

# **PG&E Contra Costa-Las Positas 230 kV Transmission Line Reconductoring Project**

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*Initial Study and  
Draft Mitigated Negative Declaration*

*December, 2008*

*Contra Costa County  
Community Development Department  
651 Pine Street, Fourth Floor, North Wing  
Martinez, CA 94553*



## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

Pacific Gas and Electric Company (PG&E) is proposing to replace transmission lines on (e.g. reconductor) the Contra Costa-Las Positas 230 Kilovolt (kV) Line and the Contra Costa-Lone Tree 230 kV Line as part of the Contra Costa-Las Positas 230 kV Transmission Line Reconductoring Project (project), and has applied to the East Contra Costa County Habitat Conservancy to be included in the East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan (East Contra Costa County HCP/NCCP). Both of the two existing lines originate at the Contra Costa Power Plant located in northern Contra Costa County and extend south to the Lone Tree Substation, which is also located in Contra Costa County. The Contra Costa-Las Positas 230 kV Line then continues south to the Las Positas Substation in Alameda County. The project includes work at approximately 131 existing towers along the line and at approximately ten temporary pull and tension sites (pull sites) interspersed along the length of the corridor.

The East Contra Costa County Habitat Conservancy is serving as the Lead Agency under the California Environmental Quality Act (CEQA) for this project. Before the habitat conservation plan (HCP) was approved by the California Department of Fish and Game and United States Fish and Wildlife Service in 2007, an Environmental Impact Report/Environmental Impact Statement was certified in compliance with the CEQA and the National Environmental Policy Act (California State Clearinghouse Number 2005092129; November 8, 2006). PG&E's project is consistent with the type of infrastructure project anticipated to be included in the HCP. This Initial Study and Draft Mitigated Negative Declaration (MND) reviews the project-specific impacts of PG&E's proposed project, concluding that all impacts will be less-than-significant with incorporation of the mitigation measures proposed.

### **PROJECT COMPONENTS**

The project consists of the following two major components:

- Modifying approximately 12 towers by installing cage-top extensions or converting towers to dead-end structures to maintain the necessary ground clearance for the new conductor as per the California Public Utilities Commission General Order 95
- Reconductoring 24 miles of the Contra Costa-Las Positas 230 kV Line and 5.6 miles of the Contra Costa-Lone Tree 230 kV Line

In addition, to accommodate the new capacity of the reconducted lines, upgrades at the associated substation terminal facilities may be necessary; however, this work will be conducted within existing fenced substation facilities.

### **IMPACT ANALYSIS**

This MND evaluates the potential for impacts from construction, operation, and maintenance of the project. Each section within this MND includes a completed checklist from the Governor's

Office of Planning and Research, CEQA Guidelines, Appendix G, which identifies the potential project impacts by significance level (i.e., no impact, less-than-significant impact, less-than-significant impact with mitigation, and potentially significant impact) for each resource area. As indicated in this MND, PG&E will construct, operate, and maintain the project with minimal impact to sensitive and valued human and environmental resources. PG&E will reduce potential temporary and permanent project impacts to the less-than-significant level through the implementation of specialized construction techniques, best management practices, and mitigation measures identified in this document. Mitigation measures have been proposed for the following resource areas for which potentially significant impacts have been identified in Table E-1:

**TABLE E-1**  
**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

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<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture Resources	<input checked="" type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology / Soils
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Hydrology / Water Quality	<input type="checkbox"/> Land Use / Planning
<input type="checkbox"/> Mineral Resources	<input checked="" type="checkbox"/> Noise	<input type="checkbox"/> Population / Housing
<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation/Traffic
<input type="checkbox"/> Utilities / Service Systems	<input type="checkbox"/> Mandatory Findings of Significance	

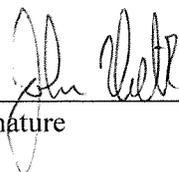
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As stated above, with the implementation of the mitigation measures, all impacts associated with this project are anticipated to be less than significant.

**DETERMINATION: (To be completed by Lead Agency)**

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

  
 \_\_\_\_\_  
 Signature

12-23-08  
 \_\_\_\_\_  
 Date

John Kopchik  
 \_\_\_\_\_  
 Printed Name



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## **PROJECT DESCRIPTION**

### **INTRODUCTION**

Pacific Gas and Electric Company (PG&E) owns and operates two 230-kilovolt (kV) electric transmission lines—the Contra Costa-Las Positas 230 kV Line, which is 24 miles long, and the Contra Costa-Lone Tree 230 kV Line, which is 5.6 miles long—located in Alameda and Contra Costa counties. These transmission lines consist of two circuits located on the same towers. The lines comprise a large portion of the critical electric transmission supply lines for the Tri-Valley area, which includes the cities of Pleasanton, Dublin, San Ramon, and Livermore. In addition, the Contra Costa-Lone Tree 230 kV Line, which provides power to the new Lone Tree Substation, is critical for providing electric service to customers in the cities of Antioch, Brentwood, Oakley, and portions of eastern Contra Costa County. These transmission lines and the surrounding project area are depicted in Figure 1: Project Location Map.

As the number of electric customers continues to increase in both Contra Costa and Alameda counties, more generation is needed. New generation from the Gateway Generating Station, located within the Contra Costa Power Plant, is currently under construction to serve existing and future electric customers in the area. PG&E's electric transmission planning analysis<sup>1</sup> indicates that the addition of the Gateway Generating Station's power in June 2009 could result in potential overloads on these two critical 230-kV lines. In order to eliminate the potential normal and emergency overloads predicted for the near future, PG&E proposes to reconnector the Contra Costa-Las Positas 230 kV Line and the Contra Costa-Lone Tree 230 kV Line as part of the Contra Costa-Las Positas 230 kV Transmission Line Reconductoring Project (project). This reconductoring project will increase both electric reliability and capacity for existing and future electric customers within Alameda and Contra Costa counties.

### **PROJECT LOCATION AND REGIONAL CONTEXT**

The Contra Costa-Las Positas 230 kV Line and the Contra Costa-Lone Tree 230 kV Line both originate at the Contra Costa Power Plant located in northern Contra Costa County and extend south approximately 5.6 miles to the Lone Tree Substation, also located in Contra Costa County. The Contra Costa-Las Positas 230 kV Line then continues south for approximately 18.4 miles to the Las Positas Substation in Alameda County. The project includes work at approximately 131 existing towers along the line and at approximately ten temporary pull sites interspersed along the length of the corridor. Where possible, pull sites have been located within the existing transmission line corridor. Figure 1: Project Location Map depicts the transmission line and substation locations.

The Contra Costa Power Plant is located in an unincorporated area of Contra Costa County just north of the City of Antioch and west of State Route (SR-) 160. Both transmission lines originate from this point and angle southwest for approximately 2 miles across rural properties and grassland, crossing over SR-4. The lines then turn southeast for approximately 4 miles, passing

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<sup>1</sup> PG&E uses planning standards established by the California Independent System Operator, the Western Electricity Coordinating Council, and the North American Electric Reliability Council.

through the City of Antioch towards the Lone Tree Substation. The Contra Costa-Las Positas 230 kV Line continues southeast from this point for approximately 10 miles, passing through the City of Brentwood, the John Marsh/Cowell Ranch Property of the California Department of Parks and Recreation, and entering the Los Vaqueros Watershed. The transmission line then angles to the southwest for approximately 1 mile near wind turbine facilities within the Los Vaqueros Watershed. The line then turns due south and continues for approximately 2 more miles through the Los Vaqueros Watershed and entering Alameda County. The line then traverses approximately 2 miles across private rural property before reaching the City of Livermore, where it continues for approximately 2 more miles until reaching the Las Positas Substation.

## **PROJECT PURPOSE AND NEED**

### **1.0.1 Background**

The Contra Costa-Las Positas 230 kV Line and the Contra Costa-Cayetano 230 kV Line are critical supply lines for the Tri-Valley area, which includes the cities of Pleasanton, Dublin, San Ramon, and Livermore. In addition, the Contra Costa-Lone Tree 230 kV Line also serves the cities of Antioch, Brentwood, Oakley, and portions of eastern Contra Costa County. These lines are built on common towers from Contra Costa County to the City of Livermore. The Lone Tree Substation, a new distribution substation that became operational in 2008, is looped into the Contra Costa-Cayetano 230 kV Line, creating the Contra Costa-Lone Tree and Lone Tree-Cayetano 230 kV lines. The construction of the Lone Tree Substation was needed due to the economic growth, development, and population increase experienced in eastern Contra Costa County.

### **1.0.2 Existing Supply**

The Contra Costa-Las Positas 230 kV Line and the Contra Costa-Lone Tree 230 kV Line are currently comprised of three different types of conductors—954 aluminum conductor steel reinforced (ACSR), 1113 all aluminum conductor, and 795 ACSR. In total, over 22 miles of the conductor is 795 ACSR, which is considered to be a limiting factor in energy capacity on these lines. The 795 ACSR conductor has a normal rating of 886 amperes (amps) (353 megavolt amps [MVA]) and an emergency rating of 1,006 amps (400 MVA). Transmission planning analysis has determined that the addition of the new 530-megawatt Gateway Generating Station, together with new wind generation facilities in Solano County, will result in normal and emergency overloads on the Contra Costa-Las Positas 230 kV Line and the Contra Costa-Lone Tree 230 kV Line. The Gateway Generating Station is expected to be online in spring 2009.

**Figure 1: Project Location Map**



### 1.0.3 Demand Forecast and Solutions

Planning analysis shows that the Contra Costa-Las Positas 230 kV Line and the Contra Costa-Lone Tree 230 kV Line could experience normal overloads in 2009 if the Gateway Generating Station, Contra Costa Units 6 and 7, and wind projects located in Solano County are all generating high levels of output. In addition, an overlapping outage of the Contra Costa-Lone Tree 230 kV Line and Metcalf Energy Center<sup>2</sup> with high generation levels into the Contra Costa 230 kV Switchyard could cause the Contra Costa-Las Positas 230 kV line to exceed its emergency rating by approximately eight percent.

In order to eliminate the potential normal and emergency overloads caused by the addition of the Gateway Generating Station, both the Contra Costa-Las Positas 230 kV Line and the Contra Costa-Lone Tree 230 kV Line will need to be reconducted with a conductor that has an emergency rating of at least 1,700 amps. PG&E proposes to reductor these lines with 954 aluminum conductor steel-supported (ACSS) 54/7, which has a normal and emergency rating of 1,714 amps (683 MVA), to eliminate the potential for normal and emergency overloads on these lines.

## PROJECT COMPONENTS

The Contra Costa-Las Positas 230 kV Transmission Line Reconducting Project will consist of the following two major components:

- Modifying approximately 12 towers by installing cage-top extensions or converting towers to dead-end structures to maintain the necessary ground clearance for the new conductor as per the California Public Utilities Commission General Order 95
- Reconducting 24 miles of the Contra Costa-Las Positas 230 kV Line and 5.6 miles of the Contra Costa-Lone Tree 230 kV Line with 954 ACSS 54/7, which has an emergency rating of 1,714 amps

In addition, to accommodate the new capacity of the reconducted lines, upgrades at the associated substation terminal facilities may be necessary; however, this work will be conducted within existing fenced substation facilities.

### 1.0.4 Tower Modifications

Modifying approximately 12 towers, which have an average existing height of 105 feet, by installing cage-top extensions or converting towers to dead-end structures will result in raising the existing towers vertically approximately 15 feet. These modifications will be conducted through the use of helicopters and cranes. The cage-top extensions will be installed on existing facilities owned by PG&E or utilizing areas that are identified in this document. Any additional temporary construction areas will be placed in areas where there are no environmental concerns.

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<sup>2</sup> The Metcalf Energy Center is a 600-megawatt power generation facility located in southern San Jose built by Calpine Corporation.

### 1.0.5 Reconductoring

Reconductoring will involve the replacement of the existing 795 ACSR conductor with a 954 ACSS, which will increase the ampacity to 1,714 amps. Ten pull and tension locations will be necessary for the reconductoring operation. The reconductoring work will also involve the replacement of insulators and the installation of crossing structures<sup>3</sup> to protect roadways and existing utilities crossed by the transmission lines.

## GENERAL CONSTRUCTION METHODS

This section includes an overview of the typical methods used in modifying towers and reconductoring existing lines. Typical equipment necessary for these activities is listed in Table 1: Typical Major Construction Equipment.

### 1.0.6 Project Access

The project area will be accessed by helicopter wherever feasible. Trucks and all-terrain vehicles (a quad runner or Gator) will be used, along with foot access, to enter the existing transmission corridor. PG&E will access towers using the minimum amount of equipment necessary.

The project area will be accessed primarily by existing roads. There are approximately 40 miles of existing access roads, which vary in width from 10 to 12 feet. These access roads are identified on the maps in Attachment A: Detailed Project Map. The majority of these roads are currently used by PG&E during maintenance and operation activities and thus are in good condition. No grading or blading of these roads is anticipated.

### 1.0.7 Tower Modifications

Tower modifications will be necessary on approximately 12 existing towers to accommodate the reconducted lines. Tower modifications will include either placing approximately 15-foot-tall cage-top extensions on the top of the existing towers to raise the towers vertically, or converting existing towers to dead-end structures, replacing the existing peak with a taller peak. Preliminary engineering indicates that the following towers will be modified: 4/29, 8/48, 19/102, 19/103, 21/113, 21/117, 22/119, 22/121, 22/123, 23/125, 23/126, and 23/130.

#### Cage-Top Extensions

For cage-top extension installation, PG&E will first prepare the towers. PG&E will access the towers with a pickup truck, an all-terrain vehicle, a helicopter, or on foot, and will install the necessary braces and additional plates. PG&E will then prepare the cage-top extensions for the towers located near sensitive habitat at one of the temporary construction areas. If a tower is not located in or near sensitive habitat, a tower laydown site may be located adjacent to the tower. This area will be used to assemble and erect the steel cage-top extensions required for that tower. Preparing the cage-top extensions will take approximately 1 day per tower.

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<sup>3</sup> Crossing structures consist of wood poles with netting strung between them. The structures are placed over overhead utilities and roadways at crossings to protect them when pulling the cable.

**Table 1: Typical Major Construction Equipment**

<b>Equipment</b>	<b>Use</b>
3/4-ton pickup trucks	Transport construction personnel
All-terrain vehicles	Transport construction personnel
5-ton line trucks	Haul materials and conductor reels
2-ton flatbed trucks	Haul materials
Flatbed boom trucks	Haul and unload materials
Small mobile cranes (less than 12 tons)	Load and unload materials
3-reel pullers	Pull conductor
Dual bullwheel tensioners	Pull conductor
Tensioners	Pull conductor
Wire reel trailers	Haul conductor
Condor boom trucks	Access towers more than 100 feet high
70-ton cranes	Set cage-top extensions in non-sensitive areas
Air compressors	Operate air tools
Portable generators	Operate power tools
Hydraulic presses	Press together the conductor ends at dead-end structures
Aerial lift trucks	Access insulators in non-sensitive areas
Rubber-tire backhoes	Install crossing structures in sensitive areas
Tracked excavators	Install crossing structures in sensitive areas
Helicopters	Transport crews and materials

After the towers have been prepared, the cage-top extensions will be delivered to the top of the towers and bolted on. A Huey 204 or Super 206 helicopter may be used to facilitate tower modifications, as well as to bring in all of the necessary tools and equipment when the use of a crane is not possible due to adjacent land uses, uneven terrain, or sensitive environmental areas. If a crane is used, existing access roads will be used to deliver the materials and a 50-foot-wide by 50-foot-long crane work area will be established at the base of the towers.

After the cage-top extension is attached to the tower, the existing bottom set of cross arms will be removed from the tower and the existing conductor reattached to the tower. No work is anticipated on any tower foundations or footings.

