

MITIGATION IMPLEMENTATION AND MONITORING PLAN

PACIFIC GAS & ELECTRIC (PG&E)

SAN MATEO-MARTIN #4 CONVERSION PROJECT

Pacific Gas and Electric Company (PG&E) has proposed the San Mateo-Martin #4 Conversion Project, an upgrade to an existing 60-kV transmission line in northern San Mateo County (referred to as San Mateo-Martin #4) by converting it to 115 kV operation in order to reduce potential electrical service interruptions in the event of overloading of the existing electrical transmission system serving San Francisco and northern San Mateo County (see Figures B-1 and B-2 of the Initial Study). The primary components of the project include power line conversion (reconductoring) work and modifications at four substations along the 12-mile long corridor. The construction schedule would depend on CPUC completion of the CEQA review process and approval of the project. Assuming a construction season starting in the fall of 2003, operation would start in the fall of 2004. In the West of Bayshore parcel, PG&E has proposed to restrict construction activities to the period from August 1 to about November 1, or the first heavy rainfall, to avoid disturbance to sensitive species. For the same reason, PG&E has proposed to conduct construction activities on San Bruno Mountain from September 1 to approximately February 28, and at Navigable Slough from September 1 to January 15. It would take from 60 to 90 days to install, pull, and tension the new conductor for the entire length of the line. Construction at each substation would take between five and eight months to complete.

An Initial Study was prepared to assess the potential effects on the environment from the various components of the proposed project. The Initial Study was prepared based on information in the Proponent's Environmental Assessment (PEA), project site visits, and supplemental research. The majority of the proposed project's impacts would occur during project construction, as a result of disturbance caused by construction activity. Within PG&E's Application, Applicant Proposed Measures (APMs) addressing potentially significant impacts were proposed to reduce potentially adverse impacts related to project construction.

The purpose of this Mitigation Implementation and Monitoring Plan is to ensure that the Applicant Proposed Measures, as well as the Agency Mitigation Measures (MMs) that PG&E has agreed to are adequately implemented. This plan includes specific actions to be taken to implement each measure, information on monitoring requirements, and the timing of implementation (see Table C-1). This plan includes:

- The Agency Mitigation Measures, which PG&E must implement as part of the proposed project, followed by the Applicant Proposed Measures that PG&E has made part of the proposed project and is responsible for implementing (as indicated in Table C-1, APM-1 through APM-17 and APM-60 through APM-64 apply to the entire project site, APM-18 through APM-54 apply to the West of Bayshore parcel, and APM-55 through APM-59 apply to San Bruno Mountain);
- The actions required to implement these measures;

- Monitoring requirements; and
- Timing of implementation for each measure.

Construction field monitoring shall be carried out by a CPUC-designated environmental monitor as well as a PG&E-designated monitor to ensure that the measures are implemented. In all instances where non-compliance occurs, the CPUC's designated environmental monitor shall issue a warning to the construction foreman and PG&E's project manager. Continued non-compliance shall be reported to the CPUC's designated project manager. Any decisions to halt work due to non-compliance shall be made by the CPUC's designated project manager, except where noted in the mitigation measures or as required by other agencies. The CPUC's designated environmental monitor shall keep a record of any incidents of non-compliance with mitigation measures. Copies of these documents shall be supplied to PG&E and the CPUC.

**Table C-1
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan**

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
Aesthetics					
Light and glare from nighttime construction.	AES-1	All night lighting during construction shall be directed, to the maximum extent possible, vertically towards the work area and shall be shielded to prevent receptors along US 101 and residents in the vicinity of substations from experiencing glare from the lights. Nighttime lighting specification shall be based on consultation with Caltrans. Nighttime lighting for work to be performed at the Martin Substation shall be shielded and directed away from Guadalupe Canyon Parkway.	PG&E to direct and shield lighting as defined.	CPUC to inspect lighting during nighttime activities.	During nighttime construction.
Light and glare from permanent lighting fixtures at the substations.	AES-2	Lighting fixtures shall be located and designed (e.g., using non-glare bulbs) to illuminate the substation property at the minimum level to ensure work safety while also avoiding casting light or glare on off-site locations beyond the substation fence lines at the nearest residents.	PG&E to install lighting fixtures as defined.	CPUC to inspect lighting upon installation.	Upon installation of lighting fixtures.
Air Quality					
Dust generation from helicopter staging.	AQ-1	This measure supplements APM-1. Helicopter staging shall be conducted, to the maximum extent possible, on paved surfaces to reduce potential for fugitive dust to occur during take off and landing.	PG&E to conduct helicopter staging as defined.	CPUC to inspect periodically.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Air Quality Continued)</i>					
Dust generation from construction.	AQ-2	In areas where helicopter staging would occur on non-paved surfaces, PG&E shall water the staging area as needed prior to take off to reduce potential for significant dust-stirring. All active construction areas, access roads, and staging areas shall be watered at least twice daily from May through October as needed to control dust, unless it affects endangered species.	PG&E to implement measures as defined.	CPUC to inspect periodically	During construction
Biology					
Direct or indirect adverse effects on sensitive or special status species or their habitats.	BIO-1	This measure supplements APM-20, -21, -31, -44, -45 and -61. PG&E shall retain qualified biologists and other qualified resource specialists, as necessary, to monitor project construction within the West of Bayshore parcel, and the San Bruno Mountain segments. Monitors shall be hired and trained prior to construction and shall be responsible for pre-construction surveys, work area delineations (i.e., staking, flagging, etc.), onsite monitoring, documentation of violations and compliance, coordination with construction inspectors, and post-construction documentation. The PG&E on-site biological monitors shall prepare weekly reports and send them to	PG&E to retain and train biological monitor(s); Monitor(s) to complete variance forms and obtain clearance as defined.	CPUC to review monitoring reports and variances (as appropriate), review possible deviations from proposed mitigation, periodically audit monitoring program to insure compliance with requirements, permits and clearances.	Prior to and during construction

