

## **17 MITIGATION MONITORING AND REPORTING**

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### **17.1 INTRODUCTION**

The purpose of this chapter is to summarize the avoidance and protective measures proposed as part of Pacific Gas and Electric Company's (PGandE) Delta 21 kilovolt Distribution Planning Area Capacity Increase Substation Project (project) to ensure that potential environmental impacts are less than significant. It also outlines PGandE's plans to evaluate success of these measures during construction.

The avoidance and protective measures listed in Table 17-1 have been incorporated into the project procedures and will ensure that any potential impacts are less than significant. These measures are in addition to the plans that PGandE will implement as part of the project, including:

- Hazardous Substance Control and Emergency Response Plan
- Stormwater Pollution Prevention Plan
- Spill Prevention, Control, and Countermeasure Plan
- Revegetation/Restoration Plan

PGandE and its contractors, including construction personnel and biological monitors, are responsible for complying with all conditions described in these plans. During construction of the project, a copy of all project plans and permits will be available at the substation site.

In addition to ensuring implementation of the applicant-proposed measures summarized in this chapter, PGandE will be responsible for complying with any additional protection measures that may be required by other agencies and applicable laws.

**Table 17-1: Mitigation Monitoring**

Potential Environmental Impact Without Avoidance and Mitigation Measures	Avoidance and Mitigation Measures	Success Criteria
<b>AESTHETICS</b>		
No significant impacts to visual resources are anticipated.		
<b>AGRICULTURAL RESOURCES</b>		
No significant impacts to agricultural resources are anticipated.		
<b>AIR QUALITY</b>		
Construction activities could result in short-term, temporary emissions and fugitive dust.	Implement applicable standard best management practices identified in Table 2 of the Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Guidelines to reduce air quality impacts associated with particulate matter.	All applicable control measures are implemented in accordance with BAAQMD requirements to reduce temporary air quality impacts from construction.
	Encourage carpooling among construction workers through contractor bid specifications and project orientation training for workers.	Emissions from vehicle exhaust are reduced.
	Tune vehicles used in construction activities per the manufacturer's recommended maintenance schedule, or at least annually thereafter.	Emissions from construction equipment exhaust are reduced.
	Minimize vehicle idling time when feasible.	Emissions from construction equipment exhaust are reduced.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
<b>BIOLOGICAL RESOURCES</b>		
Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction has the potential to take protected plant and wildlife species and temporarily disturb their habitat.	An ongoing endangered species/sensitive habitat education program for construction crews will be conducted by a qualified biologist(s) prior to the commencement of the project and during construction activities. Sessions will include discussion of the federal Endangered Species Act and California Endangered Species Act, the consequences of noncompliance with these acts, and identification and values of sensitive species and wetland habitats.	Construction personnel sign an environmental training attendance sheet. Disturbance to sensitive habitat is minimal. Sensitive species are avoided to the extent possible.
	An educational brochure will be produced for construction crews working on the project. Colored photos of specific threatened and endangered species will be included, as well as a discussion of protective measures agreed to by Pacific Gas and Electric Company (PGandE) and the resource agencies.	Disturbance to sensitive habitat is minimal. Sensitive species are avoided to the extent possible.
	Vehicles will be confined to existing roads or approved routes. In sensitive areas the speed limit will be 15 miles per hour.	Disturbance to sensitive habitat is minimal. Sensitive species are avoided to the extent possible.
	A biological monitor will be on-site during any construction activity in sensitive habitat.	The biological monitor prepares daily project reports documenting impacts to sensitive species and habitat. Disturbance to sensitive habitat is minimal. Sensitive species are avoided to the extent possible.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	Photo documentation of all sensitive habitat before and after construction will occur and be part of the project report due to the resource agencies no later than 90 days following completion of construction.	Photos of all sensitive habitat before and after construction are taken and included in a project report sent to resource agencies no later than 90 days following completion of construction.
	Diligent efforts by PGandE will be used to protect the existing plant community and to keep temporary impacts to a minimum. However, if they occur, temporary impacts to habitat will be addressed through a revegetation/restoration plan prepared in conjunction with the resource agencies.	Disturbance to the plant community is minimal. A Revegetation/Restoration Plan is created in conjunction with the resource agencies and temporarily impacted habitat areas are revegetated/restored as required.
	The biological monitor will document monitoring activities in a daily report and all daily reports will be summarized in a written report within 90 days of completion of construction.	The biological monitor documents monitoring activities, prepares daily reports, and summarizes all daily report in a written report within 90 days of completion of construction.
	Trash dumping, firearms, and pets will be prohibited in the project area.	Disturbance to sensitive habitat and species is minimal. Sensitive species are avoided to the extent possible.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction has the potential to temporarily disturb emergent wetlands.	A wetland delineation per the U.S. Army Corps of Engineers (ACOE) Wetlands Delineation Manual will be conducted prior to construction. The delineation will use a three-parameter approach that includes an examination of vegetation, soils, and hydrology to determine the presence of wetlands. A wetland report will be prepared and submitted to the ACOE for verification. Through this process, final calculations of wetland area present in the project area will be obtained for project permitting.	A wetland delineation is conducted prior to construction and a report prepared for ACOE verification.
	<p>Wetlands and aquatic resources will be denoted as environmentally sensitive areas and will be avoided during construction to the degree practicable. The permanent loss of emergent and/or seasonal wetlands resulting from project construction will be mitigated at a minimum ratio of 1:1 through:</p> <ul style="list-style-type: none"> <li>• the purchase, restoration and protection of severely degraded similar wetlands in the vicinity of the project,</li> <li>• the creation of new emergent and/or seasonal wetland from upland habitat within the vicinity of the project, and/or</li> <li>• the purchase from a mitigation bank of similar wetlands in the vicinity of the project.</li> </ul>	Disturbance to wetlands is minimal. Wetlands are avoided to the extent possible. The permanent loss of emergent and/or seasonal wetlands resulting from project construction is appropriately mitigated.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
<p>Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction has the potential to temporarily disturb special-status plant species.</p>	<p>Following the completion of all special-status plant surveys, if it is determined that special-status plant species occur within any areas subject to impact, the project has the potential to impact these special-status plant species.</p> <ul style="list-style-type: none"> <li>• PGandE will acquire suitable habitat for identified species within the project vicinity,</li> <li>• PGandE will develop a long-term habitat enhancement plan for identified species, and/or</li> <li>• PGandE will monitor the implementation of and the compliance with mitigation measures outlined in the habitat enhancement plan.</li> </ul>	<p>Special-status plant surveys are performed and documented. Impacts to special-status plant species resulting from project construction are appropriately mitigated, or otherwise accounted for.</p>
<p>Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction has the potential to disturb areas potentially occupied by</p>	<p>Access to the construction site will be restricted to those routes identified in the project description. Access will be clearly marked in the field with appropriate flagging and signs.</p>	<p>All project access is clearly marked with appropriate flagging and fencing and restricted to the routes identified in the project description. Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.</p>