### **Dead-End Conversion**

PG&E will be converting some of the existing towers into dead-end structures. This work will be accomplished through the use of helicopters that will fly between helicopter landing zones and the towers to transport the crew and to deliver the appropriate materials. At most dead-end structure locations, the existing approximately 4-foot-tall peak on the towers will be replaced with a new peak that is approximately 11 feet tall.

### **1.0.8 Reconductoring**

The following steps describe the construction techniques that are utilized when reconductoring. PG&E will coordinate with the California Independent System Operator (CAISO) to obtain all necessary clearances prior to beginning reconductoring work. This action will ensure that the existing line can be taken out of service and that power is redistributed to service centers and customers, so that work can be safely conducted on the line.

#### **Step 1: Grounding**

Temporary personal protection grounds will be installed near the base of each structure. Ground rods (i.e., copper rods that are 5/8-inch in diameter) will be driven deep enough to reach firm ground, and approximately 1 foot of the rod will protrude above ground level during construction. Grounding equipment will be connected to these ground rods during construction hours and will be disconnected when the line is restored to service. The ground rods will remain in the ground throughout the construction period and will be removed when project activities have been completed. Ground rods will also be used for the reel puller and bullwheel tensioner trucks and any equipment near an energized conductor.

#### **Step 2: Crossing Structure Installation**

Crossing structures, constructed of wood poles and in some instances netting, will be placed at road and railroad crossings and at other locations where the new conductor could come into contact with other existing transmission lines, distribution lines, communication lines, or vehicular and/or pedestrian traffic, as a protection measure in the unlikely event of the line falling during reconductoring operations. If nets are required for crossing protection, steel cable will be installed to hold them taut. The locations of these crossing structures have been identified in Attachment A: Detailed Project Map.

A line truck will be used to auger and set the required number of wood poles on each side of a crossing (typically located in disturbed areas). No concrete foundations are required to set the crossing structures, and no grading or other site work is anticipated. The total temporary disturbance associated with the installation of each crossing structure is approximately 2 feet in diameter.

Crossing structures will be installed from paved roads whenever possible. Where this is not possible, crossing structure sites will be accessed from existing dirt roads or pre-established overland access and installed with minimal soil disturbance. In biologically sensitive areas, a rubber-tire backhoe or a tracked excavator may be used to minimize impacts to these areas. In addition, PG&E may use staged equipment (i.e., bucket trucks or large flowerpot-like buckets) to function as crossing structures, thus eliminating the need for excavation.

At the completion of the reconductoring process, the crossing structure poles will be removed. PG&E will then backfill and compact the holes, and the disturbed areas will be restored to near preconstruction conditions, including reseeding them if necessary. As an alternative to installing crossing structures, PG&E may also use flaggers to hold traffic for brief periods of time while the overhead line is installed across roads.

### **Step 3: Unclipping and Traveler Installation**

Conductor replacement begins with the installation of travelers on the bottom of each of the insulators, using helicopters in biologically sensitive areas or aerial lift trucks (bucket trucks) in disturbed areas. If access by ground is necessary in biologically sensitive areas, travelers may be installed through the use of tracked equipment. The travelers allow the conductor to be pulled through each structure until the entire line is ready to be pulled up to the final tension position.

During the pull, the conductor forces at the towers located at each end of the pull sections<sup>4</sup> will be transferred to trucks, tensioners, and pullers. The existing conductor will be placed in a hoist and attached at one end to the steel tower to support the down-strain load, removing the load on the existing insulator conductors. The existing insulators will be removed, and new insulators will be installed with conductor travelers located on the ends. Once the travelers are in place, the hoist will lower the existing conductor onto the travelers. Next, the existing conductor will be unclipped from the existing insulators and placed on the travelers to be pulled out and removed from the structures within a pull section.

The crew, as well as travelers, insulators, and the tools required to install them will be brought in by helicopter to most tower sites. If access by ground is necessary in sensitive areas, PG&E will approach the towers on foot; otherwise, all-terrain vehicles or pickup trucks may be used to access the base of the towers.

### **Step 4: Pulling and Tensioning**

Once all of the travelers have been installed in a given pull section of the transmission lines, a cable from the puller truck will be attached to the existing conductor at one side of the pull

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<sup>4</sup> A pull section is a length of circuit that requires reconductoring. Pull section length is dictated by the location of the dead-end structures (conductor end points).

section, and the new conductor will be attached to the existing conductor on the opposite end. As the puller truck removes the old conductor, the new conductor will be pulled into place. The conductor will be pulled through each structure under a controlled tension to keep it elevated and away from obstacles, thereby preventing damage to the line and protecting the public.

Once the new conductor is pulled into place and the sags between structures are adjusted to a pre-calculated level, it will be removed from the rollers and clipped onto the end of each insulator. The rollers will then be removed, and vibration dampers and other accessories will be installed. Between the Contra Costa Power Plant and the Lone Tree Substation, there are two circuits to be reconducted, thus, the process will occur twice in each pull section. Between the Lone Tree Substation and the Las Positas Substation, the process will occur only once because only one circuit of the Contra Costa-Las Positas 230 kV Line will be reconducted.

At dead-end structures (conductor end points) located in disturbed areas, PG&E will use a boom truck to support the down-strain load and enable the removal of the travelers, as well as to provide the crew access to the structures to attach the dead-end material. However, in situations where dead-end structures are located in biologically sensitive areas or are difficult to access, all work will be done by helicopter.

### **1.0.9 Restoration**

In accordance with the State Water Resources Control Board National Pollutant Discharge Elimination System-Construction Stormwater Permit, PG&E will implement the best management practices (BMPs) included in the Stormwater Pollution Prevention Plan (SWPPP) developed for this project. These BMPs, including ERTEC environment fencing, straw wattles, silt fences, and the restoration of all disturbed areas, will be utilized to prevent sediment and other materials from being transported from the project area into adjacent waterbodies. All areas disturbed during project activities, including pull sites and crossing structure locations, will be restored to near preconstruction conditions and revegetated as needed. Appropriate BMPs will be installed and maintained during and after construction at all disturbed sites. All restored sites will be monitored for at least 1 year after the completion of construction to ensure successful revegetation.

## **TEMPORARY CONSTRUCTION AREAS**

### **1.0.10 Pull Sites**

Approximately ten pull sites have been identified and have been identified in Attachment A: Detailed Project Map. Two wood poles will be installed within each pull and tension location to accommodate the reconducting process.

The average temporary disturbance for each pull site will be approximately 2 acres. Pull sites will be reasonably flat areas that are in line with the conductor. In order to minimize impacts to biologically sensitive resources, PG&E will not grade these pull sites. However, to assist with equipment stability, PG&E will place a layer of geotechnical fabric covered with crushed rock at each pull site location. PG&E will also place geotechnical fabric and rock along the dirt access roads that lead to the pull sites. In addition to assisting with equipment stability, this process will also minimize rutting of the soil within the pull sites and related access roads. The geotechnical

fabric and crushed rock will be removed after the completion of project activities. Pull Sites 1, 6A/B, and 11 will not be rocked because they are located within areas that are currently graveled or paved.

Water baffles and other BMPs will be installed to minimize erosion during work at the pull and tension sites, if necessary. After the completion of the project, the pull sites will be returned to near preconstruction conditions and reseeded as necessary.

The equipment at the pull sites, when located between the Contra Costa Power Plant and the Lone Tree Substation, will be used for four pulls—two in one direction and two in the other. The equipment at the pull sites, when located between the Lone Tree Substation and the Las Positas Substation, will be used for two pulls—one in each direction. Several pieces of equipment will be used at the pull sites, including tensioners (rope trucks) to feed out the new conductor and to adjust tension, conductor reels to receive the old conductor as it is removed, and reels of new conductor. The reels are typically placed on trailers pulled by semi-trucks, which will also be parked on site. Cranes will be on site to move the conductor reels on and off of the semi-trucks.

### **1.0.11 Other Temporary Construction Areas**

Other temporary construction areas will include helicopter landing zones and staging areas. Where feasible, helicopter landing zones will be located within the pull sites described above. One helicopter landing zone, Landing Zone 2, is not located within a pull site and has been identified in Attachment A: Detailed Project Map. PG&E will use its current facilities, including the Lone Tree Substation and the Las Positas Substation, to assemble and erect the steel cage-top extensions and to stage materials. Four small crane work areas located adjacent to the transmission line corridor will be used for the installation of cage-top extensions.

A temporary shoofly will be located just outside of the existing Lone Tree Substation in the city of Antioch. The shoofly will be installed for the purpose of maintaining looped service to the Lone Tree, Cayetano, North Dublin, Vineyard, and Las Positas substations. Without the shoofly, the loss of a single line would result in an outage to customers. The worst-case scenario would involve the loss of the Vineyard-Newark 230 kV Line. This would result in an outage to all customers served from Lone Tree, Cayetano, North Dublin, and Vineyard substations. The installation of a shoofly protects against such an outage. The shoofly will consist of approximately seven wooden poles installed in a similar manner as the installation of the crossing structures and will be removed at the completion of the project.

## **TEMPORARY IMPACTS**

The project will result in approximately 78 acres of new temporary disturbance resulting from the temporary use of pull sites, landing zones, crane work areas, overland access roads, dirt roads and crossing structures. All impacts to non-urban land cover types—approximately 22 acres—will be located within the East Contra Costa County Habitat Conservation Plan Area (HCP Area). Approximately 44 acres of temporary impacts to urban land cover types will be located within the HCP area and are exempt from the HCP, and approximately 12 acres of temporary impacts to disturbed areas will be located in Alameda County. These impacts have been broken down by temporary construction areas in Table 2: Project Disturbance.

PG&E will limit vegetation removal activities to the minimum amount necessary. In order to set up equipment at Pull Site 7, up to 54 valley oak saplings will need to be relocated. These saplings are mitigation oaks that the Los Vaqueros Watershed planted within PG&E's existing right-of-way (ROW). PG&E will work closely with Los Vaqueros Watershed personnel to ensure that these saplings are replanted in an appropriate location outside of the transmission line ROW. At Pull Site 2A, up to five white ash trees will need to be pruned to remove limbs overhanging the pull site. Along the access path between Tower 3/19 and Tower 4/31, trimming of tree and brush species—acacia trees, cottonwoods, willows, African sumac, and other brush species—will likely be needed to accommodate crew vehicles.

Although all project impacts will be temporary, PG&E is planning to mitigate for these temporary impacts using the permanent impact fee amounts for the East Contra Costa County HCP/NCCP. This project involves approximately 78 acres of temporary impacts, approximately 22 of which will be located in the HCP Area, are within non-urban land cover types and will be subject to fees under the East Contra Costa County HCP/NCCP. Impacts in areas designated as urban or turf land cover types are exempt from fees and were therefore not included in fee calculations. Areas within the City of Antioch, which are not designated as a fee zone in the East Contra Costa County HCP/NCCP, were calculated as Fee Zone 2 in the Sand Creek and Lone Tree areas, and as the average of Fee Zone 1 and Fee Zone 2 in areas that were in the middle of the City of Antioch but not classified as urban or turf land cover. PG&E will be compensating for approximately 22 acres of temporary impacts by paying fees of approximately \$495,700.

## **PERSONNEL**

Two main construction teams—the tower crew and the line crew—will work to reconnector the transmission lines. Generally, one crew of eight workers and one helicopter crew of two personnel will work on the tower extensions. The average line reconnectoring workforce will consist of two crews of eight people and one helicopter crew. Additionally, Biological Monitors will be working with the crews to monitor adherence to the avoidance and protection measures. It has been estimated that up to 30 people are anticipated to be working on this project at any given time.

After the completion of construction, the line will be operated and maintained by existing PG&E employees. No additional staff will be necessary to maintain this line.

## **CONSTRUCTION SCHEDULE**

Construction is expected to take approximately 3.5 months and is planned to occur from mid-March 2009 to the end of June 2009. Construction hours will generally be between 7:00 a.m. and 7:00 p.m., 7 days per week, as permitted by local ordinances.

**Table 2: Project Disturbance**

Construction Activity	Approximate Impact Acreage				
	HCP Area				Alameda County
	Fee Zone 1	Fee Zone 2	Fee Zone 4	HCP-Exempt Areas <sup>5</sup>	Disturbed Areas <sup>6</sup>
Pull Site/Landing Zone Use	0.87	8.96	4.63	4.75	2.06
Crossing Structure Installation	0	0	0	0	0
Overland Access Route Use	0.16	5.46	0.94	0.16	0.15
Impacted Dirt Road <sup>7</sup> Use	0.04	0.92	0.31	0	0
Other Dirt Road Use	0	0	0	19.18	1.83
Gravel and Paved Access Road Use	0	0	0	19.91	7.58
Crane Work Area Use	0	0	0.06	0	0.17
<b>Total</b>	<b>1.07</b>	<b>15.35</b>	<b>5.94</b>	<b>44.00</b>	<b>11.80</b>

<sup>5</sup> HCP-exempt areas include urban, turf, and aqueduct land cover types.

<sup>6</sup> Disturbed areas include areas that were surveyed and found to be disturbed and to have no potential for sensitive-status species.

<sup>7</sup> Impacted Dirt Roads include dirt roads that require rockings and portions of dirt roads from which crossing structures will be installed.



## IMPACT ASSESSMENT

### INTRODUCTION

This section of the Mitigated Negative Declaration (MND) is structured as an expansion of the California Environmental Quality Act (CEQA) Checklist. In examining the potential impacts, a two-step evaluation was performed. The first step identified the change in the environment that could occur in each resource area as a result of the project. The second step determined whether each identified impact was significant. Each impact was determined to have one of the following levels of impact:

- Potentially Significant Impact – Impact that needs further review to determine significance level (i.e., an Environmental Impact Report [EIR])
- Less-than-Significant Impact with Mitigation – Impact that is not considered significant with the implementation of the mitigation measures
- Less-than-Significant Impact – Impact that is not considered significant
- No Impact – No adverse impact would result from the proposed project

For resource areas in which no impact was identified or for which impacts are less than significant, only an impact discussion is provided for each of its checklist items. For resource areas in which impacts that are less than significant with mitigation measures and potentially significant were identified, the discussion is divided into the following sections:

- Existing Conditions
- Impact Discussion

A section titled Mitigation Measures has been included for resource areas where potentially significant impacts have been identified. This section identifies measures that will reduce potentially significant impacts to a less-than-significant level. In addition, each resource area contains a references section that documents the supporting information.

### METHODOLOGY

The analysis of potential impacts to the resource areas is based on a review of various documents, including aerial photographs of the project area, county and city general plans and zoning ordinances, and official city and county websites. The review also included United States (U.S.) Geological Survey (USGS) 7.5-minute series quadrangle maps, geographic information system (GIS) mapping data, and Thomas Brothers maps covering the project area. Land use and agricultural information was gathered from the California Farmland Mapping and Monitoring Program from the California Department of Conservation. Personal communication with local agency representatives confirmed existing land uses and jurisdictions. Field visits were also conducted to obtain information regarding existing land uses and visual resources in the project

area. References used for the resource areas analyzed in this document are located at the end of each respective resource section.

Preliminary investigations to obtain information on existing biological resources, cultural resources, and paleontological resources in the study area included literature and database searches and site visits. Sources of information used to prepare the Biological Resources section included the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California and the California Natural Diversity Database (CNDDDB) maintained by the California Department of Fish and Game (CDFG). CNDDDB records were searched within a 1-mile radius of the transmission lines. This search included sections of the following USGS 1:24,000 quadrangle maps: Antioch North, Antioch South, Jersey Island, Brentwood, Tassajara, Byron Hot Springs, Livermore, and Altamont. In addition, rare plant surveys were conducted from September 22 through September 26, 2008, and general reconnaissance surveys for animal species potentially occurring in the project area were conducted from September 29 through October 3, 2008.

