19.0 MITIGATION MONITORING PLAN

This Mitigation Monitoring Plan is intended to be used by the CPUC to document that each mitigation measure adopted as a condition of project approval is implemented. This monitoring plan meets current CEQA requirements, as amended, which mandate that mitigation monitoring be assigned as part of project approval.

PG&E has identified and discussed in this PEA several potentially significant environmental impacts that could result from construction and operation of the proposed project. PG&E has also developed a variety of mitigation measures that will be implemented to reduce, avoid, or otherwise mitigate these impacts to less than significant levels.

19.1 MITIGATION MONITORING

Mitigation measures associated with project development could be implemented by PG&E, the construction contractor, or a designated resource professional. Mitigation implementation for several resources will be assigned to resource professionals, but it is recognized that PG&E has the ultimate responsibility for implementing those assigned mitigation measures. The CPUC will be responsible for monitoring the implementation of most of the mitigation measures.

The CPUC will retain primary responsibility for ensuring that project activities meet the mitigation program requirements and other permit conditions imposed by participating regulatory agencies. The CPUC is responsible for mitigation monitoring that will occur during project construction and operation. PG&E will be responsible for submitting all documentation and reports to CPUC in a timely manner to demonstrate compliance with specified mitigation requirements. The CPUC has the authority to require implementation of mitigation requirements and will be capable of terminating project construction and operation activities found to be inconsistent with mitigation objectives or project approval conditions. Table 19-1 identifies each potentially significant impact identified in this PEA and the associated mitigation measure(s).

19.2 MITIGATION ENFORCEMENT

The CPUC will be responsible for enforcing mitigation measures implemented by PG&E. Work specification and performance standards necessary for the implementation of required mitigation will be included as part of contract terms with PG&E's construction contactors. Clauses in the contract will further serve to enforce mitigation implementation. If alternative mitigation measures are identified that would be equally effective in mitigating the impacts identified in this PEA, these alternative measures would not be implemented until agreed to by the CPUC.

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Impact	Mitigation Measure (MM)	Responsible Party
Biological Resources		
Impact 6.2. Removal and Trimming of Protected Trees. (transmission line - construction)	**Mitigation Measure 6.2. Pre-construction Tree Survey.** Prior to construction, a tree survey will be completed that will identify and map any protected valley oak, heritage and landmark trees within the project area. These trees will be avoided if possible. Required permits will be obtained if protected trees must be removed or trimmed. Any trees removed will be replaced or compensation will be provided, as stipulated in county regulations. These measures will reduce impacts to a less than significant level. Plantings in the vicinity of towers 7-10 will be assessed and if necessary, replaced with suitable plantings as appropriate for ROWs.	PG&E / CPUC
Impact 6.3. Disturbance to Wetlands and Aquatic Resources. (transmission line - construction)	**Mitigation Measure 6.3a. Wetlands and Aquatic Resources Protection Measures.** Potential impacts to wetlands and other aquatic resources will be less than significant with implementation of the following measures: • For the vernal pools between poles 43 and 44, a qualified professional biologist will establish an exclusion zone of the maximum practicable distance, not less than 50 or greater than 100 feet, from the wetland edge. The exclusion zone will be staked and flagged or delineated with temporary fencing. For work at pole 107 and its access road near Sonoma Creek, temporary exclusion fencing and silt fencing will be installed at the downslope edge of the work footprint and not less than 25 feet from the top of the bank of Sonoma Creek. Staking and flagging or fencing will be completed prior to any construction activities and will remain in place during all construction activities. • Restrict construction personnel and equipment from entering the fenced protected area (exclusion zone and wetland habitat) for any purpose. • For the vernal marsh near poles 40 and 41, silt fencing will be installed between the access road and the marsh as close as practicable to the edge of the road improvements footprint to prevent sedimentation impacts to the marsh (see Mitigation Measure 6.3b). Installation of the silt fence will be monitored by a qualified biologist and will be completed prior to road improvement work in this area. • To the extent practicable, conduct ground-disturbing activities such as access road construction, site grading, and foundation installation during the dry season	PG&E / CPUC