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>		<p>the CPUC and the CPUC monitors. The PG&E on-site biological monitors shall prepare a post-construction compliance report for the West of Bayshore parcel within 60 days of end of construction and send it to the CPUC, CDFG, and USFWS.</p> <p>PG&E’s monitors shall be responsible for completing a CPUC Construction Staging Plan Form and obtaining clearance from the CPUC and, if necessary, resource agencies for variances. All variances will be documented and no variances will be allowed with verbal approval only. Variances that are considered minor with little risk to sensitive resources by the PG&E on-site biological monitors and the CPUC biological monitors may be approved on the site but will be documented with a Construction Staging Plan Form. Variances that could affect sensitive resources but are required to ensure the health and safety of work crews shall also be documented in a Construction Staging Plan Form.</p>			
Same as above.	BIO-2	<p>This measure supplements APM-38 and APM-60.</p> <p>PG&E shall conduct Worker Environmental Awareness Program (WEAP) training for construction crews (primarily crew and construction foremen)</p>	PG&E to prepare WEAP and conduct training.	CPUC to review WEAP and list of personnel who attend training.	Prior to construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
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AGENCY MITIGATION MEASURES (MMs)

(Biology Continued)

before construction activities begin within any of the sensitive habitat areas. The WEAP shall include a brief review of the special status species and other sensitive resources that could occur in the proposed project area (including their life history and habitat requirements and an identification of portions of the project corridor where they might be found) and their legal status and protection. The program shall cover all mitigation measures, environmental permits and proposed project plans, such as BMPs, erosion control and sediment plan, reclamation plan, and any other required plans. The designated biological monitor shall be responsible for ensuring that construction personnel adhere to the guidelines and restrictions. WEAP training sessions shall be conducted as needed for new personnel brought onto the job during the construction period. A list of all personnel who have attended the WEAP training shall be kept by the biological monitor and shall be available for CPUC review in the field at all times, and a copy shall be submitted to the CPUC. During WEAP training, construction personnel shall be informed of the importance of avoiding ground-disturbing activities outside of the designated work area.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>					
Same as above.	BIO-3	This measure supplements APM-35. All planned work activities and construction access routes at each construction site shall be defined and described in detail in a Construction Staging Plan Form that will be submitted to and approved by the CPUC and, if required, by the CDFG and USFWS. The form shall identify, at a minimum, the nature of the work to be performed, the number and type of equipment to be used, the methods of accessing the construction area, the duration of construction, the individual in charge of the construction work, and information on the location of sensitive biological resources within or along construction sites. The form or an equivalent version subject to CPUC approval shall be completed and submitted for agency approval if required (see Appendix H to the Initial Study for the form).	PG&E to fill out Construction Staging Plan Form for all construction areas; PG&E project manager and monitor to sign completed Form.	CPUC to review completed Form for all areas; San Bruno Mountain Habitat Conservation Plan Operator or Habitat Manager to review Form for San Bruno Mountain area; CPUC monitor to inspect compliance with Form.	Review of Form prior to construction at each site; Inspection of compliance during construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>					
Same as above.	BIO-4	<p>This measure supplements APMs-29,-38, -39, -45, -47, -48, and -49, which all refer to the “approved Mitigation and Monitoring Plan.”</p> <p>APMs-29, -38, -39, -45, -47, -48, and -49 shall include reference to compliance with the CDFG 1802 Agreement and conditions in the USFWS Biological Opinion. These two additional documents will define the protective measures for each sensitive species and will take precedence over the Mitigation and Monitoring Plan should there be any differences among the documents. PG&E shall ensure that its biological monitors have the defining documents to avoid any confusion or uncertainty in the field.</p>	PG&E to provide documents to field monitors.	<p>CPUC to review documents to be provided to field monitors;</p> <p>PG&E and CPUC monitors to inspect for compliance with documents.</p>	<p>Provide documents prior to construction;</p> <p>Monitor compliance during construction.</p>
Same as above.	BIO-5	<p>This measure supplements APM-20, -33, -34, -39, and -43.</p> <p>At the end of each workday, any open holes shall be fully covered, after they have been inspected by the on-site biologist, with steel plates or other effective coverings to prevent entrapment of wildlife species. If common wildlife species are found in a hole, the designated biological monitor shall immediately be informed and the</p>	PG&E to cover holes; monitors to inspect that all holes are covered and no wildlife is trapped inside.	CPUC to review agreements with all contractors.	<p>Review contractor agreements prior finalization;</p> <p>Monitor during construction.</p>

Table C-1 (Continued)
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>					
Same as above.	BIO-6	animal(s) shall be removed. If the animal(s)is/are a sensitive species that requires special handling authorization (e.g., San Francisco garter snake), a qualified biologist (agency-permitted or approved to handle a specific species) shall remove the animal before resumption of work in that immediate area. PG&E shall specify this requirement in its agreements with all construction contractors.	PG&E to comply with applicable permits and regulations as defined; PG&E to notify the CPUC of any amendments or additions to permits.	CPUC to review any amendments or additions to permits.	During construction.
Same as above.	BIO-7	This measure supersedes APM-52. If PG&E or any of its employees, contractors, or agents kills or injures an individual San Francisco garter snake or California red-legged frog or finds any such animal dead or injured, project activities shall be halted immediately on the West of Bayshore parcel, and the CDFG, USFWS, and CPUC shall be notified	PG&E to suspend work and notify agencies as defined.	Field monitors to ensure that proper suspension and notification is achieved.	During construction.

Table C-1 (Continued)
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>					
Same as above.	BIO-8	<p>within 30 minutes of PG&E's lead biological monitor confirming the death or injury. PG&E will not allow work to resume until receiving authorization from the USFWS and CDFG.</p> <p>This measure supplements APM-33. In the event that wet weather should occur during project construction to the point that site access and construction activities would result in tire ruts and disturbances to the ground surface or present risks of equipment getting stuck in mud:</p> <ul style="list-style-type: none"> Any improvements to temporary access routes or work sites in order to provide a stable and firm base shall be accomplished through the use of removable and temporary structures such as timber mats, wood or steel grating or concrete blocks. Any such improvements shall not include the use of base rock or any other loose fill material unless there is a liner under it. Once work in the area is completed or use of the temporary access route is no longer necessary to support work activities, the temporary materials shall be immediately removed and the site restored to its condition prior to the initiation of work. 	PG&E to install removable and temporary structures and conduct dewatering as defined.	CPUC to monitor during wet weather.	During construction, if it occurs during wet weather.