To prepare the Cultural Resources section of the MND, a records search and historic map research was conducted at the Northwest Information Center of the California Historic Resource Inventory System at Sonoma State University. A field survey of the project site locations was also completed by archaeologists in the fall of 2008. To determine paleontological sensitivity of the project area, a paleontological investigation of the proposed project was conducted in the fall of 2008.

## AESTHETICS

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 1.0.12 Impact Discussion

#### Question 2.2a – Would the project have a substantial adverse effect on a scenic vista?

##### *Less-Than-Significant Impact*

The project site lies in northern Contra Costa County near the juncture of three major geographic regions—the San Francisco Bay Area, the Delta, and the Central Valley. The project area is characterized by steep hillsides, rolling hills, ridgelines, grassland, riparian corridors, and valleys. The area's hillsides and ridgelines, which reach elevations of up to 1,000 feet, are recognizable landscape features in the area. Many of the ridgelines and hills, as well as residential areas, provide scenic vistas of the project area.

The project area is characterized by a mix of oak savannah, oak woodland, and grassland, as well as urban areas. During the winter and spring months, the hillsides are predominantly green and display scattered seasonal wild flowers. Beginning in late spring through the fall, the hills turn gold and brown. Approximately 35 percent of the project crosses through areas that are more densely developed with residential and commercial land use types.

Construction-related visual impacts will result from the presence of equipment, materials, and work crews along the transmission line. These impacts will affect public vistas from some locations and would be most noticeable to local residents and recreationists in the area. While construction of the project will be visible to the public from several locations, including roadways and other public areas, work within public viewsheds will be dispersed along the line, temporary, and short-term, and will not affect the overall views in the project area. As a result, impacts will be less than significant.

As part of the aesthetic impact evaluation of the project, visual simulations were produced using computer-modeling and rendering techniques. Existing views and computer-generated visual simulations that portray the location, scale, and appearance of the proposed taller transmission towers are presented in Attachment B: Visual Simulations. The locations of simulation viewpoints are shown on the map included in Attachment B: Visual Simulations. As demonstrated by the visual simulations in Attachment B: Visual Simulations, the increase in the height and other modifications to the transmission towers will not be readily noticeable to most viewers, given the height of the existing towers. After construction has been completed, the project will not obstruct or substantially affect a scenic vista because the visual change associated with the minor modifications to the existing transmission towers will not substantially alter views of the landscape setting that are currently experienced by the public. As a result, impacts will be less than significant.

**Question 2.2b – Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

***Less-Than-Significant Impact***

The Contra Costa General Plan indicates that a stretch of highway extending from Highway 160 through the State Highway 4 Bypass and south on Vasco Road is a Scenic Highway/Expressway. The Contra-Costa-Las Positas Line crosses Vasco Road between Towers 19/101 and 19/102 and then crosses again at three locations between Towers 19/104 and 19/106. According to the Contra Costa General Plan, Deer Valley Road and Marsh Creek Road are also designated as scenic routes. The transmission line parallels Deer Valley Road for approximately 10 miles. Located approximately 0.1 mile from Deer Valley Road, Tower 2/14 is the closest tower to this scenic route.

Highway 24 and Highway 680 are both state-designated scenic highways within Contra Costa County; however, the transmission lines are located at least 15 miles from both of these highways. The transmission lines cross Highway 4, which is considered to be an eligible scenic highway, between Towers 1/13 and 2/14. Highway 580 is also considered to be an eligible scenic highway within Alameda County. The transmission line crosses Highway 580 between Tower 23/128 and 23/129.

Construction activities may be visible from some of the designated and eligible scenic roadways within the project area. Construction will be visible to motorists traveling along these routes; however, given the brief nature of the views at highway speeds and the temporary, dispersed nature of the construction activities, impacts are expected to be less than significant.

After construction, the permanent impacts of the project will be minimal and occur within an existing PG&E corridor to existing structures. As demonstrated by the visual simulations in Attachment B: Visual Simulations, the changes will not be readily noticeable and will not affect the visual character or quality of motorists' views from roadways crossed and adjacent to the project. As a result, impacts will be less than significant.

**Question 2.2c – Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

***Less-Than-Significant Impact***

As previously described, construction-related visual impacts will result from the presence of equipment, materials, and work crews along the lines. These construction-related visual effects are considered to be less than significant because the impacts will be temporary, short-term, limited to a small number of modified towers (approximately 12 towers in total), and dispersed along the 24-mile-long transmission line.

The height of 12 modified towers will be raised by approximately 15 feet through the installation of cage-top extensions or conversion to dead-end structure types. For the cage-top extensions, the existing bottom set of cross arms will be removed from the tower once the extensions have been attached, leaving the modified tower with the same number of cross arms as the existing towers. The dead-end conversions will result in an addition to the top of the towers and reconfiguration of the insulators and conductors, changing their appearance to some degree, but maintaining the same number of cross arms.

The reconductoring work will also involve the replacement of insulators. The appearance of the replacement conductors and insulators will not be noticeably different than the existing components.

As demonstrated by the visual simulations in Attachment B: Visual Simulations, the project will change the appearance of approximately 12 of the existing transmission towers. A comparison between the existing views and visual simulations demonstrate that the visual level of change associated with the taller towers is minor. The project's effect on views from nearby vantage points will be minimal. In terms of the overall view, the changes will not substantially alter the visual character or quality of the existing landscape as seen from residential or other public areas. In addition, the existing overhead lines will be reconducted. Due to the similarity between the existing and new conductors' (and insulators') physical characteristics, this change will not be apparent to the public. As a result, impacts will be less than significant.

After tower modifications and the reconductoring of the transmission lines, operation and maintenance activities for the transmission lines and the substations will continue in the same manner as they did prior to this project. Operation and maintenance activities will result in few, if any, visual impacts, and the project will create no new impacts to the visual character and quality of the project area.

**Question 2.2d – Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?**

***Less-Than-Significant Impact***

Construction activities will occur mainly during daylight hours with some limited activity for crossing structure installation conducted during nighttime hours. In addition, unexpected emergency repairs may also occur during nighttime hours. Lighting at these locations will be temporary, short-term, and limited to a small area. As a result, impacts will be less than significant. Beyond minor glare from some pieces of equipment, which will be similar to the

existing surroundings and other vehicles on local roads, there will be no new sources of glare associated with project construction. Because no new lighting is proposed along the line or within the substations and the project will utilize dulled (non-reflective) finish cage extensions, the project will not create new sources of substantial light or glare. Therefore, there will be no adverse effects to day or nighttime views in the area once the project has been constructed.

### **1.0.13 References**

Alameda County, California. Alameda County General Plan. Online.

<http://www.acgov.org/cda/planning/plans.htm>. Site visited December 2008.

Bonekemper, Jeff. Alameda County, California. Planner. Personal communication with K. Vincent, Insignia Environmental. December 08, 2008.

California Department of Transportation. Scenic Highways. Online.

[http://www.dot.ca.gov/hq/LandArch/scenic\\_highways/](http://www.dot.ca.gov/hq/LandArch/scenic_highways/). Site visited December, 2008

Contra Costa County, California. Contra Costa County General Plan. Online.

<http://www.co.contra-costa.ca.us/depart/cd/current/advance/GeneralPlan/CCCGeneralPlan.pdf>. Site visited December 2008.

Shimano, Rich. Contra Costa County, California. Road Maintenance Department. Personal communication with K. Vincent, Insignia Environmental. December 08, 2008.

## AGRICULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency) to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.14 Impact Discussion

**Question 2.3a – Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency) to non-agricultural use?**

#### *Less-Than-Significant Impact*

A summary of all specially designated farmland and Williamson Act contract parcels that are crossed by the project has been included in Table 3: Designated Farmland and Williamson Act Land Crossed. The transmission lines span land zoned for agricultural production, as well as parcels that are designated as Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance. All tower modifications will take place within PG&E's existing transmission line corridor. Some construction activities associated with the reconductoring process, such as the pulling and tensioning of the conductor at the pull sites, may occur outside of the existing transmission line corridor. The transmission lines and associated work areas will be accessed by existing access roads and helicopters, where necessary. The average temporary disturbance at each of these pull sites will be approximately 2 acres and the temporary disturbance at Landing Zone 2 will be 0.9 acre. Pull sites 4/5, 7, 9A, 9B, and Landing Zone 2 are located in areas designated Farmland of Local Importance, and will have a total temporary disturbance area of approximately 6.5 acres. PG&E will lay down crushed rock within all of these pull sites and Landing Zone 2 in order to produce stable areas for the equipment. Geotechnical fabric will be placed over the topsoil for protection and rock will be spread over the fabric. Once construction has been completed, the rock and fabric will be removed. Because the

area of impacted farmland represents a small percentage of the total amount of similar farmland in the area, the soil will be protected by the fabric, and the impacted farmland will only be temporarily affected, impacts will be less than significant.

**Table 3: Designated Farmland and Williamson Act Land Crossed**

Approximate Tower Span		Designation	County
Begin	End		
0/2	0/3	Unique Farmland	Contra Costa
0/3	0/5	Farmland of Statewide Importance	Contra Costa
5/31	5/34A	Farmland of Local Importance	Contra Costa
6/37	6/40	Farmland of Local Importance	Contra Costa
		Williamson Act	
8/49	8/50	Farmland of Local Importance	Contra Costa
8/52	8/53	Farmland of Local Importance	Contra Costa
9/54	11/64	Farmland of Local Importance	Contra Costa
11/65	12/68	Farmland of Local Importance	Contra Costa
13/72	13/73	Farmland of Local Importance	Contra Costa
14/79	14/80	Farmland of Local Importance	Contra Costa
14/81	14/82	Farmland of Local Importance	Contra Costa
16/87	18/99	Farmland of Local Importance	Contra Costa
19/104	19/106	Williamson Act	Alameda
20/110	21/116	Williamson Act	Alameda

Crossing structures will need to be installed throughout the project area where necessary. Of all the crossing structures planned for the project, eight will be located in Farmland of Local Importance, four will be located in Unique Farmland, and two will be located in Farmland of Statewide Importance. Each crossing structure will impact approximately 6 square feet, totaling 48 square feet of impact to Farmland of Local Importance, 24 square feet of impact to Unique Farmland, and 12 square feet of impact to Farmland of Statewide Importance. Because they represent small areas of impact and these impacts will be temporary, the overall impact as a result of the crossing structures is expected to be less than significant.

Minor substation work is planned at several existing substations along the alignment. Because these are existing substations and all work will occur within the existing substation fences, no impacts are expected.

Operation and maintenance activities for the transmission lines will be conducted within the existing corridor and in the same manner as they were prior to this project. Therefore, operation and maintenance activities will not result in conversion of any specially designated farmland.

**Question 2.3b – Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?**

***No Impact***

According to the 2006 Williamson Act contract parcel GIS data, nine parcels of land within the project area are under Williamson Act contracts. The first parcel begins between Tower 6/37 and Tower 6/38 and ends between Tower 6/40 and Tower 6/41. The second and third parcels are bordered along their western sides between Towers 19/104 and 19/106. The remaining six parcels are all crossed consecutively between Towers 20/110 and 21/116. A total of approximately 2.2 miles of Williamson Act contract land is crossed by the alignment.

Although the project crosses through land with existing zoning for agricultural use, construction of the project will not conflict with existing zoning because impacts to these areas will be temporary and will not result in any permanent changes to zoning. Additionally, no pull sites are located on land under Williamson Act contracts. One crossing structure may be located within land under a Williamson Act contract. However, project construction will not conflict with any Williamson Act contracts because the project will not subdivide any parcels, nor will it result in any changes in contract status or ownership.

Operation and maintenance activities for the transmission lines will be conducted within the existing corridor and in the same manner as they were prior to this project. Therefore, operation and maintenance activities will not result in any new conflicts with zoning for agricultural use or Williamson Act contracts.

**Question 2.3c – Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?**

***No Impact***

With the exception of the areas described in Question 2.3.a, project construction will not result in the temporary conversion of any farmland to non-agricultural use. Operation and maintenance activities will be conducted in the same manner as they were prior to the project and within the established corridor for the existing lines. Therefore, no impact will occur.

**1.0.15 References**

California Department of Conservation. Farmland Mapping and Monitoring Program. Online: <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>. Site visited December 4, 2008.

California Department of Conservation. Williamson Act Program. Online: <http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx>. Site visited December 4, 2008.

Contra Costa County. Contra Costa County Zoning Map. April 16, 2007. Online: <http://www.co.contra-costa.ca.us/depart/cd/current/zoningmap.htm>. Site visited December 8, 2008.

## AIR QUALITY

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.16 Existing Conditions

#### Regional Setting

The project is located within an area under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), the local agency that is responsible for achieving clean air within the district and protecting the public's health and the environment. Contra Costa and Alameda counties are characterized by warm summers with high temperatures regularly exceeding 90 degrees Fahrenheit and temperate winters with low temperatures above 40 degrees Fahrenheit. The project area averages approximately 18 inches of rainfall annually.

#### Air Quality

The Federal Clean Air Act (CAA) and California CAA have established the ambient air quality standards (AAQS) for six criteria pollutants: carbon monoxide (CO), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub>),<sup>8</sup> nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead. Three air quality designations can be given to an area for each of these pollutants:

<sup>8</sup> Particulate matter is a mixture of extremely small particles and liquid droplets. The particle's size is directly linked to its potential for causing health problems. Particles that are 10 micrometers in diameter or smaller (PM<sub>10</sub>) can generally pass through the throat and nose and enter the lungs. Fine particulate matter (PM<sub>2.5</sub>) is made of particles

- Non-attainment: This designation applies when air quality standards have not been consistently achieved.
- Attainment: This designation applies when air quality standards have been achieved.
- Unclassified: This designation applies when there is not enough monitoring data to determine if the area is non-attainment or attainment.

Table 4: BAAQMD Attainment Status lists the current state and federal AAQS and the BAAQMD's current attainment status for each of these pollutants.

**Table 4: BAAQMD Attainment Status**

Pollutant	Averaging Time	California Standards		Federal Standards	
		Concentration <sup>9</sup>	Attainment Status	Concentration	Attainment Status
O <sub>3</sub>	1-hour	0.09 ppm	Nonattainment	--	--
	8-hour	0.070 ppm		0.075 ppm	Nonattainment
CO	1-hour	20 ppm	Attainment	35 ppm	Attainment
	8-hour	9 ppm		9 ppm	
NO <sub>2</sub>	1-hour	0.18 ppm	Attainment	--	--
	Annual	0.030 ppm	--	0.053 ppm	Attainment
SO <sub>2</sub>	1-hour	0.25 ppm	Attainment	--	Attainment
	24-hour	0.04 ppm		0.14 ppm	
	Annual	--		0.03 ppm	
PM <sub>10</sub>	24-hour	50 µg/m <sup>3</sup>	Nonattainment	150 µg/m <sup>3</sup>	Unclassified
	Annual	20 µg/m <sup>3</sup>		--	
PM <sub>2.5</sub>	24-hour	--	Nonattainment	35 µg/m <sup>3</sup>	Unclassified/ Attainment
	Annual	12 µg/m <sup>3</sup>		15 µg/m <sup>3</sup>	

Source: California Environmental Protection Agency (EPA), 2008; California Air Resources Board (CARB) 2008

### ***Greenhouse Gas Emissions and Climate Change***

Many chemical compounds found in the earth's atmosphere act as "greenhouse gases" (GHG). These gases allow sunlight to enter the atmosphere freely, and absorb the heat radiated from the surface of the earth and trap it in the atmosphere. Many gases exhibit these "greenhouse" properties. Over time, the amount of energy sent from the sun to the earth's surface should be about the same as the amount of energy radiated back into space, leaving the temperature of the earth's surface roughly constant. There is a widespread, scientific understanding that human-caused increases in GHG have and will continue to contribute to global warming; however, the scientific community is still in disagreement over the rate or magnitude of this warming.

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that are 2.5 micrometers in diameter or smaller and are easily inhaled deeply into the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects.