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Impact	Mitigation Measure (MM)	Responsible Party
	(June 1 to October 15). The dry season window may begin as early as May 1 if ground conditions at the work sites and access routes are determined to be sufficiently dry by a qualified biologist. • If it is not feasible to limit work to the dry season, use appropriate erosion control measures for the local site, which might include one or more of: tacked straw, erosion control fabrics, silt fencing, and graded bedding on roads (see Mitigation Measure 6.3b). Do not use hydromulch unless specified for a specific location by a professional erosion control/revegetation specialist. • Prior to construction of access road crossings of ephemeral drainages, seek technical assistance from and notify as appropriate the CDFG, Corps, and RWQCB and obtain any approvals or agreements required by these agencies to protect these watercourses. • Monitor the protected areas, using a trained professional biologist, during all work activities in the vicinity of wetlands and sensitive aquatic and riparian habitats including Sonoma Creek, Felder Creek, and other watercourses that may be affected by the project. The monitor will verify that environmental fencing, erosion and sediment control measures, and other protection measures are properly installed and are effective. If problems are found, the monitor will recommend remedial measures. The monitor will have the authority to stop activities that are likely to adversely affect sensitive aquatic habitats and recommend alternative work practices in consultation with construction personnel. • After construction is complete, conduct follow-up monitoring to ensure that installations made during construction to control erosion and sedimentation, and to achieve any other protection measures, remain in place. If construction is completed in the dry season, this follow-up monitoring should begin during the subsequent September to verify that measures are in place before the wet season begins. Wet season monitoring should commence immediately after the first major rainfall event and should comply with the scheduling and procedures that are specified in the SWPP, or until the monitor feels that there is no longer potential for erosion and sedimentation impacts. In accordance with the SWPPP, monitoring should be conducted at least once during the subsequent	

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Impact	Mitigation Measure (MM)	Responsible Party
	dry season, to check for erosion, sedimentation and other potential impacts to wetlands, and to verify that measures continue to be effective; if problems are found, the monitor will recommend remedial measures. • Mitigate any direct or indirect impacts (e.g., fuel spills, sedimentation and erosion impacts) through appropriate spill cleanup, sediment, and erosion control measures. **Mitigation Measure 6.3b. Erosion Control and Restoration Plan.** Erosion control and revegetation measures will be implemented during and following the construction phase, as described in the Project Description (Chapter 2) and in the Erosion Control and Restoration Plan written for this project (Appendix A). The Erosion Control and Restoration Plan includes recommendations for each project element that will reduce or eliminate the possibility of erosion and sedimentation impacts to wetlands and streams. Implementation of this plan will reduce impacts to wetlands and aquatic resources to a less than significant level.	
Impact 6.4. Impacts to Special-status Plants. (transmission line - construction)	**Mitigation Measure 6.4. Special-status Plant Avoidance Measures.** Impacts to special-status plants will be less than significant through implementation of the following measures: • Develop access routes to poles 43, 44, 58 and 59 that avoid, to the extent feasible, direct impacts to special-status plants and their habitats. • Habitat occupied by Lobb's aquatic buttercup and cotula navarretia, and any additional special-status plant populations that might be found prior to or during the construction period, will be protected as appropriate[1] by establishing an exclusion zone around the perimeter of the habitat where feasible. The exclusion zone will be staked and flagged in the field prior to construction by a trained professional botanist. New poles and temporary use areas (i.e., staging areas, cable pulls, access roads, etc.) will be located outside of this exclusion zone.	

[1] This measure is not intended to apply to Northern California black walnut for the reasons previously discussed. Other exceptions may arise and will be determined based on the judgment of a trained professional botanist.

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Impact	Mitigation Measure (MM)	Responsible Party
	• During all phases of construction, the outer edge of the exclusion zone will be marked in the field with temporary fencing. • Restrict construction personnel and equipment from entering the fenced protected area (exclusion zone and plant habitat) for any purpose. • Restrict construction activities to the dry season (June 1 to October 15), or, if this is not feasible, use appropriate erosion control measures (see Mitigation Measure 6.3b). • Monitor the known locations for Lobb's aquatic buttercup and cotula navarretia, and any additional special-status plant populations that might be found prior to or during the construction period, using a trained professional botanist. Monitor while construction is taking place in the vicinity of the special-status plant populations and for one year following construction to assess the effectiveness of protection measures. • Mitigate any direct or indirect impacts (e.g., weed invasion, erosion impacts) through appropriate weed control and erosion control measures. Also See Mitigation Measure 6.3b	
Impact 6.5. Introduction or Spread of Invasive Plants. (transmission line - construction)	**Mitigation Measure 6.5.** Control of Invasive Plants. During construction, management practices will be implemented that reduce the likelihood of spreading already established weeds into new areas or increasing their abundance, and of introducing new weed species to the project area. These management practices will include using construction equipment that has been cleaned of soil and plant parts, including seeds, before entering the project area, using weed-free straw for erosion control (see Erosion Control and Restoration Plan, Appendix A) and doing a post-construction survey for new weeds in areas that were disturbed during construction. If weed populations not previously found adjacent to project-disturbed areas are found following construction, these will be controlled using the most effective and least environmentally harmful methods. Weed control methods are described in the Erosion Control and Restoration Plan (Appendix A). Implementing management practices described above will reduce potential adverse impacts from non-native invasive plants to a less than significant level.	CPUC / PG&E
Impact 6.6. Spread of the Sudden Oak Death	**Mitigation Measure 6.6. Control and Prevention of the Spread of the SOD**	CPUC /