Table C-1 (Continued)
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AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>					
Same as above.	BIO-9	<ul style="list-style-type: none"> In heavily flooded areas or conditions, water from any dewatering work areas or excavation sites shall not be discharged to the surrounding uplands. Direct discharges to adjacent waterways shall not be allowed without a filter bag at the end of the discharge hose. If a waterway is not available, the discharge water shall be placed into a basin consisting of hay bales and filter fabric. Once sediments have dropped to the bottom of the basin, the water shall be collected and discharged to a waterway. The sediment shall be collected and disposed of off-site. 			
Same as above.	BIO-9	<p>This measure supersedes APM-22. Prior to driving the ground rods into the ground, a biological monitor shall inspect an area defined by a six-foot radius from the selected location for the hole and identify all rodent burrows. Each rodent burrow shall be hand dug and cleared of any San Francisco garter snakes by a monitoring biologist under the supervision of a permitted biologist.</p>	PG&E to provide biologist (monitor), who shall inspect burrows as defined.	CPUC monitor to supervise inspection of burrows.	Prior to driving the ground rods into the ground.
Same as above.	BIO-10	<p>This measure supplements APM-26. A biological monitor shall be continually present during all vegetation clearing on access roads and work sites, and all cut vegetation shall be removed the same day it is cut.</p>	PG&E to remove and clear vegetation as defined	CPUC and PG&E monitor vegetation clearance.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>					
Same as above.	BIO-11	<p>This measure expands upon and supplements APM-15.</p> <p>A functional fire extinguisher shall be required in each PG&E and PG&E contractor vehicle that enters the West of Bayshore property.</p>	PG&E to provide fire extinguishers.	CPUC to inspect vehicles.	During construction.
Same as above.	BIO-12	<p>Construction noise from the proposed pull or tension work site at Towers 7/55 and 7/56 could disrupt clapper rail nesting in Navigable Slough, although none have been observed at this location. Helicopter noise and downdraft would also affect any clapper rail present. To avoid any possible impact to clapper rail in the vicinity, PG&E shall:</p> <ul style="list-style-type: none"> • Preclude use of helicopters for work on Towers 7/55 and 7/56. AND EITHER • Schedule the construction work at the pull and tension site and on Towers 7/55 and 7/56 between September 1 and January 15 to avoid the clapper rail breeding period. This option would avoid any noise impacts to clapper rail nests. OR • Conduct clapper rail surveys, using USFWS-approved protocols, prior to initiating construction activity at this site. If the surveys indicate clapper 	PG&E to implement measure as defined.	CPUC to monitor helicopter use.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>		rails are not using the adjacent habitat in Navigable Slough, then work may proceed as planned. However, if clapper rails are found in Navigable Slough, then PG&E shall consult with the USFWS to determine if mitigation measures are required before the work may proceed. A possible mitigation measure would be to erect a sound barrier between the pull or tension site and Navigable Slough.			
Same as above.	BIO-13	This measure supplements APM-31, -37, -56, and -58. PG&E shall flag or stake the access roads/routes and all work areas in the West of Bayshore and San Bruno Mountain areas to demarcate the minimum area necessary to safely conduct project construction and staging. PG&E and its contractors shall stay within the designated access and work areas. The flagged or staked work areas shall be documented in a Construction Staging Plan Form (see MM BIO-3) to be approved by the CPUC and, if required, the San Bruno Mountain HCP administrator for San Mateo County, the CDFG, and USFWS. The form shall identify, at a minimum, the nature of the work to be performed, the number and type of equipment to be used, the methods	PG&E to complete form (see MM BIO-3 above).	CPUC and/or HCP Administrator to approve plan.	Prior to at each construction site.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Biology Continued)</i>					
Same as above.	BIO-14	of accessing the construction area, the duration of construction, the individual in charge of the construction work, and information on the location of sensitive biological resources within or along construction sites. A form that shall be completed and submitted for agency approval is included in Appendix H.	PG&E to submit Revegetation Plan to HCP Operator; PG&E to submit to CPUC documentation on comments of HCP Operator on Revegetation Plan.	CPUC to review comments of HCP Operator on Revegetation Plan.	Prior to revegetation or site restoration efforts.
Degradation of needlegrass habitat.	BIO-15	PG&E shall consult with the HCP Habitat Manager to obtain mapped locations of needlegrass habitat on San Bruno Mountain. All work areas (such as staging areas and access roads) shall be flagged or staked and reviewed in the field by the HCP Habitat Manager. If needlegrass habitat is in proximity to an equipment staging area, the use of this area shall be approved by the Habitat Manager prior to any construction staging.	PG&E to implement measure as defined.	CPUC and/or HCP Habitat Manager to monitor compliance with requirements for HCP.	Prior to construction.
Cultural Resources					
Discovery of unknown cultural resources.	CR-1	This MM supersedes APM-63. The following provisions shall be incorporated into the grading and construction contracts to address the	PG&E to provide qualified archaeologist; Archaeologist to provide extraction plan to PG&E	CPUC and PG&E monitors to ensure work is suspended upon discovery of	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Cultural Resources Continued)</i>		<p>potential to encounter currently unknown cultural resources:</p> <p>a. If potential historical or unique archaeological resources are discovered during construction, all work in the immediate vicinity shall be suspended and alteration of the materials and their context shall be avoided pending site investigation by a qualified archaeological or cultural resources consultant retained by the project applicant. The immediate vicinity wherein work shall be suspended, shall be approximately 50 feet from the discovery or within an appropriate distance to be determined by the retained archaeologist or consultant. Construction work shall not commence again until the archaeological or cultural resources consultant has been given an opportunity to examine the findings, assess their significance, and offer proposals for any additional exploratory measures deemed necessary for the further evaluation of and/or mitigation of adverse impacts to any potential historical resources or unique archaeological resources that have been encountered.</p> <p>b. If the find is determined to be historical or unique archaeological resource, and if avoidance of the resource would not</p>	<p>and CPUC if needed; PG&E to contact County Coroner if human remains are found; Coroner to contact NAHC if appropriate.</p>	<p>resources; CPUC and NAHC to review extraction plan if needed.</p>	

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
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AGENCY MITIGATION MEASURES (MMs)

(Cultural Resources Continued)

be feasible, the archaeological or cultural resources consultant shall prepare a plan for the methodical excavation of those portions of the site that would be adversely affected. The plan shall be designed to result in the extraction of sufficient volumes of non-redundant archaeological data to address important regional research considerations. The work shall be performed by the archaeological or cultural resources consultant, and shall result in detailed technical reports. Such reports shall be submitted to the California Historical Resources Regional Information Center. Construction in the vicinity of the find shall be accomplished in accordance with current professional standards and shall not recommence until this work is completed.

- c. The project applicant shall assure that project personnel are informed that collecting significant historical or unique archaeological resources discovered during development of the project is prohibited by law. Prehistoric or Native American resources can include chert or obsidian flakes, projectile points, mortars, and pestles as well as dark friable soil containing shell and bone dietary debris, heat-affected rock, or

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
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AGENCY MITIGATION MEASURES (MMs)

(Cultural Resources Continued)

human burials. Historic resources can include nails, bottles, or other items often found in refuse deposits.