<sup>9</sup> Concentrations are provided in parts per million (ppm) and micrograms per cubic meter (µg/m<sup>3</sup>).

## 1.0.17 Impact Discussion

### Question 2.4a – Would the project conflict with or obstruct implementation of the applicable air quality plan?

#### *Less-Than-Significant Impact With Mitigation*

Construction of the project will not conflict with any applicable air quality plans as the emissions will be negligible when compared to the existing air quality and are short-term in nature. BAAQMD construction standards of significance are defined in Section 2.3 of the 1999 BAAQMD CEQA Guidelines. According to these guidelines:

“Construction-related emissions are generally short-term in duration, but may still cause adverse air quality impacts. Fine particulate matter (PM<sub>10</sub>) is the pollutant of greatest concern with respect to construction activities...Construction emissions of PM<sub>10</sub> can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions and other factors. Despite this variability in emissions, experience has shown that there are a number of feasible control measures that can be reasonably implemented to significantly reduce PM<sub>10</sub> emissions from construction. The District’s approach to CEQA analyses of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions...If all of the control measures indicated in Table 2 [of the BAAQMD CEQA Guidelines] (as appropriate, depending on the size of the project area) will be implemented, then air pollutant emissions from construction activities would be considered a less than significant impact. If all of the appropriate measures in Table 2 [of the BAAQMD CEQA Guidelines] will not be implemented, then construction impacts would be considered to be significant.”

PG&E will implement the BAAQMD basic and enhanced feasible control measures that are outlined in Table 5: BAAQMD Feasible Control Measures for Construction Emissions of PM<sub>10</sub>, as applicable (refer to MM-AIR-01 through MM-AIR-08), to reduce emissions and to be in compliance with BAAQMD guidelines.

According to the BAAQMD CEQA Guidelines, project operations will be considered significant if:

- the California AAQS for CO of 9 ppm averaged over 8 hours or 20 ppm for 1 hour is exceeded;
- the total emissions from project operations exceed the thresholds provided in Table 6: BAAQMD Thresholds of Significance for Project Operation.
- the project will frequently expose members of the public to objectionable odors;
- the project will expose sensitive receptors or the general public to substantial levels of toxic air contaminants;
- the project uses or stores acutely hazardous air emissions; or
- the project will have a significant cumulative impact.

**Table 5: BAAQMD Feasible Control Measures for Construction Emissions of PM<sub>10</sub>****Basic Control Measure. – The following controls should be implemented at all construction sites.**

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials *or* require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily to, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

**Enhanced Control Measures. – The following measures should be implemented at construction sites greater than four acres in area.**

- All “Basic” control measures listed above.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

**Optional Control Measures. – The following control measures are strongly encouraged at construction sites that are large in area, located near sensitive receptors or which for any other reason may warrant additional emissions reductions.**

- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.
- Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 miles per hour.
- Limit the area subject to excavation, grading and other construction activity at any one time.

Source: BAAQMD, 1996

**Table 6: BAAQMD Thresholds of Significance for Project Operation**

<b>Pollutant</b>	<b>Tons per Year</b>	<b>Pounds per Day</b>	<b>Kilograms per Day</b>
Reactive Organic Compounds	15	80	36
Nitrogen Oxides	15	80	36
PM <sub>10</sub>	15	80	36

Source: BAAQMD, 1996

Because operation and maintenance activities will not change from existing practices, the project will not create any new air emissions.

**Question 2.4b – Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

***Less-Than-Significant Impact With Mitigation***

As described previously, PG&E will implement the BAAQMD’s basic and enhanced control measures, as applicable, to reduce construction-related emissions. The BAAQMD is currently listed as having non-attainment status for three criteria pollutants—PM<sub>10</sub>, PM<sub>2.5</sub>, and O<sub>3</sub>. Emissions from construction will be short-term and will not violate any air quality standards or contribute significantly to the non-attainment status for PM<sub>10</sub>, PM<sub>2.5</sub>, or O<sub>3</sub>. As a result, with the implementation of mitigation measures MM-AIR-01 through MM-AIR-08, impacts will be less than significant with mitigation.

Once operational, the project will not create any air emissions beyond those associated with maintenance and repair of the project. Because the project is already operated and maintained by PG&E and these activities will not change as a result of the project, there will be no impact.

**Question 2.4c – Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?**

***Less-Than-Significant Impact With Mitigation***

***Criteria Air Pollutants***

As described previously, the particulate matter emissions will be reduced by implementing the BAAQMD’s basic and enhanced control measures, as applicable. Because these emissions will be short-term and will occur over approximately 3.5 months, they will not be considered cumulatively considerable. In addition, the ozone emissions from the operation of construction vehicles will also be short-term, and as a result, considered not cumulatively significant. As a result, with the implementation of mitigation measures MM-AIR-01 through MM-AIR-08, impacts will be less than significant.

Once operational, the project will not create any new air emissions because operations and maintenance will not change from existing conditions after construction.

### *Greenhouse Gasses*

At the present, there are no regulations in place from Contra Costa County defining “significant” sources of GHG emissions, nor are there specific GHG emission limits or caps. On October 24, 2008, the CARB released their Preliminary Draft Staff Proposal for the Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the CEQA. This document provides interim significance criteria for the evaluation of GHG emissions for industrial projects. For the GHG emissions from a project to be considered less than significant, the standard requires that CARB performance standards for construction related emissions and transportation be met or equivalent mitigation measures be implemented. In addition, the project, with mitigation, cannot emit more than 7,000 metric tons of carbon dioxide (CO<sub>2</sub>) equivalent gas (CO<sub>2</sub>e) per year from non-transportation-related sources during operations.

Because the interim CARB construction-related and transportation-related standards have not yet been released, the BAAQMD standards apply, and will be used to judge significance. With the implementation of MM-AIR-01 through MM-AIR-08, the project’s construction-related emissions will be considered less than significant by the BAAQMD.

GHG emissions associated with operations and maintenance of an electric substation are limited to sulfur hexafluoride (SF<sub>6</sub>). SF<sub>6</sub> is a highly potent GHG with warming potential<sup>10</sup> of 23,900. No changes in the operations and maintenance activities will occur due to construction of the project that would affect the amount of SF<sub>6</sub> emissions; therefore, no air quality impacts related to GHG are associated with operation of the substation.

In addition, PG&E is implementing several voluntary company-wide actions to further reduce GHG emissions. These actions will help to meet Assembly Bill 32’s (AB32) goal of reducing California’s GHG emissions to 1990-levels by 2020. The following voluntary actions by PG&E will reduce future operational GHG emissions:

- PG&E is an active member of the EPA SF<sub>6</sub> Emission Reduction Partnership, which focuses on reducing emissions of SF<sub>6</sub> from transmission and distribution operations. Since 1998, PG&E has reduced their SF<sub>6</sub> leak rate and absolute SF<sub>6</sub> emissions by 89 percent and 83 percent, respectively.
- PG&E supports the Natural Gas STAR, a program promoting the reduction of methane (CH<sub>4</sub>) (at least 21 times as potent as CO<sub>2</sub> on a per-ton basis) from natural gas pipeline operations. Since 1998, PG&G has avoided the release of thousands of tons of CH<sub>4</sub>.
- In June 2007, PG&E launched a voluntary GHG emission reduction program—the ClimateSmart program—that allows its customers to make their energy use “climate neutral” by balancing out the GHG emissions produced by their energy use. PG&E calculates the GHG emissions associated with ClimateSmart customers’ energy use and adds a tax-deductible amount to their monthly bill in order to make their consumption “climate neutral”. One hundred percent of customer payments are applied to funding new

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<sup>10</sup> A GHG’s warming potential measures the potency of the GHG’s effect on global warming. It is a relative scale that compares a GHG’s potency to the potency of the same mass of CO<sub>2</sub>. CO<sub>2</sub> has a warming potential of 1.

GHG emission reduction projects in California, such as projects that capture CH<sub>4</sub> gas from dairy farms and landfills and those that conserve and restore California's forests.

- PG&E is offsetting all of the GHG emissions associated with the energy used in their buildings by participating in its ClimateSmart program. In 2007, PG&E's participation amounted to over 50,000 tons of CO<sub>2</sub> reductions.

In January 2010, the CARB will review and adopt Early Action Measures, as described in AB32, in order to further reduce GHG emissions. Equipment used during the operation and maintenance of project facilities after 2010 will be subject to these requirements and any future emissions reduction measures adopted by the CARB. PG&E will implement these measures and the California Energy Commission GHG emission performance standards for local, public-owned electric utilities as these policies become effective. These actions will further reduce the company-wide GHG emissions for all PG&E projects, including this one. As a result, there will be no impact from GHG emissions during operations and maintenance activities.

**Question 2.4d – Would the project expose sensitive receptors to substantial pollutant concentrations?**

***Less-Than-Significant Impact With Mitigation***

Sensitive receptors, including homes and schools, are spanned by the project in multiple areas along the alignment. Construction activities will generally occur in a linear fashion and will be spread out across the entire ROW. Receptors located near the landing zones may experience increased dust during helicopter take off and landing activities. However, these activities will be infrequent (approximately 15 to 20 times per weekday), spread across multiple landing zones, and will only occur for a period of approximately 3.5 months. Helicopter landings will generate dust; however, landings will be brief and the dust effects will be very localized. Also, because particulate matter emissions are of greatest concern during construction activities, PG&E will implement mitigation measures MM-AIR-01 through MM-AIR-08 to reduce particulate matter impacts. Therefore, the impacts to these sensitive receptors during construction will be temporary and less than significant with mitigation.

Once operational, the project will not create any new air emissions because there will be no change in operations and maintenance.

**Question 2.4e – Would the project create objectionable odors affecting a substantial number of people?**

***No Impact***

Operation of construction vehicles could generate airborne odors (i.e., diesel exhaust). Such emissions will be localized to the immediate area under construction and will be short in duration. In addition, most of the project (65 percent) is located a significant distance from residences and other potential receptors. As a result, there will be no impact. As previously described, operations and maintenance activities will not change because of the project. As a result, there will be no impact.

### 1.0.18 Mitigation Measures

According to the BAAQMD CEQA Guidelines, implementation of the following mitigation measures during construction will ensure impacts to air quality are less than significant:

- MM-AIR-01: All active construction areas will be watered at least twice daily.
- MM-AIR-02: Trucks transporting earth material off site will be covered or maintain a minimum 2-foot freeboard.
- MM-AIR-03: All unpaved access roads, parking areas, and staging areas will be watered three times daily or stabilized with non-toxic soil stabilizers to control dust.
- MM-AIR-04: All paved access roads, parking areas, and staging areas will be swept daily with water sweepers.
- MM-AIR-05: All public streets will be swept daily with water sweepers if visible soil material is carried onto them by construction activities or vehicles.
- MM-AIR-06: Exposed stockpiles (e.g., dirt, sand, etc.) will be enclosed, covered, and/or watered at least twice daily, or stabilized with non-toxic soil binders.
- MM-AIR-07: Traffic speeds on unpaved roads will be limited to 15 miles per hour.
- MM-AIR-08: Sandbags or the installation of other erosion control measures will be utilized to prevent silt runoff to public roadways.

### 1.0.19 References

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## BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.20 Existing Conditions

The approximately 24-mile project traverses a variety of habitat types, including annual grassland, oak savanna, riparian scrub, vernal pools, alkali grassland, valley needlegrass grassland, and valley sink scrub. The northern third and the southern end of the project area are located in urban areas with patches of natural and ornamental vegetation intermixed. Rolling

hills with grazed annual grassland vegetation predominate for the majority of the project, but agricultural land and other habitat types occupy small areas along the transmission line corridor. The transmission line corridor passes through two protected areas—the John Marsh/Cowell Ranch Property of the California Department of Parks and Recreation and the Los Vaqueros Watershed—and runs adjacent to the Springtown Preserve. There are documented occurrences of special-status species in all three protected areas. All habitat types and special-status species that may occur within the entire transmission line corridor, not just those in the work areas, have been considered in this report.

### Natural Plant Communities

Plant communities found within the transmission line corridor include the following:

- Annual grassland
- Alkali grassland
- Oak savanna
- Nonnative woodland
- Riparian woodland/scrub
- Valley needlegrass grassland
- Valley sink scrub

The five protected natural plant communities found in the CNDDDB include valley needlegrass grassland, valley sink scrub, alkali meadow, alkali seep, and cismontane alkali marsh. A short description of each is provided next.

- Valley needlegrass grassland is a midheight (up to 2 feet) grassland dominated by perennial, tussock-forming purple needlegrass (*Nassella pulchra*). Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. Valley needlegrass grassland is usually found on fine-textured (often clay) soils that are moist or even waterlogged during winter but very dry in summer.
- Valley sink scrub is a low, open to dense succulent shrubland dominated by alkali-tolerant Chenopodiaceae species, especially iodine bush (*Allenrolfea occidentalis*) or *Sueda* species. Soil surfaces often have a brilliant white salty crust over dark, sticky clay. Valley sink scrub generally occurs in a climate with hot, dry summers and damp winters with long periods of tule fog.
- Alkali meadow is a dense to fairly open growth of perennial grasses and sedges. It is usually low growing, but occasionally has tufts up to 3 feet tall. The growing and flowering season is from late spring to early fall. It is generally found in fine-textured, more or less permanently moist, alkaline soils.
- Alkali seep is comprised of low-growing perennial herbs, usually forming relatively complete cover and growing throughout the year in areas with mild winters. It is generally found in permanently moist or wet alkaline seeps and is often associated with alkali meadows.

- Cismontane alkali marsh is dominated by perennial, emergent, herbaceous monocots that are up to 6 feet tall. Cover is often complete and dense. Standing water or saturated soil is present during most or all of the year. High evaporation and low input of fresh water render these marshes somewhat salty, especially during the summer.

### **Critical Habitat**

U.S. Fish and Wildlife Service (USFWS)-designated critical habitat for the following three different species is located in or near the project area:

- Vernal pool fairy shrimp (*Branchinecta lynchi*): The transmission line corridor passes through critical habitat for vernal pool fairy shrimp.
- Delta smelt (*Hypomesus transpacificus*): Critical habitat for delta smelt is located within the project area; however, none of the primary constituent elements are present in the transmission line corridor.
- California red-legged frog (*Rana aurora draytonii*): The transmission line corridor is located approximately 500 feet to the east of critical habitat for California red-legged frog.

### **Special-Status Species**

The following special-status plant species have a high potential to occur or are known to occur within the transmission line corridor:

- Heartscale (*Atriplex cordulata*), CNPS List 1B.2<sup>11</sup>
- Britblescale (*Atriplex depressa*), CNPS List 1B.2
- San Joaquin spearscale (*Atriplex joaquiniana*), CNPS List 1B.2
- Big tarplant (*Blepharizonia plumosa*), CNPS List 1B.1<sup>12</sup>
- Round-leaved filaree (*California macrophylla*), CNPS List 1B.1
- Mount Diablo fairy lantern (*Calochortus pulchellus*), CNPS List 1B.2
- Hispid bird's beak (*Cordylanthus mollis* ssp. *hispidus*), CNPS List 1B.1
- Palmate-bracted bird's beak (*Cordylanthus palmatus*), Federally Endangered (FE), California Endangered, CNPS List 1B.1
- Mount Diablo buckwheat (*Eriogonum truncatum*), CNPS List 1B.1
- Diablo helianthella (*Helianthella castanea*), CNPS List 1B.2
- Brewer's western flax (*Hesperolinon breweri*), CNPS List 1B.2

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<sup>11</sup> CNPS List 1B.2 species are rare, threatened, or endangered in California and elsewhere and are fairly endangered in California.

<sup>12</sup> CNPS List 1B.1 species are rare, threatened, or endangered in California and elsewhere and are seriously endangered in California.