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
California red-legged frog (CRLF) and California tiger salamander (CTS).	Vehicle parking at the construction site will be restricted to previously disturbed areas or existing roads. Agricultural areas are not considered previously disturbed. Necessary vehicles belonging to the biological monitors and construction personnel will be parked at the nearest point to the work site on existing access roads.	Vehicle parking occurs only within previously disturbed areas or existing roads. Necessary vehicles belonging to the biological monitors and construction personnel are parked at the nearest point to the work site on existing access roads. Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.
	Soil disturbance will be minimized to the greatest extent possible.	Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.
	Prior to the start of construction, a qualified biological monitor will train all project personnel regarding habitat sensitivity, identification of special-status species, and required practices within the project area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understood all of the conservation and protection measures.	Construction personnel sign an environmental training attendance sheet. Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	<p>A qualified biologist will monitor all construction activities within 300 feet of Sand Creek. If necessary, the monitor will inform the project foreman of any construction activities that compromise environmental integrity. The project foreman will have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The biologist will complete a daily report summarizing activities and environmental compliance.</p>	<p>The biologist completes daily reports summarizing activities and environmental compliance. Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.</p>
	<p>A qualified biologist will oversee placement of orange safety/ exclusion construction fencing on either side of Sand Creek at the boundary to the work area to limit the area of disturbance during construction of the access road and bridge.</p>	<p>Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.</p>
	<p>Sensitive species will not be handled without first obtaining the necessary authorizations from the U.S. Fish and Wildlife Service (USFWS).</p>	<p>Only USFWS-authorized project personnel handle sensitive species. Disturbance to sensitive species is minimal.</p>
	<p>A qualified biologist will conduct a preconstruction survey within the project area no earlier than two days before the start of ground-disturbing activities. If a CRLF or CTS is encountered during the construction work, activities will cease until the species is removed and relocated by a USFWS-approved biologist. Any incidental take will be reported to USFWS immediately by telephone.</p>	<p>A qualified biologist conducts a preconstruction survey within the project area no earlier than two days before the start of ground-disturbing activities and documents findings. Disturbance to CRLF and CTS is minimal. CRLF and CTS are avoided to the extent possible.</p>