- d. If human remains are discovered, there shall be no further excavation or disturbance of the discovery site or any nearby area reasonably suspected to overlie adjacent human remains until the project applicant has complied with the provisions of State CEQA Guidelines Section 15064.5(e). In general, these provisions require that the County Coroner shall be notified immediately. If the remains are found to be Native American, the County Coroner shall notify the Native American Heritage Commission (Commission or NAHC) within 24 hours. The most likely descendant of the deceased Native American shall be notified by the Commission and given the chance to make recommendations for the remains. If the Commission is unable to identify the most likely descendent, or if no recommendations are made within 24 hours, remains may be reinterred with appropriate dignity elsewhere on the property in a location not subject to further subsurface disturbance. If recommendations are made and not accepted, the Native American Heritage Commission will mediate the problem.

Table C-1 (Continued)
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
Hazardous Materials					
Soil or groundwater contamination during helicopter refueling.	HAZ-1	Helicopter refueling operations shall be accomplished over graded surfaces with secondary containment in place.	PG&E to implement measure as defined.	CPUC to inspect refueling areas outside of airports before and after refueling.	During construction.
Release of hazardous substances during grading or excavation of contaminated soils.	HAZ-2	If field evidence of contamination is observed during grading or excavation, sampling and direct laboratory testing shall be conducted. Personnel conducting soil sampling and field analysis shall meet the Federal OSHA requirement for 40-Hour Training for Hazardous Waste Operations and Emergency Response (HAZWOPER) and be familiar with the calibration and operation of testing equipment. The monitoring personnel shall have the authority to implement a health and safety plan that complies with applicable OSHA requirements and is approved by a certified industrial hygienist. The health and safety plan shall present specific alternatives for action to be taken in the event contaminated soils are encountered. The plan shall specify procedures for monitoring, identifying, handling, and disposing of hazardous waste.	PG&E to obtain personnel conducting soil sampling and to submit to CPUC personnel's HAZWOPER certification	CPUC to review proof of HAZWOPER certification and to monitor soil testing.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
<i>(Hazardous Materials Continued)</i>					
Increased risk of fire hazard during refueling.	HAZ-3	All gasoline powered light duty trucks and mobile equipment requiring infield refueling shall be re-fueled no less than 200 feet lateral separation from the area directly beneath transmission lines.	PG&E to implement measure as defined.	CPUC to monitor refueling.	During construction.
Hydrology and Water Quality					
Discharge of polluted runoff from construction.	HY-1	This measure supplements APM-17. PG&E shall implement best management practices (e.g., water bars, silt fences, staked straw bales, and mulching and seeding of all disturbed areas) defined in the California Storm Water Quality Association (Stormwater Best Management Practices Handbook, 2003), the Bay Area Stormwater Agencies Association Start at the Source – Design Guidance Manual, or similar documents. These documents shall be identified by PG&E prior to final project approval.	PG&E to provide additional BMPs based on the identified documents; PG&E to implement additional BMPs.	CPUC to review additional BMPs as defined; CPUC to monitor implementation of additional BMPs.	Provide additional BMPs to CPUC prior to project approval; Monitor implementation during construction.

Table C-1 (Continued)
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
Noise					
Noise emissions from construction at substations.	NOI-1	PG&E or its construction contractor shall provide advance notice, between two and four weeks prior to construction, by mail to all sensitive receptors ¹ and residences within 300 feet of construction. The announcement shall state specifically where and when construction will occur in the area.	PG&E shall conduct public notification as defined.	PG&E to provide CPUC with construction notices for review.	Prior to construction.
Same as above.	NOI-2	PG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighborhood receptors, including residents about noise construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with MM NOI-1. PG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers (procedures to be approved by the CPUC).	PG&E to provide public liaison officer, procedures for reaching the officer, and toll-free telephone number.	CPUC to review procedures for reaching officer.	Prior to construction.

¹ Note: Examples of sensitive receptors include hospitals, schools, convalescent facilities, and residential areas.

Table C-1 (Continued)
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Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY MITIGATION MEASURES (MMs)					
Transportation/Traffic					
Increase in emergency response times due to construction road encroachment.	TR-1	PG&E shall inform local emergency personnel of lane closure activities prior to project commencement to prevent impacts to emergency routes and shall amend its plans, if necessary, based on local agency input.	PG&E to implement measure as defined.	PG&E to notify CPUC when local emergency personnel have been informed of closure activities.	Prior to construction.
Decrease in parking capacity.	TR-2	No material or equipment shall be left or parked overnight along the project right-of-way or on private property; however, in the event pull and/or tension trucks or equipment need to remain on the site more than one day, PG&E shall notify the appropriate representative or landowner.	PG&E to remove equipment from site every night and notify the appropriate representative or landowner if trucks or equipment need to remain on-site more than one day.	PG&E to notify CPUC when equipment needs to stay on-site overnight; CPUC to inspect removal of equipment after construction day is over.	During construction.
Same as above.	TR-3	This measure supplements APM-9. Construction personnel shall park in designated areas and shall be encouraged to carpool to the job site if suitable park-and-ride facilities exist in the project vicinity.	PG&E to implement measure as defined.	CPUC to inspect the construction parking in designated areas.	During construction.
Same as above.	TR-4	PG&E shall post signage 24 hours in advance of the lane closure on Nerli Lane in Burlingame to notify any residents or businesses that might be inconvenienced.	PG&E to implement measure as defined.	CPUC to inspect signage.	Post and inspect signage 24 hours in advance of lane closure.