The following special-status animal species have a high potential to occur or are known to occur within the transmission line corridor:

- Western pond turtle (*Actinemys marmorata*), California Species of Special Concern (SSC)
- Tricolored blackbird (*Agelaius tricolor*), SSC
- California tiger salamander (CTS) (*Ambystoma californiense*), Federally Threatened (FT), SSC
- Golden eagle (*Aquila chrysaetos*), California Fully Protected Species
- Burrowing owl (*Athene cunicularia*), SSC
- Vernal pool fairy shrimp (*Branchinecta lynchi*), FT
- Swainson's hawk (*Buteo swainsoni*), California Threatened (CT)
- Western red bat (*Lasiurus blossevillii*), SSC
- California red-legged frog (*Rana aurora draytonii*), FT
- American badger (*Taxidea taxus*), SSC
- San Joaquin kit fox (*Vulpes macrotis mutica*), FE, CT

## Waters of the United States

The general wetland habitats within the project area include coastal brackish marsh, northern claypan vernal pools, alkaline marsh, meadow, and vernal pool areas. The transmission lines cross nine watersheds—East Antioch Creek, Sand Creek Subbasin, Deer Creek Subbasin, Dry Creek Subbasin, Briones Creek Subbasin, Upper Marsh Creek, Kellogg Creek, Brushy Creek, and Alameda Creek (Altamont and Livermore subsections). The transmission line passes through the protected lands in Los Vaqueros Watershed, which includes portions of the Upper Marsh Creek, Kellogg Creek, and Brushy Creek watersheds. Many additional streams, ponds, and emergent wetlands are identified within the vicinity of the project by the National Wetland Inventory (NWI), but according to the NWI, the existing line crosses only freshwater emergent wetlands and ponds.

### 1.0.21 Impact Discussion

**Question 2.5a – Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, by the CDFG or the USFWS?**

#### *Less-Than-Significant Impact With Mitigation*

##### *Sensitive Plant Species*

There are 11 sensitive plant species that have a high potential to occur or are known to occur within the project area. Most sensitive plant species will not be impacted because they are not proximate to work areas associated with this project. However, there is potential for some individuals to be affected by the project, either through crushing by project vehicles and equipment, trampling by foot traffic, or disruption of the seed bank by excavation. The majority of the impacts are associated with the use of pull sites, the installation of crossing structures, and the use of overland access routes. The majority of overland access routes will be used only twice

during the project for the installation and removal of the travelers. Thus, the exposure of many plants will be limited in duration.

Rare plant surveys were performed in all work areas and windshield-level surveys were performed for all access routes in September 2008. Fall-blooming sensitive plant species—brittlescale, San Joaquin spearscale, big tarplant, hispid bird's beak, palmate-bracted bird's beak, Mount Diablo buckwheat—were not observed at this time. Mount Diablo fairy lantern, Diablo helianthella, and Brewer's western flax are known to occur in valley and foothill grasslands and could potentially occur in several work areas. However, given the temporary nature of the impacts, minimal ground-disturbing activities, and implementation of mitigation measures MM-BIO-10 through MM-BIO-13 in Section 2.5.2 Mitigation Measures, impacts to all sensitive plant species will be reduced to a less-than-significant level.

Of the 11 plant species, two—heartscale and round-leaved filaree—are known to occur near the project area and warrant further discussion, which follows.

#### Heartscale

Four occurrences of heartscale were discovered in a highly disturbed agricultural field to the west of the transmission line near Tower 6/38. PG&E will access the base of Towers 6/38 and 6/39 by driving crew trucks across these agricultural fields, avoiding the known locations of the heartscale occurrences. Any occurrences of this species will be flagged for avoidance prior to the commencement of work activities in this area. In addition, any disturbance caused by this project is expected to be less severe than that caused by agricultural equipment. With the implementation of the mitigation measures MM-BIO-10 through MM-BIO-13 in Section 2.5.2 Mitigation Measures, impacts to this species will be less than significant.

#### Round-Leaved Filaree

Round-leaved filaree was observed in 2005 in the vicinity of Pull Site 4/5, as documented in the Monk and Associates Special-Status Plant Survey Report. However, this site was surveyed again in 2006, and round-leaved filaree was not observed at this time (as confirmed by personal communication with Isabelle de Geofroy of Monk and Associates). The proposed mitigation measures should negate any negative impacts to this species.

#### *Sensitive Invertebrate Species*

Only one sensitive invertebrate species, vernal pool fairy shrimp, has the potential to occur within the transmission line corridor. Although vernal pools do occur in the transmission line corridor, PG&E designed this project to avoid all vernal pools. No vernal pools are located near work areas and access routes; therefore, there will be no impacts to vernal pool fairy shrimp.

#### *Sensitive Amphibian Species*

##### California Red-legged Frog

Because wetlands with the potential to support California red-legged frog will be avoided, and BMPs will be installed in accordance with the SWPPP, there will likely be no impact on California red-legged frog aquatic habitat. There is some potential to impact individual frogs in upland aestivation habitat near breeding sites where they may be crushed or buried in their

refuges. Potential impacts will be mitigated to a less-than-significant level as described in mitigation measures MM-BIO-2 through MM-BIO-6 and MM-BIO-14 in Section 2.5.2 Mitigation Measures.

#### California Tiger Salamander

The project will not impact breeding habitat for the CTS. Because salamanders generally migrate at night and project activities will occur primarily during daylight hours, no impact on migrating individuals is expected. There is only a small potential to affect aestivating salamanders during the installation of the crossing structures and the shoofly; however, only a discrete amount of habitat will be affected. Potential impacts will be reduced to a less-than-significant level with the implementation of mitigation measures MM-BIO-2 through MM-BIO-6 and MM-BIO-14 that are described in Section 2.5.2 Mitigation Measures.

#### *Sensitive Reptile Species*

One sensitive reptile species, western pond turtle, has the potential to occur within the transmission line corridor. There is a low potential for crushing of individuals by project vehicles or equipment. MM-BIO-06 will be implemented to further reduce the potential for crushing of individuals. Mitigation measures MM-BIO-2 through MM-BIO-6, which are described in Section 2.5.2 Mitigation Measures, will reduce impacts to western pond turtle to a less-than-significant level.

#### *Sensitive Avian Species*

There is the potential to impact breeding birds through the use of helicopters and general disturbance if work is conducted in close proximity to a nest. Breeding seasons vary from year to year depending on weather, species, and other conditions, but nesting birds could be disturbed anytime between January and August. Birds are most likely to leave nests early in the nest cycle. If the birds are forced to fledge early, they could be subject to predation or starvation, which could result in reproductive failure. Potential impacts will be reduced to a less-than-significant level through surveys and monitoring as described in MM-BIO-15 in Section 2.5.2 Mitigation Measures.

#### *Sensitive Mammal Species*

Three sensitive mammal species—western red bat, American badger, and San Joaquin kit fox—have a high potential to occur in the project area. Project activities, particularly helicopter use, have the potential to disturb roosting bats. American badgers have been observed within the project area, and potential San Joaquin kit fox dens have been identified. Potential impacts will be mitigated to a less-than-significant level through surveys and monitoring as described in MM-BIO-2 through MM-BIO-6 and MM-BIO-16 in Section 2.5.2 Mitigation Measures.

Because operation and maintenance activities for the 230-kV transmission lines and substations will not change after the construction of the project, no new or additional impacts to sensitive species will occur.

*East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan*

An application has been submitted to the East Contra Costa Habitat Conservancy for coverage under the East Contra Costa County HCP/NCCP. In order for HCP/NCCP to be approved, an EIR was prepared that disclosed and analyzed impacts related to projects in this region. Based on the analysis of biological impacts in this MND, the impacts are consistent with those analyzed in the EIR. All impacts to biological resources will be reduced to a less-than-significant level by coverage under the East Contra Costa Habitat Conservancy for coverage under the East Contra Costa County HCP/NCCP.

**Question 2.5b – Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS?**

***No Impact***

There are five sensitive natural communities that may occur within 1 mile of the transmission line—valley needlegrass grassland, valley sink scrub, alkali meadow, alkali seep, and cismontane alkali marsh. No sensitive natural communities are located within any work areas or overland access routes. Therefore, although sensitive natural communities may exist beneath the transmission lines, the project will have no impact on sensitive natural communities.

PG&E will employ the same operations and maintenance activities of the transmission line and substations as it did prior to the project. Therefore, operations and maintenance of the project will have no impact on sensitive natural communities.

**Question 2.5c – Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

***No Impact***

Because all wetlands and waterbodies will be avoided during construction, there will be no direct impacts to these features as a result of construction activities. There is potential for very limited, minor erosion and siltation to result from stormwater runoff from the pull sites, crossing structure locations, the shoofly, and helicopter landing sites. In work areas near wetlands or other water features, appropriate BMPs will be installed in accordance with the project's SWPPP to avoid sedimentation or disturbance of these features. As a result, there will be no impacts.

Because operation and maintenance activities for the 230-kV transmission lines and substations will not change after the construction of the project, no new or additional impacts to wetlands or any other waterbodies will occur.

**Question 2.5d – Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

***No Impact***

As the project involves reconductoring of existing overhead transmission lines in an existing corridor and no new permanent roads, the project will not interfere with wildlife movement corridors. No major areas will be blocked by project construction activities because work will occur in limited areas at one time. No waters of the U.S. will be affected. Therefore, the movement of fish species will not be affected. As a result, the project will not interfere with wildlife movement corridors.

PG&E will employ the same operation and maintenance activities of the transmission lines and substations as it did prior to this project. Therefore, operations and maintenance of this project will have no impact on wildlife movement corridors.

**Question 2.5e – Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

***No Impact***

Construction of the project does not conflict with any environmental plans, policies, or regulations adopted by agencies with jurisdiction over local land uses, including the Contra Costa County Tree Protection Ordinance, the Alameda County Tree Ordinance, the City of Antioch Article 12: Tree Preservation and Regulation, the City of Brentwood Oak Tree Preservation and Chapter 5: Trees and Shrubs of the Brentwood Municipal Code, and the City of Livermore Tree Preservation Ordinance. After reconductoring, PG&E will employ the same operations and maintenance activities of the transmission line and substations as it did prior to this project. Therefore, operations and maintenance of the project will not conflict with any existing plans, policies, or regulations.

**Question 2.5f – Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

***No Impact***

An application has been submitted to the East Contra Costa County Habitat Conservancy for coverage under the East Contra Costa County HCP/NCCP, and as a result, this project will adhere to the provisions in the East Contra Costa County HCP/NCCP. This project will not conflict with any other approved local, regional, or state habitat conservation plan.

PG&E will employ the same operations and maintenance activities of the transmission line and substations as it did prior to this project. Therefore, operations and maintenance of the project will not conflict with any existing Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or other approved local, regional or state HCP.

### **1.0.22 Mitigation Measures**

Implementation of the following mitigation measures will reduce the potential adverse impacts to biological resources to a less-than-significant level:

#### **General Mitigation Measures**

- MM-BIO-01: All project employees will attend a general environmental training that will cover all environmental protection measures required to conduct the project. The training will include a review of BMPs to be implemented to reduce the potential for erosion and sedimentation during construction.
- MM-BIO-02: All areas with sensitive species or habitats, as identified by the Biological Monitor, will be flagged and signed for avoidance. Crews will not enter flagged areas without the approval and presence of a Biological Monitor.
- MM-BIO-03: A Biological Monitor will be present at all times during construction. More than one monitor may be necessary when multiple crews are working in sensitive areas. The monitor will have the authority to stop activities and determine alternative work practices (in consultation with construction personnel) if construction activities are likely to impact sensitive biological resources.
- MM-BIO-04: If additional sensitive species are observed prior to or during construction, PG&E will halt construction and consult with the respective federal, state, and/or local agency(s) to coordinate avoidance or minimization measures, as necessary.
- MM-BIO-05: Overland access routes in sensitive areas will be surveyed for special-status species by a Biological Monitor within eight hours prior to first use. If a period of at least one week passes with no use of the overland access route, the area will be surveyed again.
- MM-BIO-06: Vehicles will be restricted to approved access roads, pull sites, landing zones, and temporary work areas. All project vehicles will observe a 15 mile-per-hour speed limit on unpaved access roads.
- MM-BIO-07: Food-related garbage and trash will be removed from the site daily.
- MM-BIO-08: At the completion of the project, all construction materials will be removed from the site.
- MM-BIO-09: All work areas will be restored to near preconstruction conditions after the completion of construction. This may include reseeding with local native plant seed immediately following the completion of the project and once more in the fall.

#### **Special-Status Plants**

- MM-BIO-10: PG&E will conduct rare plant surveys within one day prior to the commencement of work activities at all work areas in oak savanna and annual grassland

natural land covers for all rare plants that have a blooming period that coincides with survey date. Should a rare plant be discovered within the work area, PG&E will fence off the location of the rare plant and avoid the area.

- MM-BIO-11: PG&E will utilize mats within the work areas in oak savanna and annual grassland land covers in areas where spring rare plant surveys have not been completed. Mats will not be utilized in those areas that are surrounded on all sides by urban development. Mats will help to evenly distribute the weight of trucks and heavy machinery across its surface, thus avoiding disturbance to the seed bank below.
- MM-BIO-12: For any ground-disturbing activities, such as the installation of crossing structures, that are located in areas with the potential for rare plants, PG&E will stockpile the topsoil to preserve the existing seed bank. This topsoil will be stored separately from the subsoil and placed on matting to ensure that it remains separated from adjacent topsoil. The salvaged topsoil will be replaced after the ground-disturbing activities have been completed.
- MM-BIO-13: PG&E, in conjunction with the East Contra Costa County Habitat Conservancy, will restore all work areas that were disturbed by project activities to near preconstruction conditions. Where appropriate, restoration work will include the distribution of seeds from a variety of local native species.

### **Special-Status Wildlife Species**

- MM-BIO-14: To the maximum extent feasible, burrows will be avoided. Mats will be placed over burrows in areas where avoidance is infeasible.
- MM-BIO-15: Preconstruction bird surveys will be conducted between March 1 and August 15 within 1 week prior to the start of construction at all work areas to identify active nests and/or birds exhibiting breeding behavior. A Biological Monitor will establish an appropriate nest-exclusion zone around active nests that will be appropriate for the activity and species.
- MM-BIO-16: Preconstruction surveys for San Joaquin kit fox will be performed, during which potential kit fox dens will be identified. The status of each den will be determined, and any unoccupied dens will be destroyed. If any occupied dens are discovered, the USFWS and CDFG will be notified immediately.

### **1.0.23 References**

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## CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.24 Existing Conditions

#### Cultural Resources

A cultural records search and field survey were conducted in 2008 by Garcia and Associates (GANDA). The results of the records searches indicate that 14 studies have been completed within 0.25 mile of the Area of Potential Effect (APE), resulting in the identification of 44 cultural resources. Of the 44 previously recorded resources, 18 are prehistoric sites, 20 are historic period sites, and 4 are prehistoric and historic period multi-component sites. Two of the sites are reported, but have not been formally recorded and therefore remain undefined. Results of the records search are inventoried in Table 7: Cultural Resources within a 0.25-Mile Radius. Cultural resources in bold are located within the APE.

Based on the records search, archival research, field surveys, and resource evaluations, there is one newly identified archaeological resource within the APE that could be potentially eligible for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR)—GANDA Site 02—though the potential significance of this resource is unknown. There is one previously identified site—P-07-00759—which has not been formally evaluated for its potential eligibility for listing in the NRHP or CRHR. In addition, there are two architectural resources within the APE that are not eligible for listing in the NRHP and CRHR—the Contra Costa 230 kV Transmission Line and the Las Positas Substation.

#### Paleontological Resources

GANDA conducted a paleontological investigation of the proposed project area in order to determine the relative paleontological sensitivity of geologic units within each pull site, access road to the pull sites, and associated crossing structures. Background research conducted for this project consisted of a literature and map review and a fossil locality search. Field surveys were

conducted in areas noted to have a high sensitivity for paleontological resources. High sensitivity areas were defined as areas underlain by geologic units from which vertebrate or significant invertebrate fossils or suites of plant fossils have been recovered. Low sensitivity areas were defined as areas underlain by geologic units that are not known to have produced a substantial body of significant fossil material. Results of the paleontological investigation are provided in Table 8: Paleontological Sensitivity.