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	<p>Ground-disturbing activities within 30 feet of suitable CRLF or CTS breeding habitat will only occur during the dry season.</p> <p>The bridge at Sand Creek will be installed during this time period to ensure breeding behavior is not disrupted.</p>	<p>Ground-disturbing activities within 30 feet of suitable CRLF or CTS breeding habitat, including the Sand Creek bridge installation, are conducted between May 1 and October 31. Disturbance to CRLF and CTS and their breeding habitat is minimal. CRLF and CTS are avoided to the extent possible.</p>
	<p>From October 15 or the onset of the rainy season, whichever occurs first, until May 1, a qualified biologist will conduct daily visual surveys of all work areas within 100 feet of aquatic habitat prior to the start of any vehicle or equipment traffic. If CRLF or CTS are observed within the work area, work activities will cease until they are removed and relocated by a USFWS-approved biologist.</p>	<p>Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.</p>
	<p>Mobile equipment will not be parked overnight within 100 feet of aquatic habitat. Stationary equipment (e.g., pumps, generators) used or stored within 100 feet of aquatic habitat will be positioned over secondary containment.</p>	<p>Disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible. No sensitive resources or species are harmed through contact with hazardous materials.</p>
	<p>During the installation of the bridge at Sand Creek, surveys will be conducted each morning to ensure wildlife is not within the work area. Sediment control measures will be installed to minimize sedimentation downstream.</p>	<p>Daily surveys are performed and disturbance to CRLF and CTS and their habitat is minimal. CRLF and CTS are avoided to the extent possible.</p>

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	<p>PGandE will purchase habitat at a 3:1 ratio for impacted San Joaquin kit fox (kit fox) foraging habitat. Because this habitat is also suitable CRLF and CTS upland habitat, no additional habitat will be purchased. PGandE anticipates approximately 6 acres will be permanently impacted as a result of the project. A total of 18 acres of suitable kit fox, CRLF, and CTS upland habitat or credits will be purchased from an organization agreed upon by PGandE and the USFWS.</p>	<p>Habitat or credits are purchased from an organization agreed upon by PGandE and the USFWS as necessary to mitigate for permanently impacted kit fox, CRLF, and CTS upland habitat as a result of the project.</p>
<p>Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction, has the potential to disturb areas potentially occupied by burrowing owl.</p>	<p>A preconstruction survey will be conducted in all areas providing suitable habitat at least 30 days prior to construction according to the most recent Burrowing Owl Survey Protocol and Mitigation Guidelines. Surveys will cover a 500-foot buffer around the substation and work areas. The survey will include checking for the burrowing owl and owl sign. If owls are found to be using the site and avoidance is not feasible, a passive relocation effort (displacing the owls from the site) may be conducted as stipulated by the California Department of Fish and Game (CDFG) guidelines. If an active burrow is inadvertently destroyed or an individual incidentally killed during construction, PGandE will take appropriate actions as recommended by current CDFG guidelines. However, PGandE does not anticipate an incidental take occurring.</p>	<p>A qualified biologist conducts a preconstruction survey within the project area at least 30 days before the start of ground-disturbing activities and documents findings. Disturbance to burrowing owl is minimal. Burrowing owls are avoided to the extent possible. If construction causes the destruction of active burrows or owl mortality occurs, mitigation will be performed as required.</p>