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APPLICANT PROPOSED MEASURES (APMs)					
Air Quality					
Fugitive dust emission from construction.	APM-1	This APM is supplemented by MM AQ-1 above. This APM applies to the entire project site. All construction personnel working on the project will be trained prior to starting construction on methods for minimizing air quality impacts during construction.	PG&E to conduct training and provide CPUC with documentation that all workers attended training.	CPUC to review documentation on training.	Prior to construction.
Same as above.	APM-2	This APM is supplemented by MM AQ-2. This APM applies to the entire project site. All active construction areas, access roads, and staging areas will be watered at least twice daily in dry season as needed to control dust, unless it affects endangered species.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically, as needed.	During construction.
Same as above.	APM-3	This APM applies to the entire project site. All trucks hauling soil and other loose material will be covered or at least 2 feet of freeboard will be in place.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor in field periodically.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-4	This APM applies to the entire project site. Construction vehicles will use paved roads to access the construction site when possible.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During construction.
Same as above.	APM-5	This APM applies to the entire project site. Streets, paved access roads, and parking lots will be swept daily if visible soil material is carried onto adjacent public streets.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports.	During construction.
Same as above.	APM-6	This APM applies to the entire project site. Soil stabilizers will be applied to inactive construction areas on an as-needed basis.	PG&E to implement measure as defined.	Applicant-appointed biological monitor; CPUC monitor to review daily reports.	During construction.
Same as above.	APM-7	This APM applies to the entire project site. Exposed stockpiles of soil and other excavated materials will be enclosed, covered, or watered twice daily or treated with soil binders during the dry season.	PG&E to implement measure as defined.	Applicant-appointed biological monitor; CPUC monitor to review daily reports.	During construction.
Same as above.	APM-8	This APM applies to the entire project site. Vegetation in disturbed areas will be planted after the completion of construction.	PG&E to implement measure as defined.	Applicant-appointed biological monitor; CPUC monitor to verify during postconstruction site visit.	During and after construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-9	This APM is supplemented by MM TR-3. This APM applies to the entire project site. Construction workers will carpool when possible.	PG&E to implement measure as defined.	Not applicable	During construction.
Same as above.	APM-10	This APM applies to the entire project site. No equipment will “idle” more than 5 minutes, although some equipment will require extended warm-up time or will remain in use (and running) while stationary (e.g., to power other equipment or when used for repetitive tasks).	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor in field periodically as needed.	During construction.
Biological Resources					
Disturbance of habitat for sensitive species and injury or death to a threatened or endangered species.	APM-11	This APM applies to the entire project site. PG&E, its contractors, and agents will restrict all activities to the minimum area necessary to safely conduct project activities.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor in field periodically as needed	During construction.
Same as above.	APM-12	This APM applies to the entire project site. All vehicle travel will be limited to existing access roads or clearly identified construction areas.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-13	This APM applies to the entire project site. Vehicle speed limits of 10 miles per hour will be monitored and enforced during construction in environmentally sensitive areas.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Same as above.	APM-14	This APM applies to the entire project site. Refueling of pick-up trucks will not occur at or adjacent to the construction site or within 100 feet of any wetland area. Containment tarps will be set up under the equipment before refueling to prevent spills. Operators will be required to stay with these vehicles during refueling operations.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Same as above.	APM-15	This APM is supplemented by MM BIO-11. This APM applies to the entire project site. The following measures will be taken to prevent accidental wildfires. <ul style="list-style-type: none"> • Herbaceous vegetation will be cleared (by hand or weed whacker) on access roads and spurs, in pull or tension sites, and in work areas in the West of Bayshore parcel. • No campfires or trash burning will be allowed. 	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		<ul style="list-style-type: none"> • Smoking will be restricted to vehicle interiors. All cigarette butts will be disposed of in vehicle ashtrays. • The construction foreman will have a cellular phone on hand to immediately report a fire via 911, if one should occur. 			
Same as above.	APM-16	This APM applies to the entire project site. All food-related trash items will be removed from the work area daily.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Same as above.	APM-17	This APM is supplemented by MM HY-1. This APM applies to the entire project site. Best management practices to reduce sedimentation and minimize erosion will be employed on all work sites.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Disturbance of the habitat of the San Francisco garter snake and the California red-legged frog in West of Bayshore parcel (Towers 4/33 to 6/49).	APM-18	This APM applies to the West of Bayshore parcel. To minimize the potential for impacts to the California red-legged frog and San Francisco garter snake, construction of the	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		West of Bayshore parcel will be limited to the period between August 1, 2003 and approximately November 1, 2003, or the first heavy rainfall, subject to extensions approved by the California Department of Fish and Game (CDFG).			
Disturbance of habitat for sensitive species and injury or death to a threatened or endangered species.	APM-19	<p>This APM applies to the West of Bayshore parcel.</p> <p>Before initiating the reconductoring activities and installation of guard structures, PG&E will designate a representative responsible for communications with CDFG and for overseeing compliance. The CDFG will be notified in writing of the representative's name, business address, and telephone number, and will be notified in writing if a substitute representative is designated.</p>	PG&E to implement measure as defined.	CDFG to receive notification from PG&E.	Prior to and during construction.
Same as above.	APM-20	<p>This APM is supplemented by MM BIO-1 and MM BIO-5. This APM applies to the West of Bayshore parcel.</p> <p>Knowledgeable and experienced biologists approved by the CDFG will be retained by PG&E as biological monitors and will be present during all project activities within areas of San Francisco garter snake habitat to help avoid mortality or injury of individual San Francisco garter snake and to minimize disturbance to the habitat. A biologist who holds or is named on a valid</p>	PG&E to implement measure as defined.	<p>CDFG and USFWS to receive resumes for approval prior to construction;</p> <p>Applicant-appointed biological monitor in field;</p> <p>CDFG and USFWS to review daily reports and monitor periodically.</p>	Prior to and during construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		<p>10(a)(1)(A) Federal Scientific Collection permit issued by the U.S. Fish and Wildlife Service (USFWS) for handling San Francisco garter snake (hereinafter referred to as “permitted biologist”) will be the only biologists allowed to handle San Francisco garter snake. All biological monitors will provide quality control and quality assurance for implementation of the mitigation measures to avoid mortality or injury to San Francisco garter snake. The biological monitors will ensure compliance with the measures provided. The biological monitors will inspect each activity area daily immediately before activities begin and continually monitor in advance of the work crew. If a snake is found, the monitor will call a permitted biologist.</p>			
Same as above.	APM-21	<p>This APM is supplemented by MM BIO-1 and MM BIO-5. This APM applies to the West of Bayshore parcel.</p> <p>PG&E, its contractors, and agents working on the West of Bayshore parcel will provide biological monitors with the express authority to order any immediate changes in project activities necessary to bring those activities into compliance or to otherwise avert a risk of imminent mortality or injury of San Francisco garter snake, and to stop any activity that cannot be or has not been brought into immediate</p>	PG&E to implement measure as defined.	<p>Applicant-appointed biological monitor in field;</p> <p>CDFG and USFWS to be notified if work is stopped to avert take of San Francisco garter snake.</p>	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		compliance, provided that the job site foreman or other PG&E authority on-site deems it safe. The CDFG and the USFWS will be notified the same day or within 24 hours of circumstances that led biological monitors to halt work or to take other actions to ensure compliance or to otherwise avert threatened mortality or injury of San Francisco garter snake.			
Same as above.	APM-22	This APM is superseded by MM BIO-9.			
Same as above.	APM-23	<p>This APM applies to the West of Bayshore parcel.</p> <p>At the guard structures between Towers 4/36 and 4/37, and at Towers 4/38, 5/43, and 5/44, if no rodent burrows are found, the truck-mounted digger may be used exclusively to excavate the holes for the structure. If rodent burrows are found, the following procedure will apply.</p> <ul style="list-style-type: none"> At the guard structures between Towers 4/37 and 4/38, and at Towers 4/38, and 5/43 and 5/44, the holes will be hand dug until the permitted biologist determines that all rodent burrows have been hand excavated or that the soil type or other relevant factors preclude the existence of additional rodent burrows. Once the permitted biologist has made this determination, the truck-mounted 	PG&E to implement measure as defined.	<p>Applicant-appointed biological monitor in field;</p> <p>CDFG and USFWS to review daily reports.</p>	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		digger may be used to complete the holes for the structure.			
Same as above.	APM-24	This APM applies to the West of Bayshore parcel. Prior to the removal of the two wood poles, PG&E will use the same procedures for inspecting the pole locations as described above for the guard structure poles.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CDFG and USFWS to review daily reports.	During or after construction.
Same as above.	APM-25	This APM applies to the West of Bayshore parcel. A biological monitor will inspect underneath any vehicle that is parked for 30 minutes or more immediately prior to moving the vehicle.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CDFG and USFWS to review daily reports and monitor periodically.	During construction.
Same as above.	APM-26	This APM is supplemented by MM BIO-10. This APM applies to the West of Bayshore parcel. At least one biological monitor will be continually present during the following activities. <ul style="list-style-type: none"> • Guard structure installation • Ground rod installation • Removal of the two wood poles • Movement of equipment larger than a pickup truck onto or off the site using access roads. A biological monitor will 	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CDFG and USFWS to review daily reports and monitor periodically.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		walk in front of the equipment and watch for snakes.			
		<ul style="list-style-type: none"> • Movement of any equipment (including but not limited to line trucks, trailers, cranes, pickup trucks) into or off undisturbed areas as necessary to conduct activities adjacent to or in alignment of towers. 			
Same as above.	APM-27	<p>This APM applies to the West of Bayshore parcel.</p> <p>A biological monitor will walk in front of all vehicles in the West of Bayshore parcel, except for those using the Millbrae Substation access road, which is an improved and maintained access road.</p>	PG&E to implement measure as defined.	<p>Applicant -appointed biological monitor in field;</p> <p>CDFG and USFWS to review daily reports and monitor periodically.</p>	During construction.
Same as above.	APM-28	<p>This APM applies to the West of Bayshore parcel.</p> <p>Each biological monitor will be supplied with an operable cellular phone for the purpose of efficient communication on-site.</p>	PG&E to implement measure as defined.	Applicant-appointed Lead biological monitor to supply a phone list to CPUC, CDFG, and USFWS.	Prior to construction.
