.
Hazards and Hazardous Materials			
CM HAZ-1: Hazardous-Substance Control and Emergency Response. PG&E will implement standard hazardous substance control and emergency response procedures to ensure the safety of the public and site workers during construction. The procedures identify methods and techniques to minimize the exposure of the public	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction.

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and site workers to potentially hazardous materials during all phases of Proposed Project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on-site. If it is necessary to store chemicals on-site, they will be managed in accordance with all applicable regulations. Material safety data sheets will be maintained and kept available on-site, as applicable. Proposed Project construction will involve soil surface blading/leveling, excavation of up to several feet, and auguring to a maximum depth of 35 feet in some areas. In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil will be tested, and if contaminated above hazardous waste levels, will be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil will require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations. All hazardous materials and hazardous wastes will be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following: ▶ Proper disposal of potentially contaminated soils. ▶ Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources. ▶ Emergency response and reporting procedures to address hazardous material spills. ▶ Stopping work at that location and contacting the County Fire Department Hazardous Materials Unit immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Unit.			
CM HAZ-2: Worker Environmental Awareness. The training will include the following components related to hazards and hazardous materials: ▶ PG&E Health, Safety, and Environmental expectations and management structure. ▶ Applicable regulations. ▶ Summary of the hazardous substances and materials that may be handled and/or to which workers may be exposed. ▶ Summary of the primary workplace hazards to which workers may be exposed. ▶ Overview of the controls identified in the Storm Water Pollution Prevention Plan.	PG&E	PG&E to provide/report evidence of compliance. CPUC mitigation monitor to inspect compliance.	During project construction. To be repeated for all new personnel.
CM HAZ-3: Air Transit Coordination. PG&E will implement the following protocols related to helicopter use during construction and air traffic: ▶ PG&E will comply with all applicable Federal Aviation Administration regulations regarding air traffic within 2 miles of the Proposed Project alignment.	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction.

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▶ PG&E's helicopter operator will coordinate all Proposed Project helicopter operations with local airports before and during Proposed Project construction. ▶ Helicopter use and landing zones will be managed to minimize impacts on local residents.			
Noise and Vibration			
CM NOI-1: Employ Noise-Reducing Construction Practices during Temporary Construction Activities. PG&E will employ standard noise-reducing construction practices such as the following: ▶ Ensure that all equipment is equipped with mufflers that meet or exceed factory new-equipment standards. ▶ Locate stationary equipment as far as practical from noise-sensitive receptors. ▶ Limit unnecessary engine idling. ▶ Limit all construction activity near sensitive receptors to daytime hours unless required for safety or to comply with line clearance requirements. Minimize noise-related disruption by notifying residents. Should nighttime Proposed Project construction be necessary because of planned clearance restrictions, affected residents will be notified at least 7 days in advance by mail, personal visit, or door hanger, and informed of the expected work schedule.	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction.
Traffic and Transportation			
CM TRA-1: Temporary Traffic Controls. PG&E will obtain any necessary transportation and encroachment permits from the California Department of Transportation and the local jurisdictions, as required, including those related to state route crossings and the transport of oversized loads and certain materials, and will comply with permit requirements designed to prevent excessive congestion or traffic hazards during construction. PG&E will develop road and lane closure or width reduction or traffic diversion plans as required by the encroachment permits. Construction activities that are in or along or that cross local roadways will follow best management practices and local jurisdictional encroachment permit requirements—such as traffic controls in the form of signs, cones, and flaggers—to minimize impacts on traffic and transportation in the Proposed Project area.	PG&E	CPUC mitigation monitor to inspect compliance. Coordination with Caltrans and Fresno County, as appropriate.	Prior to and during project construction.
CM TRA-2: Coordinate Road Closures with Emergency Service Providers. At least 24 hours prior to implementing any road or lane closure, PG&E will coordinate with applicable emergency service providers in the Proposed Project vicinity. PG&E will provide emergency service providers with information regarding the road or lanes to be closed; the anticipated date, time, and duration of closures; and a contact telephone number.	PG&E	CPUC mitigation monitor to inspect compliance. Coordination with emergency service providers.	Prior to and during project construction.
Wildfire			
CM FIRE-1: Fire Risk Management. PG&E will follow its standard fire risk management procedures, including: ▶ Safe work practices, training, and fire response. ▶ Proposed Project personnel will be directed to park away from dry vegetation.	PG&E	CPUC mitigation monitor to inspect compliance.	During project construction.

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▶ During fire season in designated State Responsibility Areas, all motorized equipment driving off paved or maintained gravel/dirt roads will have federally approved or State-approved spark arrestors. ▶ All off-road vehicles will be equipped with a backpack pump (filled with water) and a shovel. ▶ Fire-resistant mats and/or windscreens will be used when welding. In addition, during fire "red flag" conditions (as determined by the California Department of Forestry and Fire Protection), welding will be curtailed. ▶ Every fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C, and all flammable materials will be removed from equipment parking and storage areas. ▶ Coordinate procedures with federal and local fire officials. ▶ Identification of daily site-specific risk conditions.			

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