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	<p>If occupied habitat is found on or adjacent to the project area, the following measures to avoid, minimize, or mitigate impacts to burrowing owls will be incorporated into the project.</p> <ul style="list-style-type: none"> <li>• Confirmed unoccupied burrows in the area may be collapsed.</li> <li>• If occupied burrows are identified, reasonable protective buffer zones will be implemented.</li> <li>• All work will be coordinated with the CDFG.</li> </ul>	<p>Disturbance to burrowing owl and their habitat is minimal. Burrowing owls are avoided to the extent possible.</p>
<p>Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction, has the potential to disturb breeding habitat of the tricolored blackbird.</p>	<p>Field surveys for the tricolored blackbird will occur prior to construction.</p>	<p>Field surveys are performed and documented. Disturbance to the tricolored blackbird and their habitat is minimal. The tricolored blackbird is avoided to the extent possible.</p>
	<p>Suitable breeding habitat within the project area will be surveyed by a qualified biologist. If an active nest belonging to this species is located prior to construction and the nest cannot be avoided, PGandE will consult with the USFWS and CDFG to coordinate mitigation measures. Direct avoidance is possible by spanning suitable habitat.</p>	<p>Suitable breeding habitat within the project area is surveyed and documented. Disturbance to the tricolored blackbird and their habitat is minimal. The tricolored blackbird is avoided to the extent possible.</p>
	<p>If construction is scheduled during the breeding season, a buffer of a reasonable distance as determined by the on-site biological monitor, will be established around any active nests to protect breeding tricolored blackbirds.</p>	<p>Disturbance to the tricolored blackbird and their breeding habitat is minimal. The tricolored blackbird is avoided to the extent possible.</p>

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	A biological monitor will remain on-site in sensitive habitat during breeding season while construction activity occurs to assist construction crews with information relative to nesting tricolored blackbirds, to minimize disturbance to habitat, and to maintain a buffer of a reasonable distance around active nests. These measures will be implemented to lessen the chance of nest abandonment by this sensitive species.	Disturbance to the tricolored blackbird and their breeding habitat is minimal. The tricolored blackbird is avoided to the extent possible.
Project construction has the potential to disturb nesting raptors.	During the spring breeding season (and prior to start of construction), a survey of the construction area for potential sensitive raptor habitat will be performed by a qualified biologist. It is expected that if construction occurs in suitable habitat before the onset of the breeding season, the construction disturbance will cause the raptors to seek alternate sites for breeding and nest construction.	Raptor surveys before the spring breeding season (and prior to start of construction) are performed and documented. Disturbance to breeding raptors is minimal. Breeding raptors are avoided to the extent possible. No nest abandonment occurs as a result of construction activities.
	If avoidance of active nests is not practicable, a buffer of a reasonable distance will be maintained around any active raptor nest.	Disturbance to breeding raptors is minimal. Breeding raptors are avoided to the extent possible. No nest abandonment occurs as a result of construction activities.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	<p>If construction activities do not start until the onset of the nesting season for raptors (generally March through September), a qualified biologist will conduct a raptor survey at the site and of the surrounding area within 500 feet.</p>	<p>If construction activities do not start until the onset of the nesting season for raptors (generally March through September), raptor surveys at the site and of the surrounding area within 500 feet will be conducted and documented. Disturbance to breeding raptors is minimal. Breeding raptors are avoided to the extent possible. No nest abandonment occurs as a result of construction activities.</p>
	<p>In the event an active raptor nest is found within 500 feet of the work area, a qualified biological monitor will be provided by PGandE, and remain on-site during construction activities to ensure there is no nest abandonment.</p>	<p>Disturbance to breeding raptors is minimal. Breeding raptors are avoided to the extent possible. No nest abandonment occurs as a result of construction activities.</p>
<p>Project construction has the potential to disturb nesting passerines.</p>	<p>During the spring breeding season (and prior to start of construction), the construction area will be surveyed for potential breeding birds. If active nests or breeding species are located prior to construction, PGandE will consult with the USFWS and CDFG to coordinate avoidance if the active nests cannot be avoided.</p>	<p>Surveys for potential breeding birds before the spring breeding season (and prior to start of construction) are performed and documented. Disturbance to breeding birds is minimal. Breeding birds are avoided to the extent possible. No nest abandonment occurs as a result of construction activities.</p>