Same as above.	APM-29	<p>This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel.</p> <p>Each biological monitor will be supplied with a copy of the approved <i>Mitigation Implementation and Monitoring Plan</i> for the purpose of ready reference in the field.</p>	PG&E to conduct work according to the <i>Mitigation and Monitoring Plan</i> .	Applicant-appointed Lead biological monitor to verify upon arrival of each biological monitor to the job site.	Prior to and during construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-30	This APM applies to the West of Bayshore parcel. PG&E will provide the CDFG and USFWS representatives with access to the biological monitors for purposes of discussing implementation of the measures to avoid mortality or injury of San Francisco garter snake.	PG&E to implement measures as defined.	Applicant-appointed Lead Environmental Monitor to supply a phone list to CPUC, CDFG and USFWS prior to construction.	During construction.
Same as above.	APM-31	This APM is supplemented by MM BIO-1 and BIO-13. This APM applies to the West of Bayshore parcel. PG&E, its contractors, and agents will restrict activity areas to the minimum area necessary to transport materials and equipment to towers and work areas.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports; CPUC, CDFG and USFWS to monitor periodically.	Prior to and during construction.
Same as above.	APM-32	This APM applies to the West of Bayshore parcel. Once work begins, all project-related parking and equipment storage will be confined to the established access roads or to areas outside the West of Bayshore parcel. Undisturbed areas will not be used for parking or equipment storage, except at the pull or tension sites and at sites where equipment use is required for multiple days. Project-related vehicle traffic will be restricted to established access roads or work areas adjacent to towers where	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-33	<p>equipment will be positioned to conduct the necessary tower, guard structure, and grounding activities.</p> <p>This APM is supplemented by MM BIO-5 and MM BIO-8. This APM applies to the West of Bayshore parcel.</p> <p>When plywood or timber mats or steel plates are required to be placed in the case of wet or unstable ground, the following activities will occur.</p> <ul style="list-style-type: none"> • A permitted biologist will inspect the area to be covered by the mats or plates for rodent burrows. • All rodent burrows encountered will be hand dug by the permitted biologist to clear the burrows. A biological monitor may assist in clearing burrows, only under the supervision of the permitted biologist. • If the mats or steel plates must remain in place for more than one day, dirt or sand bags will be used to seal the edges of the mats or plates to prevent snakes from crawling underneath. 	PG&E clears burrows prior to the placing of mats or plates.	<p>Applicant-appointed biological monitor in field;</p> <p>CPUC, CDFG and USFWS to review daily reports and monitor periodically.</p>	During construction.
Same as above.	APM-34	<p>This APM is supplemented by MM BIO-5. This APM applies to the West of Bayshore parcel.</p> <p>When plywood or timber mats or steel plates are removed, a biological monitor will inspect underneath the mats or plates.</p>	PG&E to implement measure as defined.	<p>Applicant-appointed biological monitor in field;</p> <p>CDFG and USFWS to review daily reports and monitor</p>	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-35	<p>inspect underneath the mats or plates.</p> <p>This APM is supplemented by MM BIO-3. This APM applies to the West of Bayshore parcel.</p> <p>Driving off access roads, access spurs, or work areas is prohibited unless it is authorized as part of the Staging Plan or is an emergency subject to the PG&E foreman pre-empting the monitors to maintain minimum safety standards</p>	PG&E to implement measure as defined.	<p>periodically.</p> <p>Applicant-appointed biological monitor in field;</p> <p>CPUC to review daily reports and monitor periodically as needed.</p>	During construction.
Same as above.	APM-36	<p>This APM applies to the West of Bayshore parcel.</p> <p>All entry gates to the West of Bayshore parcel that are not used for construction access will be locked at all times. All gates to the West of Bayshore parcel that are used for construction access will be kept closed when not in use during construction hours and will be locked during nonconstruction hours.</p>	PG&E to close all gates during construction areas and lock all gates during nonconstruction areas so that access by vehicles not affiliated with the project is prevented.	Applicant-appointed biological monitor in field.	During construction.
Same as above.	APM-37	<p>This APM is supplemented by MM BIO-13. This APM applies to the West of Bayshore parcel.</p> <p>Biological monitors will designate access points to work sites off access roads in undisturbed areas for PG&E, its contractors, and agents.</p>	Construction personnel only use designated access points.	Applicant-appointed biological monitor in field.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-38	<p>This APM is supplemented by MM BIO-2 and MM BIO-4. This APM applies to the West of Bayshore parcel.</p> <p>PG&E, its contractors, and agents will conduct an orientation program for all persons who will work on the West of Bayshore parcel. The program will consist of a brief presentation given by a permitted biologist knowledgeable about the biology of the San Francisco garter snake and the terms in the approved <i>Mitigation and Monitoring Plan</i>. The education program will cover the biology of the San Francisco garter snake, its habitat needs, its status under the California Endangered Species Act (CESA), and the conservation and mitigation measures in the approved <i>Mitigation and Monitoring Plan</i>. A fact sheet containing this information will also be prepared and distributed. Upon completion of the orientation, employees will affix a small sticker to their hardhat and sign a form stating that they attended the training and understand all the conservation and mitigation measures. Those forms will be submitted to the CDFG at the end of construction or upon the agency's request.</p>	PG&E has documentation that construction workers were trained prior to beginning work.	PG&E to submit documentation to CPUC, CDFG, and USFWS.	Prior to construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-39	<p>This APM is supplemented by MM BIO-4 and MM BIO-5. This APM applies to the West of Bayshore parcel.</p> <p>Personnel who detect any snake on-site will immediately report their finding to a biological monitor, who will determine whether the detected snake is a San Francisco garter snake. Personnel will not attempt to capture or move any snake detected. If the biological monitor determines that the snake is not a San Francisco garter snake, the biological monitor may hand-capture and move the snake in a manner consistent with the approved <i>Mitigation and Monitoring Plan</i>. If the biological monitor determines that the detected snake is a San Francisco garter snake, or is unable to positively identify the snake, the biological monitor will notify the permitted biologist for appropriate action.</p>	PG&E to implement measure as defined.	<p>Applicant-appointed Lead biological monitor in field;</p> <p>CDFG and USFWS to review daily reports and monitor periodically.</p>	During construction.
Same as above.	APM-40	<p>This APM applies to the West of Bayshore parcel.</p> <p>When overnight parking is necessary for equipment larger than a pickup truck, a containment tarp will be set up under the equipment to catch any leaking fuel or oil. No pickup trucks will be parked overnight on the West of Bayshore parcel.</p>	PG&E to implement measure as defined.	<p>Applicant-appointed biological monitor in field;</p> <p>CPUC to review daily reports.</p>	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-41	This APM applies to the West of Bayshore parcel. All excess excavated material after project construction in S Segment 1 is completed will be hauled off-site and disposed of properly. No material will be stockpiled on the West of Bayshore parcel.	PG&E to haul excess and no longer usable excavated material off-site daily.	Applicant-appointed biological monitor in field; CPUC to review daily reports.	During construction.
Same as above.	APM-42	This APM is supplemented by MM BIO-10. This APM applies to the West of Bayshore parcel. Vegetation will not be cut closer than 4 to 6 inches to the ground, whether by hand or weed whacker. All other methods for vegetation removal, including but not limited to discing and herbicide application, will be prohibited.	PG&E to implement measure as defined.	PG&E-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically as needed.	During construction.
Same as above.	APM-43	This APM is supplemented by MM BIO-5. This APM applies to the West of Bayshore parcel. All holes created for guard structure poles or ground rod placement will be backfilled with native soil or clean sand.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During and after construction.
Same as above.	APM-44	This APM is supplemented by MM BIO-1. This APM applies to the West of Bayshore parcel. PG&E, its contractors, and agents will allow CDFG and USFWS representatives to accompany them to the project site	CDFG and USFWS representatives to inspect construction activities.	Not applicable.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-45	<p>without advance notice, subject to landowner permission and reasonable safety restrictions as PG&E requests.</p> <p>This APM is supplemented by MM BIO-1 and BIO-4. This APM applies to the West of Bayshore parcel.</p> <p>Within sixty (60) days of completing construction on the West of Bayshore parcel, PG&E will provide the CDFG and the USFWS with a final, postconstruction compliance report. A knowledgeable, experienced biologist will prepare the report, which will include 1) construction dates; 2) verification that measures in the approved <i>Mitigation and Monitoring Plan</i> were fully implemented; 3) identification of any measures that were not fully implemented; 4) a description of project effects on San Francisco garter snake, San Francisco garter snake prey and habitat; and 5) other pertinent information.</p>	CDFG and USFWS to receive from PG&E a postconstruction compliance report within 60 days of construction completion.	CPUC, CDFG, and USFWS to receive and review report.	After construction.
Same as above.	APM-46	<p>This APM applies to the West of Bayshore parcel.</p> <p>Daily field monitoring forms will be maintained by the on-site biological monitors to document project implementation. Monitoring forms will describe the progress of the work, any difficulties encountered, observation of San Francisco garter snake, and any other</p>	CDFG and USFWS receive weekly submittals of the daily field monitoring forms.	<p>CPUC, CDFG, and USFWS to verify in field as needed;</p> <p>CPUC, CDFG, and USFWS to review daily reports.</p>	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		pertinent information regarding project implementation. These forms will be submitted weekly to the CDFG and USFWS for review.			
Same as above.	APM-47	<p>This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel.</p> <p>PG&E will arrange a preactivity site meeting in consultation with the CDFG to allow its representatives to review the terms of the approved <i>Mitigation and Monitoring Plan</i>. The meeting will include: PG&E; its contractors and agents; permitted biologists and biological monitors; and the CDFG. Representatives from the USFWS and the CPUC will be invited. It will be held no more than thirty (30) days before the start of construction on the West of Bayshore parcel.</p>	A preactivity site meeting with the CDFG is held no more than 30 days prior to construction.	Applicant-appointed biological monitor, and CDFG, USFWS and CPUC invited to attend meeting.	Prior to construction.
Same as above.	APM-48	<p>This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel.</p> <p>A postactivity site meeting will be held for PG&E, its contractors, the CDFG, and the USFWS within two weeks after project completion to assess the effectiveness of the terms of the approved <i>Mitigation and Monitoring Plan</i>.</p>	A postactivity site meeting with the CDFG and USFWS is held no more than two weeks after construction is complete.	Applicant -appointed biological monitor, CDFG, and USFWS to attend meeting.	After construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-49	This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel. To avoid incidental take of San Francisco garter snake resulting from loss or disturbance of habitat, all related construction materials for the project will be removed from the site in a manner consistent with the terms of the approved <i>Mitigation and Monitoring Plan</i> .	PG&E to remove construction materials.	PG&E-appointed biological monitor in field CDFG and USFWS to review daily reports.	During and after construction.
Same as above.	APM-50	This APM applies to the West of Bayshore parcel. A biologist or horticulturist will inspect the site within the West of Bayshore parcel and determine whether reseeding is needed. In uplands, areas of bare soil will be reseeded with a commercially available annual grass seed mix similar to that of existing species on the parcel.	If construction activities produce new areas of bare soil, these areas are reseeded and revegetated following construction.	Applicant-appointed Biologist	After construction.
Same as above.	APM-51	This APM applies to the West of Bayshore parcel. If necessary, weeds will be pulled, cultivated or sprayed after one full season of growth.	Weed control will be implemented if needed.	USFWS to receive verification from PG&E that weed-control program was implemented	After construction.
Same as above.	APM-52	This APM is superseded by MM BIO-7.			