### 1.0.25 Impact Discussion

#### **Question 2.6a – Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

##### *Less-Than-Significant Impact With Mitigation*

Potential project construction impacts within or immediately adjacent to the existing transmission line corridor and access roads will include minor and transitory subsurface impacts (i.e., use of existing roads, temporary parking, and the temporary use of pull sites and landing zones). Subsurface or surface disturbance could result in the loss of integrity of cultural deposits, loss of information, and the alteration of a site's settings. Potential indirect impacts, primarily vandalism, could result from increased access to, and use of, the general area during construction.

There is one previously identified site—P-07-00759—which has not been formally evaluated for its potential eligibility for listing in the NRHP or CRHR. PG&E will avoid ground-disturbing activities within and in close proximity to the site during project implementation; thus, no impacts are anticipated. However, if ground-disturbing activities must occur within these areas, PG&E will implement mitigation measure MM-CUL-01, which will involve conducting formal site evaluations to assess whether the site is potentially eligible for listing in the NRHP and CRHR, to minimize impacts to this resource.

There is one newly identified archaeological resource within the APE that could be potentially eligible for listing in the NRHP and the CRHR—GANDA Site 02—though the potential significance of this resource is unknown. PG&E plans to avoid this resource. However, if ground-disturbing activities must be conducted within this area, PG&E will implement mitigation measure MM-CUL-01, which will involve conducting formal site evaluations to assess whether this site is potentially eligible for listing in the NRHP and CRHR, to minimize impacts to this resource.

In addition, there are two architectural resources within the APE that are not eligible for listing in the NRHP and CRHR—the Contra Costa 230 kV Transmission Line and the Las Positas Substation. There may also be historic resources that have not been identified to date; however, due to the limited amount of excavation associated with this project, impacts to unanticipated historic resources are expected to be less than significant.

**Table 7: Cultural Resources within a 0.25-Mile Radius**

<b>Primary Number</b>	<b>Formal Type</b>	<b>Function/ Name</b>	<b>Probable Age</b>	<b>USGS Quadrangle</b>
P-01-002147	Lithic Scatter	Not Available	Historic	Altamont
P-01-002146	Foundation/ Railroad Ties	Habitation	Prehistoric	Altamont
P-01-010670	Ranch Complex	Frick Ranch	Historic	Altamont
P-01-000813	Railroad Alignment	Central Pacific Railroad	Historic	Antioch South
P-07-000303	Farm Complex	Shannon Farm Ranch	Historic	Antioch South
P-07-000004	Ranch Complex	Ranch	Historic	Antioch South
P-07-002695	Canal	Contra Costa Canal	Historic	Antioch South
P-07-000005	Ranch	Complex Ranch	Historic	Antioch South
P-07-000212	Rock Shelter Complex	Habitation	Prehistoric	Byron Hot Springs
P-07-000249	Ranch Complex	Ordway Ranch	Historic	Byron Hot Springs
P-07-000483	Rock Shelter/Modified Outcrop	Buckeye Shelter Site	Prehistoric	Byron Hot Springs
P-07-000758	Ranch Complex	Cowell Ranch	Historic	Byron Hot Springs
<b>P-07-000759</b>	<b>Dam</b>	<b>Water Control/Cowell Ranch</b>	<b>Historic</b>	<b>Byron Hot Springs</b>
P-07-000792	Historic Artifact Scatter/Prehistoric Hearth	Multi- Component	Historic/Prehisto ric	Byron Hot Springs
P-07-000227	Stone Foundation/ Human Remains/Artifact Scatter	Multi- Component	Historic/Prehisto ric	Byron Hot Springs
P-07-000198	Midden Deposit	Not Available	Prehistoric	Byron Hot Springs
P-07-000235	Rock Shelters/Bedrock milling stations (BRM)	Habitation	Prehistoric	Byron Hot Springs
P-07-000187	Rock Shelters/BRM	Habitation	Prehistoric	Byron Hot Springs

Primary Number	Formal Type	Function/ Name	Probable Age	USGS Quadrangle
P-07-000234	Spring/Trash Scatter	Not Available	Historic	Byron Hot Springs
P-07-000236	Rock Shelters/BRM	Habitation	Prehistoric	Byron Hot Springs
P-07-000228	Ranch Complex	Ranch	Historic	Byron Hot Springs
P-07-000225	Ranch Complex	Ranch	Historic	Byron Hot Springs
P-07-000216	Petroglyph	Ceremonial/ Marker	Prehistoric	Byron Hot Springs
P-07-000226	Artifact Scatter	Not Available	Historic	Byron Hot Springs
P-07-002592	Artifact Scatter	Not Available	Prehistoric	Byron Hot Springs
P-07-000233	Lithic Scatter/Ranch Complex	Medina/Serpa/ Vallegra Ranch	Prehistoric/ Historic	Byron Hot Springs
P-07-000532	Human Remains/Artifacts	Reburial Site	Prehistoric	Byron Hot Springs
P-07-000401	Artifact Scatter/Deposit/ Human Remains	Habitation (semi-permanent residential base)	Prehistoric	Byron Hot Springs
P-07-000792	Hearth/Artifact Scatter	Habitation	Prehistoric/ Historic	Byron Hot Springs
P-07-000198	Midden Deposit	Not Available	Prehistoric	Byron Hot Springs
P-07-000199	Camp/Midden	Habitation	Prehistoric	Byron Hot Springs
P-07-000483	Rock Shelter	Buckeye Shelter Site	Prehistoric	Byron Hot Springs
P-07-000853	Power Plant	Contra Costa Power Plant	Historic	Antioch North
P-07-002670	Artifact Scatter	John Marsh/ Cowell Ranch Property of the California Department of Parks and Recreation	Prehistoric	Brentwood
P-07-000433	Rock Mound	Not Available	Not Available	Brentwood

Primary Number	Formal Type	Function/ Name	Probable Age	USGS Quadrangle
P-07-000418	Circular Depression	Possible Housepits	Prehistoric	Brentwood
P-07-000420	Structure/Exotic Plants/Loading Ramp	Habitation/Ranch	Historic	Brentwood
P-07-000376	Ranch Complex	Habitation/Ranch	Historic	Brentwood
P-07-000020	Human Remains/Artifacts	Possible Settlement	Prehistoric	Brentwood
P-07-000431	Bridge/Dam	John Marsh/ Cowell Ranch Property of the California Department of Parks and Recreation	Historic	Brentwood
P-07-000747	Coal mine (possibly destroyed)	Brentwood Coalmine	Historic	Brentwood
*P-07-000548	Unknown	Unknown	Unknown	Brentwood
P-07-000018	Artifact Scatter	Habitation	Historic	Brentwood
P-07-000027	Cultural Deposit (possibly destroyed)	Unknown	Prehistoric	Brentwood

\*No specific resource record for this site exists. Site location was only provided by University of California, Berkeley when records were submitted to the Northwest Information Center.  
Cultural resources in **bold** are located within the APE.

**Table 8: Paleontological Sensitivity**

<b>Pull Site</b>	<b>Geologic Unit</b>	<b>Paleontological Sensitivity</b>	<b>Field Survey Results</b>
Pull Site 1 and associated crossing structures	Quaternary Alluvium (Recent)	Low	Not surveyed
Pull Site 2A & 2B and associated crossing structures	Quaternary Alluvium (Recent)	Low	Not surveyed
Pull Site 3 and associated crossing structures	Pliocene Oro (5 to 2 million years old [ma]) Loma Formation	High	No paleontological sensitive geologic unit exposed at the ground surface.
Pull Site 4/5 and associated crossing structures	Quaternary Alluvium (Recent)	Low	Not surveyed
Pull Site 6A & 6B and associated crossing structures	Quaternary Alluvium (Recent)	Low	Not surveyed
Pull Site 7 and associated crossing structures	Quaternary Alluvium (Recent)	Low	Not surveyed
Pull Site 8A & 8B and associated crossing structures	Late Cretaceous (100 to 65 ma) Panoche Formation	High	Panoche Formation exposed at the ground surface. No fossils discovered.
Pull Site 9A & 9B and associated crossing structures	Late Cretaceous (100 to 65 ma) Panoche Formation	High	Panoche Formation exposed at the ground surface. No fossils discovered.
Pull Site 10	Miocene (24 to 5 ma) Briones Formation	High	Briones Formation not exposed at ground surface. No fossils discovered.
Crossing structures associated with Pull Site 10	Quaternary Alluvium (Recent)	Low	Not surveyed
Pull Site 11 and associated crossing structures	Quaternary Alluvium (Recent)	Low	Not surveyed

Once construction of the project has been completed, the project will not disturb any potential cultural resources, including historic resources, because there will be no changes to existing operating or maintenance procedures. Therefore, no impacts to cultural resources are anticipated during the continuing operation and maintenance of the transmission line and substations.

**Question 2.6b – Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?**

***No Impact***

There is a potential for inadvertent discoveries of buried archaeological materials during construction. In comparison to the historic resources, approximately half of the cultural resources in the project area are prehistoric archaeological resources. Out of a total of 44 previously recorded resources, 18 are prehistoric sites and 4 are prehistoric and historic period multi-component sites. None of these cultural resources will be affected by construction of the project because they are located outside of the proposed work areas.

There may be archaeological resources that have not been identified to date; however, due to the limited amount of excavation associated with this project, impacts to unanticipated archaeological resources are not expected.

Once construction of the project has been completed, the project will not disturb any potential cultural resources, including archaeological resources, because there will be no changes to existing operating or maintenance procedures. Excavation and grading activities will be performed at similar intensities and locations as they are currently conducted. Therefore, no impacts to cultural resources are anticipated during the continuing operation and maintenance of the transmission lines and substations. Thus, the significance of an archaeological resource will not be changed by the project.

**Question 2.6c – Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

***Less-Than-Significant Impact With Mitigation***

Because the project involves reconductoring existing transmission lines and will involve minimal ground disturbance that will consist primarily of shallow excavations, the potential for impact to paleontological resources is low. Two locations along the alignment— Pull Site 8A & 8B and Pull Site 9A & 9B—were identified as having high paleontological sensitivity and exposed geologic units. PG&E will avoid ground-disturbing activities in these areas to the extent possible. If excavation needs to occur in these locations, PG&E will implement MM-CUL-02, which involves flagging areas of exposed bedrock to be avoided prior to excavation, to reduce impacts to paleontological resources to a less-than-significant level.

Installation of several crossing structures will be necessary to protect the Pittsburg–Tesla transmission line between Towers 8/52 and 9/54. These crossing structures are located on paleontological sensitive geologic units within the John Marsh/Cowell Ranch Property of the California Department of Parks and Recreation. In order to minimize impacts to paleontological resources in this area, PG&E will implement MM-CUL-03, which will involve paleontological monitoring, to reduce impacts to paleontological resources to a less-than-significant level.

Once construction of the project has been completed, the project will not disturb any potential paleontological resources because there will be no changes to existing operating or maintenance procedures. Excavation and grading activities will be performed at similar intensities and locations as they are currently conducted. Therefore, no impacts to paleontological resources are anticipated during the continuing operation and maintenance of the transmission lines and substations.

**Question 2.6d – Would the project disturb any human remains, including those interred outside of formal cemeteries?**

***No Impact***

The likelihood of encountering human remains during construction associated with this project is considered low to nonexistent. The project involves minor excavation (associated with the crossing structures and shoofly); thus, the potential to disturb human remains is low. Regardless, if human remains are encountered during the course of construction, PG&E will implement the appropriate notification processes as required by law. In the unlikely event that Native American human remains are discovered during construction, work will be halted in the vicinity of the find and the county coroner will be notified. The Native American Heritage Commission (NAHC) will designate a “most likely descendant” (MLD). The MLD will complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Once construction has been completed, the project will not disturb any potential human remains, because there will be no changes to existing operating or maintenance procedures. Therefore, no impacts to human remains are anticipated during the continuing operation and maintenance of the transmission lines and substations.

**1.0.26 Mitigation Measures**

Implementation of the following mitigation measures will reduce the potential adverse impacts to cultural resources to a less-than-significant level:

- MM-CUL-01: If ground-disturbing activities are conducted proximate to P-07-00759 and/or GANDA Site 02, PG&E will conduct formal site evaluations to assess whether these sites are potentially eligible for listing in the NRHP and CRHR. For resources determined to be significant, a Research Design and Data Recovery Program will be prepared and carried out to mitigate the anticipated impacts.
- MM-CUL-02: A qualified paleontologist will flag areas of bedrock where paleontological sensitive geologic units are exposed on the ground surface within and adjacent to Pull Site 8A & 8B and Pull Site 9A & 9B for avoidance prior to the commencement of project activities at these locations. If avoidance is not feasible, a qualified paleontologist will monitor project activities.
- MM-CUL-03: Paleontological monitoring will occur during the installation of crossing structures between Towers 8/52 and 9/54 within the John Marsh/ Cowell Ranch Property of the California Department of Parks and Recreation.

### **1.0.27 References**

GANDA. 2008. *Cultural Resources Investigation and Architectural Evaluation for the Contra Costa to Las Positas Reconductoring of the 230 kV Transmission Line, Contra Costa County and Alameda County, California.*

GANDA. 2008. *Paleontological Resources Technical Report for the PG&E Contra Costa- Las Positas Transmission Line Project*

**GEOLOGY AND SOILS**

<b>Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less-Than-Significant Impact with Mitigation</b>	<b>Less-Than-Significant Impact</b>	<b>No Impact</b>
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## 1.0.28 Impact Discussion

**Question 2.7a.i – Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**

### *No Impact*

The Clayton-Marsh Creek-Greenville fault is the only known active fault that crosses the existing lines. The line crosses the fault several times between Towers 19/104 and 20/107. Minor surface fault rupturing occurred during the January 1980 Livermore Valley earthquakes; however, the likelihood of fault surface rupture occurring during the short duration of the construction period is very low. Heavy substation equipment is designed to withstand significant seismic events. PG&E has performed dynamic analyses on a typical 230-kV structure and found that the structure was able to withstand a ground acceleration of about 0.9 times the acceleration due to gravity, which is much higher than what is used during the design of heavy substation equipment. Thus, the increase in tower height and the installation of the new conductor will not affect the structures' ability to withstand earthquakes. Because the project does not involve the installation of any new towers, nor work on tower foundations, it will neither increase the likelihood for rupture nor increase the potential impacts to the lines from an earthquake. Operations and maintenance of the transmission lines and substations will continue in the same manner that it did prior to this project. As a result, there will be no impact.

**Question 2.7a.ii – Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?**

### *No Impact*

The Clayton-Marsh Creek-Greenville fault is capable of generating strong ground shaking along the existing transmission lines, but the likelihood for strong ground shaking during the short duration of the construction period is very low. The Los Vaqueros Watershed is the only waterbody in the project vicinity that is large enough to result in a seismic seiche following strong seismic ground shaking. Because of the very low risk of strong seismic ground shaking, the related risk of potential substantial adverse effects to people or structures during construction highly unlikely, so no impact is anticipated. Because the transmission lines are existing and the project modifications will not change the potential for a seismic seiche, no impact will occur after construction has been completed.

**Question 2.7a.iii – Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?**

### *No Impact*

Due to the very low likelihood of a strong ground shaking event during the construction period, the potential for an impact due to strong ground shaking—including direct (i.e., shaking) and secondary effects of ground shaking, including seismically induced liquefaction, lateral

spreading, landslides, and other ground failure—is extremely low. There will be no change to the potential for ground surface failure after the towers are modified and the conductor is replaced because no significant ground disturbance will occur as part of the project. As a result, there will be no impact.