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	If construction is scheduled during the breeding season, a sufficient buffer will be observed around active nests.	Disturbance to breeding birds is minimal. Breeding birds are avoided to the extent possible. No nest abandonment occurs as a result of construction activities.
	A biological monitor will be present during breeding season to ensure no construction activity results in nest abandonment.	Disturbance to breeding birds is minimal. Breeding birds are avoided to the extent possible. No nest abandonment occurs as a result of construction activities.
Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction, has the potential to disturb areas potentially occupied by kit fox.	Within 30 days prior to the commencement of construction activities, a qualified biologist will survey for kit fox dens within the area that will be disturbed, including an area of 100 feet surrounding the work area. Any potential den will be monitored for evidence of kit fox use by placing a tracking medium at den entrances for at least three consecutive nights. If an occupied den is found, progressive plugging of the den may be employed to discourage use, and the den closed after it is determined to be unoccupied for a minimum of three consecutive nights.	A documented survey for potential San Joaquin kit fox dens will be performed within 30 days prior to the commencement of construction. Active dens are monitored, progressively plugged to discourage use, and closed after being determined to be unoccupied.
	Project-related vehicles will observe a 15-mile per hour speed limit in project areas deemed to provide kit fox habitat, except as posted on County roads and state and federal highways.	Disturbance to kit fox is minimal. Kit fox are avoided to the extent possible.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	Construction will be limited to the hours between 7 a.m. and 6 p.m.	Disturbance to kit fox is minimal. Kit fox are avoided to the extent possible.
	Off-road traffic outside of the designated project area will be prohibited.	Disturbance to kit fox is minimal. Kit fox are avoided to the extent possible.
	To prevent accidental entrapment of kit fox during construction, all excavated holes or trenches will be covered at the end of each workday with plywood or similar materials. Before such holes are filled they will be thoroughly inspected for trapped animals. In the event of a trapped animal, ramps or other structures will be installed immediately to allow the animal to escape, or the USFWS will be contacted for advice. PGandE will appoint a representative who will notify the USFWS and CDFG immediately in the event of an accidental death or injury to a kit fox during project-related activities and a follow-up letter will be submitted within three working days of the accident.	Disturbance to San Joaquin kit fox is minimal. San Joaquin kit fox are avoided to the extent possible.
	PGandE will purchase habitat at a 3:1 ratio for impacted kit fox foraging habitat. PGandE anticipates approximately 6 acres will be permanently impacted as a result of the project and, therefore, a total of 18 acres of suitable kit fox habitat or credits will be purchased from an organization agreed upon by PGandE and the USFWS.	Habitat or credits are purchased from an organization agreed upon by PGandE and the USFWS as necessary to mitigate for permanently impacted kit fox foraging habitat as a result of the project.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
Ground disturbance, including grading and road improvements, and vehicle and foot traffic associated with project construction, has the potential to disturb areas potentially occupied by San Joaquin pocket mouse.	Field surveys for the San Joaquin pocket mouse will be conducted by a qualified biologist before construction begins. If this species is located prior to or during construction, PGandE will consult with the USFWS to coordinate avoidance.	Prior to construction, field surveys are conducted and documented. Disturbance to San Joaquin pocket mouse is minimal. San Joaquin pocket mice are avoided to the extent possible.
Project construction has the potential to disturb bats.	Before the spring breeding season (and prior to start of construction), a survey of the construction area for roosting or maternity colonies will be performed by a qualified biologist. It is expected that if construction occurs near suitable roosting habitat before the onset of breeding season, the construction disturbance will cause the bats to seek alternate sites for breeding and nest construction.	Surveys for roosting or maternity colonies before the spring breeding season (and prior to start of construction) are performed and documented. Disturbance to roosting or maternity colonies is minimal. Roosting or maternity colonies are avoided to the extent possible.
	If avoidance of active roosting or maternity colonies is not practicable, a sufficient buffer will be maintained around any bat roosting or maternity colony.	Disturbance to roosting or maternity colonies is minimal. Roosting or maternity colonies are avoided to the extent possible.
	In the event that a roosting bat or maternity colony occurs within or near the project area, a qualified biological monitor will be provided by PGandE, and remain on-site during construction activities to ensure there is no nest abandonment.	Disturbance to roosting or maternity colonies is minimal. Roosting or maternity colonies are avoided to the extent possible.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
<b>CULTURAL RESOURCES</b>		
<p>Subsurface or surface work associated with the project could result in the loss of integrity of cultural deposits. There is also the potential for inadvertent discoveries of buried archaeological materials or human remains during construction.</p>	<p>Prior to the initiation of construction or ground-disturbing activities, PGandE will train all construction personnel to understand the potential for exposing subsurface cultural resources and to recognize possible buried cultural resources. Training will inform all construction personnel of the anticipated procedures that will be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains and their treatment.</p>	<p>Construction personnel sign an environmental training attendance sheet. No damage to cultural resources or human remains results from project construction.</p>
	<p>Upon discovery of possible buried cultural materials (including potential Native American skeletal remains), work in the immediate area of the find will be halted and PGandE's archaeologist notified. Once the find has been identified and evaluated, PGandE's archaeologist will make the necessary plans for treatment of the find(s) and mitigation of impacts if the finds are found to be significant according to CEQA. State law will be followed in the event of the exposure of Native American skeletal remains.</p>	<p>No damage to cultural or human remains results from the project. Any discovered cultural resources are treated according to agency-approved mitigation and in compliance with state and federal regulations.</p>
<b>GEOLOGY AND SOILS</b>		
<p>Due to the design features that have been incorporated into the project, no potentially significant impacts to geology or soils are anticipated.</p>		