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-53	This APM applies to the West of Bayshore parcel. Any dead or injured special-status species will be turned over to the CDFG, the USFWS, or their agents.	Any injured or dead San Francisco garter snake is turned over to the CDFG and USFWS.	CDFG or USFWS to receive dead or injured animal	During construction
Same as above.	APM-54	This APM applies to the West of Bayshore parcel. A written report detailing the date, time, location, and general circumstances under which a dead or injured San Francisco garter snake was found will be submitted to the USFWS no later than three business days after the incident.	The USFWS receives a written report regarding any injured or dead San Francisco garter snakes within three business days of an incident.	CPUC and USFWS to be notified upon discovery; CPUC, CDFG, and USFWS to review daily report	During construction.
Disturbance of the habitat of sensitive butterfly species in San Bruno Mountain (Towers 8/60 to Martin Substation).	APM-55	This APM applies to San Bruno Mountain. To minimize the potential for impacts to sensitive butterfly species, construction activities at San Bruno Mountain will be limited to the period between September 1, 2003 and February 28, 2004, subject to extensions approved by USFWS.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During construction.
Disturbance of habitat for sensitive species and injury or death to a threatened or endangered species.	APM-56	This APM is supplemented by MM BIO-13. This APM applies to San Bruno Mountain. All access in the project area will be restricted to the routes and seasonal timeframes identified above, subject to extensions approved by USFWS.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field	During construction