**Question 2.7a.iv – Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?**

***No Impact***

The project will not involve any changes to hillsides that will create instability that could result in landslides. As a result, there will be no impact.

**Question 2.7b – Would the project result in substantial soil erosion or the loss of topsoil?**

***Less-Than-Significant Impact***

Although construction will occur during the wet season, it will involve minimal surface disturbance and no grading. In addition, PG&E will implement a SWPPP, which will further minimize soil erosion. Because surface disturbance will be minimal and disturbed areas will be reclaimed and revegetated, the potential for soil erosion is less than significant.

Because the project involves the reconductoring of existing lines, there will be minimal excavation associated with the project area. The project will result in approximately 29.3 acres of new temporary disturbance resulting from the temporary use of pull sites, landing zones, temporary work areas, overland access roads, and crossing structures. These disturbances are primarily associated with disturbed areas, such as agricultural fields, grazed lands, and existing access roads. In addition, many of the pull sites are within paved areas, so no disturbance will occur at these locations. PG&E will restore disturbed areas to near preconstruction conditions, including reseeding them if necessary. Operations and maintenance of the transmission lines and substations will continue in the same manner that it did prior to this project. Thus, no impacts to topsoil or substantial soil erosion are anticipated from operations and maintenance.

**Question 2.7c – Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

***No Impact***

Project construction will not result in changes to the stability of geologic units because the project does not involve grading. Project construction will not impact the potential for subsidence because it will not involve the withdrawal of subsurface fluids that can cause subsidence. The foundations of the transmission towers and substations will not be affected by the project's activities; therefore, there will be no changes to the geologic units as compared to existing conditions. Operations and maintenance of the transmission lines will continue in the same manner that it did prior to this project. Therefore, there will be no impact.

**Question 2.7d – Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

***No Impact***

The project will not trigger the collapse of soils because it will not involve any foundation modifications and there will be no water application (aside from surface watering for dust control) that could trigger the collapse of soils. Likewise, the potential for the project to be impacted by these soils will remain the same because the structure foundations and locations will not change. As a result, there will be no impact.

**Question 2.7e – Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

***No Impact***

Soil permeability is a consideration for projects that require septic system installation. Because this project will not involve installation of a septic tank, there will be no impact.

**1.0.29 References**

Bryant, W.A., and Cluett, S.E. USGS. Fault number 53b, Greenville fault zone, Marsh Creek-Greenville section, in Quaternary fault and fold database of the United States. Online. <http://earthquakes.usgs.gov/regional/qfaults> Site visited December 5, 2008.

City of Antioch. 2003. *General Plan*.

City of Brentwood. 1993 (Update 1999). *General Plan*.

City of Livermore. 2003. *General Plan*.

East Contra Costa County. Habitat Conservation Plan Association. *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. Volume 1. 2006.

PG&E. 2008. *Draft Stormwater Pollution Prevention Plan for the Contra Costa-Las Positas 230 kV Transmission Line Reconductor Project*.

USGS. Historic United States Earthquakes. Online. <http://earthquake.usgs.gov/regional/qfaults> <<http://earthquake.usgs.gov/regional/qfaults>> . Site visited December 5, 2008.

USGS. Quaternary Fault and Fold Database of the United States. Online. <http://earthquake.usgs.gov/regional/qfaults>. Site visited December 5, 2008.

**HAZARDS AND HAZARDOUS MATERIALS**

<b>Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less-Than-Significant Impact with Mitigation</b>	<b>Less-Than-Significant Impact</b>	<b>No Impact</b>
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) If located within an airport land use plan or within 2 miles of a public airport or public use airport for which such a plan has not been adopted, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) If located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
h) If located in an area in which wildlands are adjacent to urbanized areas or in which residences are intermixed with wildlands, expose people or structures to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 1.0.30 Impact Discussion

#### Question 2.8a – Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

##### *Less-Than-Significant Impact*

Routine transport, use, and disposal of hazardous materials, such as fuels, lubricating oil, and hydraulic fluid during construction could potentially result in releases of these materials. However, PG&E general construction crews or licensed contractors, all of whom have been trained and certified in the proper use, storage, and handling of hazardous materials, will handle all such materials. Proper handling of hazardous materials and spills, as described in the project’s SWPPP, will ensure that potential impacts are less than significant and that the project complies with applicable local, state, and federal policies and regulations.

During the operation and maintenance activities conducted on the existing transmission lines, PG&E routinely transports, uses, and disposes of hazardous materials. The procedures PG&E follows to safely handle and dispose of these materials once the project has been constructed will not change from existing practices. As a result, there will be no impact.

#### Question 2.8b – Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

##### *Less-Than-Significant Impact*

There is a potential for hazardous materials being used in construction vehicles and equipment to inadvertently be released through spills or leaks. In addition, helicopter fueling at the helicopter landing zones could cause a fuel release. However, the volume of hazardous materials to be used during construction is small, and all spills will be immediately controlled and contained, as described in the project’s SWPPP. As a result, impacts will be less than significant.

As stated previously in response to Question 2.8a, PG&E regularly handles hazardous materials associated with operation of their facilities. PG&E implements a Spill Prevention, Control, and Countermeasure Plan for each substation that ensures that any foreseeable upsets or accidents are appropriately addressed. These procedures will remain the same as prior to construction of the

project. Because no hazardous materials will remain on the ROW after construction of the project, there will be no permanent impacts related to hazardous materials from the project.

**Question 2.8c – Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?**

*No Impact*

There are nine schools and libraries located within 0.25 mile of the project. The closest school—Christian Children’s Academy—lies approximately 500 feet west of the transmission line in the City of Livermore in Alameda County. However, no schools are directly adjacent to the corridor or substations and any hazardous material spill would be unlikely to affect a school located 500 feet from the project corridor. The project will not use significant quantities of volatile hazardous materials, and hazardous materials that are released or encountered during excavation will be contained and managed. Due to the distance from schools and the relatively small quantity of hazardous materials to be used during construction, no impacts to schools from potential hazardous substance emissions are anticipated. Because the operation and maintenance activities will not change after construction of the project, there will be no impact to schools.

**Question 2.8d – Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?**

*No Impact*

No hazardous materials were found within 1,000 feet of the project corridor, and construction will not involve any excavation aside from the installation of the crossing structures and the shoofly; therefore, the project is unlikely to encounter hazardous materials. Though highly unlikely, any hazardous materials encountered will be handled and disposed of according to all applicable state and federal laws. As a result, no impact will occur.

**Question 2.8e – If located within an airport land use plan or within 2 miles of a public airport or public use airport for which such a plan has not been adopted, would the project result in a safety hazard for people residing or working in the project area?**

*No Impact*

Because there are no public airports located within a 2-mile radius of the project, no airports will be impacted by project construction. Because the project is not within an airport plan area or within a 2-mile radius of an airport, the tower modifications will not create a permanent air traffic hazard. As a result, there will be no impact.

**Question 2.8f – If located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

*No Impact*

Because the project is not within a 2-mile radius of a private airstrip, the tower modifications will not create a permanent air traffic hazard.

**Question 2.8g – Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

***No Impact***

Construction of the project will not impact potential emergency routes because the line will span main roads and will, therefore, not interfere with access along emergency routes to an emergency site or evacuation center. All roads used to access the project or spanned by the project will remain open at all times to emergency vehicles. Because the location of the towers and project access roads will not change as a result of the project, there will be no impact.

**Question 2.8h – If located in an area in which wildlands are adjacent to urbanized areas or in which residences are intermixed with wildlands, would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires?**

***Less-Than-Significant Impact***

Heat or sparks from vehicles or equipment have the potential to ignite dry vegetation and cause a fire. Vehicles and equipment will primarily use existing roads to access the transmission towers, all of which will be cleared of brush to reduce the fire potential. In addition, smoking will only be permitted in vehicles or cleared areas and appropriate fire-fighting equipment will be on site in accordance with PG&E's standard policy. As a result, the potential for fire from construction of the project is low and considered less than significant.

The project will be installed on existing towers in an existing transmission corridor. No new towers will be constructed as part of the project. Operations and maintenance work, which includes regular vegetation clearing to minimize the potential for fire, will continue in the same manner as it did prior to construction of the project. As a result, there will be no change in the fire potential in the area.

**1.0.31 References**

Alameda County. 2000. *East County Area Plan*.

City of Antioch. 2003. *General Plan*.

City of Brentwood. 1993 (Update 1999). *General Plan*.

City of Livermore. 2003. *General Plan*.

Contra Costa County. 2005. *General Plan*.

Department of Toxic Substances Control. EnviroStor Database. Online.  
<http://www.envirostor.dtsc.ca.gov/public/>. Site visited December 9, 2008.

ETIC Engineering, Inc. *Draft Storm Water Pollution Prevention Plan for Contra Costa- Las Positas 230 kV Transmission Line Reconductor Project*. November 13, 2008.

Google. Google Earth Version 4.2. Software. Program used December 7, 2008.

**HYDROLOGY AND WATER QUALITY**

<b>Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less-Than-Significant Impact with Mitigation</b>	<b>Less-Than-Significant Impact</b>	<b>No Impact</b>
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, causing a net deficit in aquifer volume or a lowering of the local groundwater table level? (In other words, would the production rate of pre-existing nearby wells drop to a level that would not support existing land uses or planned uses for which permits have been granted?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase to the rate or amount of surface runoff in a manner that would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year-flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year-flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Increase the possibility of inundation by seiche, tsunamis, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.32 Impact Discussion

#### Question 2.9a – Would the project violate any water quality standards or waste discharge requirements?

##### *No Impact*

Ground disturbance will be limited to excavation associated with the crossing structures and shoofly as described in Section 0Project Description. The use of helicopters during construction will reduce the need for additional ground disturbance associated with access. Rocking will occur within the pull sites and along dirt access roads leading to the pull sites; however, at the end of construction, these materials will be removed and the project area will be restored to near preconstruction conditions.

The project will not affect or alter any existing drainages. Ground disturbance within all waterbodies and wetlands will be avoided. Helicopters will be utilized to access jurisdictional areas that would otherwise be disturbed by ground access. In addition, stream setbacks have been applied to all perennial, intermittent, and ephemeral streams in accordance with the East Contra Costa County HCP/NCCP to the extent feasible. Roads or trails outside of the setbacks will be used when available. When roads outside of the setbacks are not available, those farthest from the stream channel with permeable or semi-permeable surfaces will be used.

To further minimize impacts, PG&E will implement BMPs (e.g., ERTEC environment fencing, straw wattles, silt fences, and the restoration of all disturbed areas) in accordance with the project's SWPPP. As a result, the project will not violate any water quality standards or waste discharge requirements.

Operation and maintenance activities for the 230-kV transmission line and substations will not differ from the existing operations, which comply with all water quality standards. As a result, operations and maintenance of the project will not result in new or additional water quality impacts.

**Question 2.9b – Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge, causing a net deficit in aquifer volume or a lowering of the local groundwater table level?**

***No Impact***

The project will not involve the use of groundwater. Water to be used during project-related construction activities will be limited to the amount necessary to conduct dust control activities. This water will be obtained from municipal water supplies and/or existing potable water systems from adjacent PG&E substations. Because surface disturbance will be limited (refer to Question 2.9a) and all areas will be restored following construction, groundwater recharge will not be impacted. Dewatering activities are not anticipated to be performed as part of this project. As a result, there will be no impacts to groundwater.

Operations and maintenance of the 230-kV transmission lines and substations will not differ from the existing operations, which do not involve the use of groundwater. As a result, operations and maintenance of the project will not result in new or additional impacts to groundwater.

**Question 2.9c – Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial on- or off-site erosion or siltation?**

***No Impact***

There is potential for very limited, minor erosion and siltation to result from stormwater runoff from the pull sites, crossing structure locations, shoofly, and helicopter landing sites (refer to Section 0 Geology and Soils for more information on erosion) due to ground-disturbing activities planned at these locations. In work areas near wetlands or other water features, appropriate BMPs will be installed in accordance with the project's SWPPP to avoid sedimentation or disturbance of these features. No substantial alteration of existing drainage patterns will occur. As a result, there will be no impacts.

Operation and maintenance of the 230-kV transmission line and substations will not differ from the existing operations. As a result, operation and maintenance of the project will not result in new or additional erosion or sedimentation impacts.

**Question 2.9d – Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase to the rate or amount of surface runoff in a manner that would result in on- or off-site flooding?**

***No Impact***

No grading will occur during construction of the project, and thus there will be no substantial alteration to drainage patterns within the project area. Three crossing structures near Pull Site 8B will be installed within a 100-year floodplain, but no grading is anticipated to install these temporary structures. Rocking will temporarily cover vegetation, but will not substantially change the slope or drainage pattern across the site. In the event that vegetation clearing is necessary in these areas, BMPs will be implemented until the areas can be restored to near

preconstruction conditions. These impacts will temporary in nature. As a result, the project will not result in on- or off-site flooding impacts.

Operation and maintenance of the 230-kV transmission lines and substations will not differ from the existing operations, which do not alter existing drainage patterns. As a result, operations and maintenance of the project will not result in new or additional on- or off-site flooding impacts.

**Question 2.9e – Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

***No Impact***

The project is located within an existing transmission line corridor, in which no new structures will be constructed. Construction associated with the substations will be limited to within the existing fenced substations. Project construction will not include any paving activities. Because the permeability of the ground will not be significantly altered and the BMPs outlined in the SWPPP will be implemented, the project will not result in any additional runoff. As a result, stormwater drainage systems will not be affected. Therefore, construction of the project will not result in substantial additional sources of polluted runoff.

**Question 2.9f – Would the project otherwise substantially degrade water quality?**

***No Impact***

During construction, routine transport, use, and disposal of fuels, lubricating oils, and hydraulic fluid will be required. In addition, helicopters fueling at the landing zones could cause a hazardous material release. Potential spills or releases of hazardous materials could result in adverse impacts to surface and/or groundwater. However, releases are not highly probable and all drainages will be protected in accordance with the project's SWPPP (refer to Section 0 Hazards and Hazardous Materials for more information about the potential for spills). As a result, the project will not substantially degrade water quality in the project area.

Because operation and maintenance activities for the 230-kV transmission lines and substations will not change after the construction of the project, no new or additional impacts to water quality will occur.

**Question 2.9g – Would the project place housing within a 100-year-flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

***No Impact***

No housing will be constructed as part of this project, so none will be placed within a 100-year flood hazard area. As a result, there will be no impact.

**Question 2.9h – Would the project place within a 100-year-flood hazard area structures which would impede or redirect flood flows?**

***No Impact***

Three crossing structures will be temporarily installed within a 100-year flood hazard area to ensure human safety during reconductoring activities. The size of the crossing structure poles will not be large enough to impede flows. As a result, there will be no impact.

**Question 2.9i – Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

***No Impact***

Project construction will not expose people or structures to a significant risk of loss, injury, or death due to flooding, as no on- or off-site flood impacts are expected, and no permanent buildings will be placed in a 100-year flood hazard area. The only structures to be installed in a flood zone that could be affected are the three crossing structures near Pull Site 8B. The crossing structures are small in diameter and will be removed upon completion of construction. As a result, they will have no impact on flooding. Therefore, project construction will not expose people or structures to a significant risk of loss, injury, or death involving flooding.

PG&E will employ the same operation and maintenance activities of the transmission lines and substations as it did prior to this project. Therefore, operations and maintenance of this project will have no impact on flood exposure.

**Question 2.9j – Would the project result in inundation by seiche, tsunami, or mudflow?**

***No Impact***

The Los Vaqueros Watershed is the only waterbody large enough in the project vicinity that could possibly result in a seismic seiche. However, given the fact that there are no known occurrences in history and that the project duration is short, the likelihood of inundation by a seismic seiche, tsunami, or mudflow occurring during the construction of the project is very low. Because the project involves only minor modifications to existing towers and substation sites, it will not increase the likelihood of associated hazards if such an event occurs. Therefore, there will be no impact.