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
<b>HAZARDS AND HAZARDOUS MATERIALS</b>		
<p>There is potential for construction-related hazardous materials to impact the environment, worker or public health, and safety.</p>	<p>A Hazardous Substance Control and Emergency Response Plan will be prepared for the project. It will prescribe hazardous material handling procedures to reduce the potential for a spill during construction or exposure of the workers or public to a hazardous material. The plan will provide a discussion of appropriate response actions in the event that hazardous materials are released or encountered during field activities. The plan will be submitted to the Certified Unified Program Agency, or another appropriate oversight agency, for approval prior to initiating field activities.</p>	<p>A Hazardous Substance Control and Emergency Response Plan is prepared and implemented throughout construction. All hazardous materials are handled in accordance with applicable local, state, and federal laws. No persons or sensitive resources are harmed through contact with hazardous materials.</p>
	<p>Emergency-spill supplies and equipment will be kept adjacent to all areas of work and in staging areas, and will be clearly marked. Oil-absorbent materials, tarps, and storage drums will be used to contain and control any minor releases. Detailed information for responding to accidental spills, and for handling any resulting hazardous materials, will be provided in the project's Hazardous Substances Control and Emergency Response Plan.</p>	<p>Emergency spill cleanup supplies and equipment are kept on-site and immediately available in the event of a spill. No persons or resources are harmed by hazardous materials during construction. Response to spills and handling of any resulting hazardous materials is performed in accordance with the project's Hazardous Substances Control and Emergency Response Plan.</p>