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Impact	Mitigation Measure (MM)	Responsible Party
Pathogen. (transmission line - construction)	**Pathogen.** Significant impacts associated with the spread of the SOD pathogen will be avoided by complying with applicable laws and regulations during the performance of vegetation trimming, clearing, and removal activities and by following PG&E Vegetation Management Sudden Oak Death Protocols (Appendix J).	PG&E
Impact 6.7. Impacts to California Freshwater Shrimp.	See Mitigation Measures 6.3a and 6.3b	
Impact 6.8. Impacts to Special-status Fish.	See Mitigation Measures 6.3a and 6.3b	
Impact 6.9. Impacts to California Red-legged Frog. (transmission line - construction)	**Mitigation Measure 6.9a. California Red-legged Frog Consultation.** Prior to project initiation, PG&E will request technical assistance from the USFWS regarding the CRLF. PG&E's request will include information on the locations of CRLF in the project area, results of all CRLF surveys, a description of the proposed project activities and schedule, and a description of the measures outlined above and in Mitigation Measure 6.9b below that will be implemented to minimize potential effects on this species. If the USFWS concurs that these measures are sufficient and that the project is not likely to adversely affect CRLF, then PG&E may proceed without further authorization. In the event that the USFWS determines that the project is likely to adversely affect CRLF, then PG&E will consult further with USFWS to determine what additional measures will be required to protect CRLF. All protection measures agreed to in consultation with the USFWS will be implemented. **Mitigation Measure 6.9b. Pre-construction Survey and Avoidance Measures for California Red-legged Frog.** Immediately prior to work activities during the wet season in the vicinity of Felder Creek, a qualified biologist will perform a preconstruction survey for CRLF. The survey area will consist of all proposed wet-season work sites within one mile of Felder Creek and will include all suitable aquatic and upland habitats within 300 feet of these proposed work sites. If CRLF are found nearby but outside the proposed work area, they will not be disturbed.	CPUC / PG&E

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Impact	Mitigation Measure (MM)	Responsible Party
	Temporary construction fencing will be installed to mark the limits of any nearby work area(s) and to limit construction personnel and equipment to the designated work area. The location of the fencing will be determined by the biologist in coordination with the construction supervisor. In addition, if recommended by the biologist, a temporary silt-fence barrier will be installed to prevent CRLF from entering the work area(s) during project activities. If CRLF are found within a work area prior to construction, the biologist, with prior authorization from the USFWS, will relocate the frogs out of harm's way. Immediately thereafter, a temporary silt-fence barrier will be installed to prevent CRLF from re-entering the work area. If a CRLF is encountered during construction, project activities will cease in the area where the frog is found until the biologist, with prior authorization from the USFWS, relocates the frog out of harm's way and/or takes other appropriate steps previously authorized by the USFWS to protect the animal. Work may resume once the biologist has determined that construction activities will not harm any CRLF and barrier fencing has been installed to prevent the animal from re-entering the work area. The USFWS will be contacted within 24 hours of the finding and informed of actions taken.	
Impact 6.10. Impacts to Northwestern Pond Turtle (transmission line - construction)	See Mitigation Measure 6.3a.	CPUC / PG&E
Impact 6.11. Disturbance to Nesting Birds (transmission line - construction)	**Mitigation Measure 6.11a. Limited Operating Period for Tree Removal and Trimming.** To the extent practicable, all tree removal and trimming required for the project, including for access road improvements, installation and removal of poles, and conductor installation, will be conducted during the non-nesting season, from September 1 to January 31. For any tree trimming or other potential nest-disturbing activities that will be conducted from February 1 to August 31, implement Mitigation Measure 6.11b. **Mitigation Measure 6.11b. Pre-construction Survey and Avoidance of Active Nests.** Prior to any potential nest-disturbing activities during the period from February 1 to August 31, a qualified wildlife biologist will conduct a pre-construction survey for	CPUC / PG&E