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Same as above.	APM-57	This APM applies to San Bruno Mountain. Helicopters will be used to transport in and out some crews and materials and to assist with the line reconductoring work unless precluded by terrain or safety issues. If helicopters cannot be used, crews will access towers using existing roads, and where access by truck is unavailable, only foot traffic will be allowed.	PG&E to implement measure as defined.	Applicant-appointed Biological monitor in field; CPUC to review daily reports and monitor periodically as needed.	During construction.
Same as above.	APM-58	This APM is supplemented by MM BIO-13. This APM applies to San Bruno Mountain. All access and construction vehicle parking will be restricted to existing roads. Necessary vehicles belonging to the biological monitors and construction supervisors will be parked at the nearest point on existing access roads.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC to review daily reports and monitor in the field periodically as needed.	During construction.
Same as above.	APM-59	This APM applies to San Bruno Mountain. All vehicles will be brought in clean and free of weeds. Vehicles will be thoroughly washed, including under the chassis, prior to entering San Bruno Mountain.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During construction.
Same as above.	APM-60	This APM is supplemented by MM BIO-2. This APM applies to the entire project site. A qualified biological monitor will train all project staff before the start of construction regarding habitat sensitivity, identification of species of concern, and required	PG&E to provide to CPUC documentation that all project personnel are trained on habitat sensitivity, species of concern, and required practices on San Bruno	CPUC to receive documentation from PG&E.	Prior to construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
		of species of concern, and required practices within the habitat area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will affix a small sticker to their hardhat and sign a form stating that they attended the training and understand all of the conservation and mitigation measures.	Mountain.		
Same as above.	APM-61	This APM is supplemented by MM BIO-1. This APM applies to the entire project site. A qualified biologist will monitor all construction activity. The monitor will have the authority, if the job site foreman or other PG&E authority on site deems it safe, to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. Because any work involving high-voltage transmission lines has implications for human safety, health, and property, the decision of the PG&E job foreman will take precedence. Note that it would be unsafe to stop the job during some activities, especially when the conductors are moving.	A qualified biological monitor is present during construction on San Bruno Mountain. The monitor stops or redirects activities if resources are at risk or if the activity is not in compliance with project permits.	Applicant-appointed biological monitor in field.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
APPLICANT PROPOSED MEASURES (APMs)					
Cultural Resources					
Discovery of unknown archaeological and historic resources.	APM-62	This APM applies to the entire project site. Prior to the initiation or construction or ground-disturbing activities, PG&E will train all construction personnel to understand the potential for exposing subsurface cultural resources and to recognize possible buried cultural resources. Training shall 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.	PG&E to conduct training and provide CPUC with documentation that all project personnel are trained on cultural resources.	CPUC to review documentation from PG&E.	Prior to construction.
Same as above.	APM-63	This APM is superseded by MM CR-1.			
Discovery of unknown paleontological resources.	APM-64	This APM applies to the entire project site. Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall receive environmental training. The training will include discussion of the possibility of buried paleontological resources and the procedure to follow if paleontological resources are encountered. If buried paleontological materials are discovered in the project area: <ul style="list-style-type: none"> work in the immediate area of the find will be halted, 	PG&E to conduct training and provide CPUC with documentation that all workers received training; PG&E to suspend activities and inform agencies and paleontologist as needed.	CPUC to receive documentation from PG&E.	During construction.

Table C-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
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APPLICANT PROPOSED MEASURES (APMs)

- an experienced paleontologist will be notified, and an experienced paleontologist will identify the find and make the necessary plans for treatment of the find.