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	An environmental training program will be established to communicate environmental concerns and appropriate work practices to all construction field personnel. The training program will emphasize site-specific physical conditions to improve hazard prevention, and will include a review of the Hazardous Substances Control and Emergency Response Plan and the Stormwater Pollution Prevention Plan (SWPPP).	Construction personnel sign an environmental training attendance sheet. All measures in the Health and Safety Plan, Hazardous Substances Control and Emergency Response Plan, SWPPP, and Spill Prevention, Countermeasure, and Control (SPCC) Plan are implemented. No persons or resources are harmed by hazardous materials during construction. All hazardous materials are handled, stored, transported, and disposed of in accordance with applicable local, state, and federal regulations.
<b>HYDROLOGY AND WATER QUALITY</b>		
There is the potential for impacts to hydrology and water quality from construction and operation of the project.	PGandE will develop a SWPPP that will describe best management practices (BMPs) to prevent the acceleration of natural erosion and sedimentation rates. A monitoring program will be established to ensure that the prescribed BMPs are followed during project construction.	All appropriate BMPs are utilized as directed by the SWPPP. Project water quality management activities comply with all applicable federal, state, and local regulatory requirements.
	PGandE will develop a SPCC Plan that will describe appropriate BMPs for preventing, controlling, and cleaning up hazardous materials spills.	All BMPs are utilized as directed by the SPCC Plan.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	<p>A worker education program will be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures. This education program will also discuss appropriate hazardous materials management and spill response.</p>	<p>Construction personnel sign an environmental training attendance sheet. All measures in the Health and Safety Plan, Hazardous Substances Control and Emergency Response Plan, SWPPP, and SPCC Plan are implemented. No persons or resources are harmed by hazardous materials during construction. All hazardous materials are handled, stored, transported, and disposed of in accordance with applicable local, state, and federal regulations.</p>
	<p>The SPCC plan will include engineered methods for containing and controlling an oil release, including a water collection system and retention pond equipped with an oil/water separator. This collection and retention system will also regulate the release of stormwater runoff from the paved portion of the substation. The retention pond will serve as a settling basin to reduce turbidity and sedimentation downstream. Oil-absorbent material, tarps, and storage drums will be present on-site to contain and control any minor releases.</p>	<p>During operations and maintenance, all measures in the SPCC Plan are implemented and emergency spill cleanup supplies and equipment are kept on-site and immediately available in the event of a spill. No persons or resources are harmed by hazardous materials during operations and maintenance.</p>
<b>LAND USE AND PLANNING</b>		
No significant impacts to land use and planning are anticipated.		

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
<b>MINERAL RESOURCES</b>		
Due to the design features that have been incorporated into the project, no potentially significant impacts to mineral resources are anticipated.		
<b>NOISE</b>		
Construction of the substation will involve the temporary, short-term use of equipment that has the potential to impact nearby residents.	All construction equipment will use noise-reduction features that are no less effective than those originally installed by the manufacturer.	All construction equipment uses noise-reduction features that are no less effective than those originally installed by the manufacturer. Noise-related complaints from nearby residents are minimized.
	Construction will be limited to the hours between 7 a.m. and 6 p.m. except for California Independent System Operator-mandated interconnection clearances.	Noise-related complaints from nearby residents are minimized.
While impacts associated with operation of the substation will be less than significant, PGandE will take the following measures to further reduce noise impacts.	The three 45 megavolt-ampere, 230/21 kilovolt transformers will meet 70 A-weighted sound level (dBA), oil-immersed self-cooled rating (without fans operating) and 72 dBA, first forced air cooling (FA) rating, and 73 dBA top FA rating.	Noise-related complaints from nearby residents are minimized.
	The substation will be designed to maintain a minimum 200-foot distance between the back of the transformer and the nearest sensitive receptors to maintain noise levels below the 55 dBA ordinance during daytime full load operation.	Noise-related complaints from nearby residents are minimized.

<b>Potential Environmental Impact Without Avoidance and Mitigation Measures</b>	<b>Avoidance and Mitigation Measures</b>	<b>Success Criteria</b>
	Transformers will be operated at reduced loading and without fan cooling between the hours of 10 p.m. and 7 a.m. where operationally possible.	Noise-related complaints from nearby residents are minimized.
	Installation of pre-cast concrete or cinder block decorative wall on all sides of the substation that will further reduce sound levels.	Noise-related complaints from nearby residents are minimized.
<b>POPULATION AND HOUSING</b>		
No significant impacts are anticipated to population and housing.		
<b>PUBLIC SERVICES</b>		
No significant impacts are anticipated to public services.		
<b>RECREATION</b>		
No significant impacts are anticipated to recreation.		
<b>TRANSPORTATION AND TRAFFIC</b>		
No significant impacts to transportation and traffic are anticipated.		
<b>UTILITIES AND SERVICE SYSTEMS</b>		
No significant impacts are anticipated to utilities and service systems.		