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Impact	Mitigation Measure (MM)	Responsible Party
	nesting birds. The survey will be conducted no more than one week prior to the start of work activities and will cover all affected areas including the transmission line route, staging areas, pull sites, and access road improvement areas where substantial ground disturbance or vegetation clearing is required. Additional pre-construction surveys will be conducted for each new phase of project implementation that occurs during the nesting season, for example, prior to road improvement and pole installation, and again prior to conductor installation. If any active nests are found, an appropriate nest exclusion zone will be established by the biologist. A buffer of 500 feet from the nest of a golden eagle, 300 feet from other raptor nests, and 50 to 100 feet from nests of non-raptors will serve as a guideline for exclusion zones, but may be modified on a site-specific basis as determined by the biologist. To the extent practicable, no project vehicles, chain saws or heavy equipment will be operated within this exclusion zone until the nesting season is over or the biologist has determined that nesting is finished and the young have fledged. If it is not practicable to avoid work within an exclusion zone around an active nest, work activities modified to minimize disturbance of nesting birds may proceed within these zones. The biologist will monitor all work activities within these zones daily and assess their effect on the nesting birds. If the biologist determines that particular activities pose a high risk of disturbing an active nest, the biologist will recommend additional, feasible measures to minimize the risk of nest disturbance. If work activities are found to result in harm to nesting birds, destruction of an active nest, or nest abandonment prior to fledging, the biologist will report this to the CDFG and USFWS.	
Impact 6.14. Spread of the Sudden Oak Death Pathogen (operation and maintenance)	See Mitigation Measure 6.6	
Cultural Resources		
Impact 7.1. Historic Stone Wall (access Road – Construction)	**Mitigation Measure 7.1.** Although the stone wall near pole 61 is not historically significant, the breach created for the access road should be kept to the minimum required to preserve as much scenic value of the wall as possible.	CPUC / PG&E
Impact 7.2. Unknown Cultural Resources (all project components – construction)	**Mitigation Measure 7.2.** An archaeological monitor shall be present during construction within 200 feet of a perennial or seasonal watercourse [i.e., streams	CPUC / PG&E

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Impact	Mitigation Measure (MM)	Responsible Party
	depicted by blue dotted lines on Figures 2-4(a) through (d)] Should previously unknown cultural resources be encountered during project-related subsurface disturbances, work shall be stopped in the area of the find pending consultation with the archaeological monitor. The monitor will determine the potential significance of the find and in consultation with PG&E will develop measures designed to eliminate or at least minimize adverse impacts. Such measures can include, but not necessarily be limited to, no action, photo and documentary recording, subsurface testing, and excavation. The duration of work stoppages will vary depending on the extent, integrity, and potential significance of the encountered resource. CEQA provides a measure of protection for human remains (Guidelines section 15064.5[d]) and for the accidental discovery of cultural resources (Guidelines section 15064.5[e]). These are particularly important provisions in that they take into account the possibility that significant resources not noted as a result of previous research efforts may be present within a project area and need to be treated in a way commensurate with CEQA standards. If human remains are discovered within the project area during any phase of construction, work within 50 feet of the remains shall be suspended immediately and PG&E and/or their representative shall immediately notify the respective county coroner. If the remains are determined by the coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. PG&E shall also retain a professional archaeological consultant with Native American burial experience who shall conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD) identified by the NAHC. As necessary, the archaeological consultant may provide professional assistance to the MLD including the excavation and removal of the human remains. PG&E or their appointed representative shall implement any mitigation before to the resumption of activities at the site where the remains were discovered.	
Geology		
Impact 9.4. Paleontology Resources (construction-related impacts)	**Mitigation Measure 9.4.** If fossils are encountered during construction, a qualified paleontologist will be contacted to examine the find and to determine its significance. If the find is deemed to have scientific value, the paleontologist and PG&E will formulate a	CPUC / PG&E

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Impact	Mitigation Measure (MM)	Responsible Party
	plan to either avoid impacts or to continue construction without disturbing the integrity of the find (e.g., by carefully excavating the material containing the resources under the direction of the paleontologist).	
Impact 9.8. Surface Fault Rupture (construction-related impacts)	**Mitigation Measure 9.8.** For overhead transmission lines, site-specific geotechnical investigations will be performed at specific pole locations to evaluate the potential for surface fault rupture. Where significant potential for surface fault rupture exists, pole locations will be adjusted where possible, to minimize any potential for damage. Incorporation of standard engineering practices as part of the project will ensure that people or structures are not exposed to fault rupture hazards and any impacts will be less than significant. For substation improvements to existing sites, data will be reviewed to determine if a geotechnical investigation is necessary for improvements at the Lakeville substation. In addition, an evaluation of the significance of the Tolay fault will be undertaken. To the extent feasible, substation improvements will be designed to accommodate potential effects during a major earthquake along the Tolay and other nearby active faults.	CPUC / PG&E
Hydrology and Water Quality		
Impact 10.1. Erosion and Runoff (construction-related impacts)	**Mitigation Measure 10.1.** Soil stockpiles will be stored away from surface waterways. Silt fences or straw waddles will be installed around stockpile perimeters to prevent sedimentation of surface runoff. Stockpiles will be covered with plastic during inclement weather to prevent erosion. Excess soil will be disposed of at an approved facility. Impacts will be less than significant. If construction activities occur in the wet season, access roads, pull sites, and material laydown areas will be rocked to prevent rutting and erosion. When project construction is completed, the rock will be removed from temporary pull sites and laydown areas (unless otherwise requested by the landowner). Where access roads cross two ephemeral waterways near Felder Creek, steel bridges will be installed to prevent construction and operation impact. Permits may be needed for bridges. If less than 50 cubic yards of soil are moved, permits for roads are not required.	CPUC / PG&E
Impact 10.2. Potential Spills (construction-	**Mitigation Measure 10.2.** The project's Stormwater Pollution Prevention Plan will	CPUC /

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Impact	Mitigation Measure (MM)	Responsible Party
related impacts)	include measures to prevent and clean up potential spills of hazardous substances, as well as stream setback requirements for refueling. Impacts will be less than significant.	PG&E
Impact 10.3. Dewatering (construction-related impacts)	**Mitigation Measure 10.3.** Evacuated seepage water will be discharged away from any nearby waterways, in a manner that does not cause erosion or sedimentation. Any unused or spilled wet concrete will be contained, allowed to dry, removed from the construction area, and disposed of at an approved facility. A dewatering permit will be obtained from the County of Sonoma if necessary. Impacts will be less than significant.	CPUC / PG&E
Noise		
Impact 12.1. Construction Noise (transmission line – construction)	**Mitigation Measure 12-1.** The following noise suppression techniques will be employed during project construction to minimize the impact of temporary construction-related noise on nearby sensitive receptors: • Compressors and other small stationary equipment will be shielded with portable barriers. • "Quiet" equipment (i.e., equipment that incorporates noise control elements into the design, including some models of jackhammers and compressors) will be used during construction. • Equipment exhaust stacks/vents will be directed away from buildings. • Truck traffic will be routed away from noise-sensitive areas where feasible. • Temporary sound barriers or sound curtains will be employed if the other noise reduction methods are not effective or possible, or if sensitive receptors will be exposed to construction noise for more than 1 day, such as for emergency purposes i.e., operations of water pumps and generators for power back-up.	CPUC / PG&E
Public Health and Safety, and Hazardous Materials		
Impact 13.1. Potential for Spills during Construction (construction)	**Mitigation Measure 13.1.** 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 excavation activities. The plan will be submitted to the Hazardous Material Unified Program Agency, or another appropriate oversight agency, for approval	CPUC / PG&E

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Impact	Mitigation Measure (MM)	Responsible Party
	prior to initiating excavation activities. 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 material, 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. 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 Storm Water Pollution Prevention Plan.	
Impact 13.2. Operation of "Skycrane" Helicopters in Populated Areas (construction)	**Mitigation Measure 13.2.** A Lift Plan will be prepared and approved by the FAA prior to all "skycrane" construction helicopter operations. The need for short-term road closures, if any, will be identified in the Lift Plan and will be coordinated with the appropriate jurisdictions as described in Chapter 14, Transportation and Traffic.	CPUC / PG&E
Visual Resources		
Impact 15.3. Staging Areas (construction)	**Mitigation Measure 15.3.** The staging areas will be kept in an orderly fashion and litter and debris that collects along the fence will be removed regularly. Fencing will be removed after construction.	
Impact 15.11. Access Roads. (operation)	**Mitigation Measure 15.11.** Plant vegetation to hide or screen views of new dirt access roads if any are highly visible from a public road.	
Corona and Induced Current Effects		
Impact 16.1: Shock Potential (operations)	**Mitigation Measure 16.1.** PG&E will examine properties along the transmission line corridor and talk to property owners as necessary to identify fences or pipes (e.g., agricultural irrigation pipes) that could pose an induction problem or be incompatible with the power line. If there are induction problems, they can be mitigated by grounding and/or isolating the fence, pipe run, etc. For example, PG&E will need to replace about a 20-foot long section of an existing wire mesh fence around pole 82 with a fiberglass fence section (pers. comm. Mike Neer, PG&E Construction Manager, July 6, 2004).	CPUC / PG&E