**1.0.33 References**

Contra Costa County. California Mapping Information Center. Online.  
<http://www.ccmmap.us/default.asp#>. Site visited December 5, 2008.

East Contra Costa Habitat Conservation Plan Association. East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan (October 2006). Online.  
<http://www.co.contra-costa.ca.us/depart/cd/water/HCP/documents.html>. Site visited on December 4, 2008.

Federal Emergency Management Agency. Map Service Center. Online.  
<http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10001&store>

[Id=10001&categoryId=12001&langId=-1&userType=G&type=1](#). Site visited December 5, 2008.

PG&E. 2008. *Draft Storm Water Pollution Prevention Plan for Contra Costa-Las Positas 230 kV Transmission Line Reconductor Project.*

## LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.34 Impact Discussion

#### Question 2.10a – Would the project divide an established community?

##### *No Impact*

The Contra Costa-Las Positas 230 kV Line and the Contra Costa-Lone Tree 230 kV Line are existing transmission lines and no new facilities are being constructed as part of the project; therefore, the project will not divide an established community. Temporary work areas, including pull sites, landing zones, temporary work areas, overland access roads, and crossing structures will be located adjacent to the existing lines, predominantly in vacant or open space areas. As a result, there will be no impact.

#### Question 2.10b – Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

##### *No Impact*

Construction of the project does not conflict with any environmental plans, policies, or regulations adopted by agencies with jurisdiction over local land uses. After tower modifications and reconductoring are completed, PG&E will employ the same operations and maintenance activities of the transmission lines as it did prior to this project. Therefore, there will be no impact.

**Question 2.10c – Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?**

***No Impact***

Because this project is being designed to comply with the East Contra Costa County HCP/NCCP, and because there are no other applicable conservation plans for the project area, there will be no impact.

**1.0.35 References**

City of Antioch. 2003. *General Plan*.

City of Brentwood. 1993 (Update 1999). *General Plan*.

City of Livermore. 2003. *General Plan*.

East Contra Costa County. Habitat Conservation Plan Association. *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. Volume 1. 2006.

## MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.36 Impact Discussion

**Question 2.11a – Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

***No Impact***

There are no active mining operations within the existing transmission line corridor. Likewise, there are no known areas designated or delineated for mineral resource recovery (Mineral Resource Zone 2 or otherwise) along the line. In addition, there are no known mineral resources that have noted value to the region and to the residents of the state. As a result, the project will have no impact on mineral resources.

**Question 2.11b – Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

***No Impact***

There are no known mineral resources that are locally important within the vicinity of the project area; therefore, there will be no impact.

### 1.0.37 References

USGS. Altamont. 1:24,000. 1981.

USGS. Antioch North. 1:24,000. 1978.

USGS. Antioch South. 1:24,000. 1980.

USGS. Brentwood. 1:24,000. 1975.

USGS. Byron Hot Springs. 1:24,000. 1991.

**NOISE**

<b>Would the project result in:</b>	<b>Potentially Significant Impact</b>	<b>Less-Than-Significant Impact with Mitigation</b>	<b>Less-Than-Significant Impact</b>	<b>No Impact</b>
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) If located within an airport land use plan or within 2 miles of a public airport or public use airport for which such a plan has not been adopted, exposure of persons residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) If located within the vicinity of a private airstrip, exposure of persons residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**1.0.38 Existing Conditions**

**Regulatory Background**

***Contra Costa County***

*General Plan, Noise Element*

The Contra Costa County General Plan Noise Element sets Normally Acceptable noise levels for stationary sources on Residential Land Uses at a maximum 60 A-weighted decibels (dBA) day-night equivalent noise level ( $L_{dn}$ ). The Conditionally Acceptable noise-level maximum for that land use is set at 70 dBA- $L_{dn}$ . Normally Acceptable noise levels for non-hotel, commercial land uses are set at a maximum of 70 dBA- $L_{dn}$  and Conditionally Acceptable levels are set at a

maximum of 77 dBA- $L_{dn}$ . Maximum Normally Acceptable noise levels for agricultural and recreational areas are 70 and 75 dBA- $L_{dn}$ , respectively.

The Noise Element also states that construction activities must take place during the hours of the day that are not noise-sensitive for the adjacent land uses and should occur during normal work hours.

#### *Municipal Code*

The Contra Costa County Municipal Code does not have any regulations that are pertinent to temporary construction noise.

#### ***Alameda County***

##### *East County Area Plan*

The East County Area Plan does not have any regulations that are pertinent to temporary construction noise.

##### *General Ordinance Code*

Chapter 6.60 Noise of the Alameda County General Ordinance Code states that noise sources associated with construction are not regulated, provided that construction activities do not take place before 7:00 a.m. or after 7:00 p.m. on any day except for Saturday or Sunday, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday.

#### ***City of Antioch***

##### *General Plan*

The City of Antioch General Plan, Chapter 11.6 Noise Objectives and Policies sets acceptable exterior noise levels at residential land uses to at 60 dBA-Community Noise Equivalent Level (CNEL), school classrooms at 65 dBA-CNEL, and commercial and industrial uses at 70 dBA-CNEL.

Construction activities that occur adjacent to noise-sensitive land uses require the implementation of a construction-related noise mitigation plan. This plan requires the following:

- a description of the location of construction equipment storage and maintenance areas
- a list of measures documenting methods to minimize noise impacts
- all construction equipment utilize noise-suppression devices, and
- that haul truck deliveries be subject to the same hours of operation as construction equipment.

The General Plan also limits construction to the hours of 7:00 a.m. through 7:00 p.m. Monday through Saturday. No construction shall be allowed on Sundays and public holidays.

#### *Code of Ordinances*

Title 5, Chapter 17 Disturbing the Peace of the Antioch Code of Ordinances restricts the operation of heavy construction equipment on weekdays prior to 7:00 a.m. and after 6:00 p.m.,

on weekdays within 300 feet of occupied dwelling space, prior to 8:00 a.m. and after 5:00 p.m., and, on weekends and holidays, prior to 9:00 a.m. and after 5:00 p.m., irrespective of the distance from the occupied dwelling.

### ***City of Brentwood***

#### *General Plan*

Chapter 4 Noise Element of the City of Brentwood General Plan limits construction activities near sensitive land uses to the hours of 9:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 7:00 p.m. on Saturdays. Construction is prohibited on Sundays.

#### *Municipal Code*

Chapter 9.32 Noise Regulations of the Municipal Code prohibits heavy construction during the following periods:

- Monday through Thursday between the hours of 5:00 p.m. of one day and 8:00 a.m. of the next,
- Friday between the hours of 5:00 p.m. of one day and 9:00 a.m. of the next,
- Saturday after 4:00 p.m., and
- on Sunday or city holidays.

In addition, when adjacent to or within any residential zone in the city, no one shall operate construction equipment or perform any outside construction work that will create any noise which exceeds the following limits:

- 60 decibels (dB) for a total period of more than 30 minutes in any consecutive 60-minute period
- 65 dB for a total period of more than 15 minutes in any consecutive 60-minute period
- 70 dB for a total period of more than 5 minutes in any consecutive 60-minute period
- 75 dB for a total period of more than 1 minute in any consecutive 60-minute period
- 80 dB for any time

Emergency construction work is exempt from these regulations.

### ***City of Livermore***

#### *General Plan, Noise Element*

The City of Livermore General Plan Noise Element sets Normally Acceptable noise levels for stationary sources on Residential Land Uses at a maximum 60 dBA-L<sub>dn</sub>. The Conditionally Acceptable noise-level maximum for that land use is set at 70 dBA-L<sub>dn</sub>. Normally Acceptable noise levels for non-hotel, commercial land uses are set at a maximum of 70 dBA-L<sub>dn</sub> and Conditionally Acceptable levels are set at a maximum of 75 dBA-L<sub>dn</sub>. Maximum Normally Acceptable noise levels for agricultural and recreational areas are 75 and 70 dBA-L<sub>dn</sub>, respectively.

The city requires that noise effects on sensitive land uses be limited from exceeding 55 dBA- $L_{50}$ <sup>13</sup> between 7:00 a.m. and 10:00 p.m. and 45 dBA- $L_{50}$  between 10:00 p.m. and 7:00 a.m. In order to allow for temporary construction, these standards may be exceeded within the receiving land use by 5 dBA for a cumulative period of no more than 15 minutes in any hour, 10 dBA for a cumulative period of no more than 5 minutes in any hour, or 15 dBA for a cumulative period of no more than 1 minute in any hour.

#### *Municipal Code*

Chapter 9.36 Noise of the Livermore Municipal Code prohibits the operation of heavy construction equipment between the hours of 6:00 p.m. Saturday to 7:00 a.m. Monday; 8:00 p.m. to 7:00 a.m. on Monday, Tuesday, Wednesday and Thursdays; 8:00 p.m. Friday to 9:00 a.m. on Saturday; or on city-observed holidays.

### **Existing Noise Sources**

Transportation-related activities are the primary existing noise sources in the project area. Approximately 35 percent of the project is located within developed communities and, as a result, the primary source of noise is traffic from the existing road network. In addition to vehicular traffic, airplanes and trains are additional sources of noise.

### **Sensitive Receptors**

Sensitive noise receptors are typically characterized by, but not limited to, single- and multi-family residences, places of worship, schools, and hospitals. Due to the project's proximity to many developed areas, there are many sensitive receptors located within 0.25 mile of the project. Approximately 35 percent of the project traverses developed areas and, as a result, spans or parallels sensitive receptors.

### **1.0.39 Impact Discussion**

**Question 2.12a – Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

#### *Less-Than-Significant Impact With Mitigation*

The operation of heavy construction equipment, such as helicopters, cranes, and augers, may temporarily expose sensitive receptors to noise levels in excess of the regulations provided in the local ordinances. These exceedances will create the potential for a significant impact to occur during construction. In order to reduce these temporary potential impacts to a less-than-significant level, mitigation measures MM-NOI-01 through MM-NOI-03 will be implemented.

Construction hours—typically between 7:00 a.m. and 7:00 p.m., 7 days per week—will be adjusted according to the local county and city ordinances, which generally restrict work hours on Saturdays and prohibit work on Sundays and holidays. As a result, impacts will be less than significant.

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<sup>13</sup>  $L_{50}$  is a statistical descriptor of noise level where a chosen noise level is exceeded 50 percent of the time.

No additional audible transmission line noise is anticipated from upgrading the ampacity of the lines, including coronal-generated sounds. Noise attributed to operation and maintenance activities will not change as a result of the project. Therefore, there will be no impact.

**Question 2.12b – Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

***Less-Than-Significant Impact***

No excavation other than to install the temporary crossing structure and shoo-fly poles will occur during construction. Additional vibration will be created by the use of helicopters. While these activities will produce some groundborne vibration, they will be temporary, localized, and dispersed along the project. Impacts due to exposure to groundborne noise and vibration will be less than significant.

Existing operation and maintenance procedures for the transmission lines and substations will not change as a result of the project. Therefore, there will be no additional or new impacts related to groundborne noise or vibration.

**Question 2.12c – Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

***No Impact***

Project construction will be temporary, taking place along various parts of the project for a total period of approximately 3.5 months. Construction activities will only cause a temporary increase in ambient noise; therefore, there will be no permanent impact to ambient noise in the project area.

No additional audible transmission line noise is anticipated from upgrading the ampacity of the line, including coronal-generated sounds. Therefore, there will be no permanent change in the ambient noise levels in the project area. Existing maintenance procedures for the transmission lines and substations will not change as a result of the project. Therefore, there will be no additional or new noise impacts associated with these activities. As a result, there will be no impact.

**Question 2.12d – Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

***Less-Than-Significant Impact***

Construction of project will result in temporary increases in noise levels in the immediate vicinity of active construction activities. Equipment used to construct the project may include flatbed trucks, boom trucks, rigging and mechanic trucks, air compressors and generators, small-wheeled cranes, man lifts, crew trucks, and tensioners. Helicopters may also be used to assist with overhead construction activities.

Two types of noise are associated with construction activities: intermittent and continuous. The maximum intermittent construction noise levels range from 65 to 110 dBA at 25 yards for conductor installation and structure modification operations. No continuous noise is anticipated

during the construction phase of this project. Construction hours will generally be between 7:00 a.m. and 7:00 p.m., 7 days per week, except when prohibited by local ordinances.

During reconductoring activities, helicopters will make approximately four trips to each tower and will briefly hover in the vicinity for 5 to 10 minutes at a time. An additional two trips will be required to towers which have been raised in order to relocate the conductor to the new tower arm locations. The flight paths for approach and departure to the transmission lines and associated towers will avoid residential areas to the greatest extent possible.

Noise levels may be higher at helicopter landing zones. Many landing zones have residences and/or businesses within approximately 500 feet. Landing zones will be used for approximately 3.5 months on a continual basis during construction. Helicopters will take off and land approximately 15 to 20 times per day at a given landing zone during construction.

Construction equipment and helicopters that will be used to construct the project will generate localized, temporary increases in ambient noise in the area. Noise will be generated for a period of 3.5 months. Due to the fact that this construction noise will be short term and distributed over the entire line, these temporary increases in ambient noise will be less than significant. In addition, PG&E will notify the property owners in advance of the start of construction as described in MM-NOI-02, will keep equipment tuned and in proper working order, and will ensure that all equipment has the standard mufflers appropriate for each piece of equipment. As a result, impacts will be less than significant.

Existing operation and maintenance procedures for the transmission lines and substations will not change as a result of the project. Therefore, there will be no additional temporary noise in the project area once construction has been completed.

**Question 2.12e – If located within an airport land use plan or within 2 miles of a public airport or public use airport for which such a plan has not been adopted, would the project result in exposure of persons residing or working in the project area to excessive noise levels?**

*No Impact*

The closest public airport to the project is Livermore Municipal Airport, located approximately 4.6 miles west of the project. The project's footprint will not change from its existing configuration and does not lie within an airport land use plan or within 2 miles of a public airport. As a result, no impact associated with air traffic noise will occur.

**Question 2.12f – If located within the vicinity of a private airstrip, would the project result in exposure of persons residing or working in the project area to excessive noise levels?**

*No Impact*

The closest private airstrip to the project—Meadowlark Field—is located approximately 3.5 miles to the southeast. Because the project does not lie within the vicinity of a private airstrip, no impact associated with air traffic noise will occur.

The project's footprint will not change from its existing configuration and as discussed previously, the project does not lie within the vicinity of a private airstrip. As a result, no impact associated with air traffic noise will occur.

#### **1.0.40 Mitigation Measures**

The following mitigation measures will be implemented during project construction to ensure impacts remain below the significance thresholds:

- MM-NOI-01: All construction activities will be limited to the hours permitted by the applicable local agency ordinances, except for unplanned repairs that may be required, work that must be conducted in accordance with CAISO clearances, and work to cross roadways during non-peak hours.
- MM-NOI-02: All property owners and tenants within 300 feet of the project and any schools within 1,000 feet of the project will be notified at least 1 week prior to the start of construction activities. Property owners, tenants and schools will be notified by mail and possibly by telephone. PG&E will establish and publicize a telephone contact number for receiving questions or complaints during construction and will develop procedures for responding to callers. The telephone number will be relayed to all property owners, tenants, and schools during the mail notification process.
- MM-NOI-03: PG&E will develop and submit a Noise Mitigation Plan to the City of Antioch for approval prior to the commencement of construction.

#### **1.0.41 References**

Alameda County. 2008. Title 6. Chapter 6.60. Noise. *Alameda County General Ordinance Code*.

Alameda County. 2000. *East County Area Plan*.

City of Antioch. 2008. Title 5. Chapter 17. Disturbing the Peace. *City of Antioch Code of Ordinances*.

City of Antioch. 2003. *General Plan*.

City of Brentwood. 2008. Title 9. Chapter 9.32. Noise Regulations. *Brentwood Municipal Code*.

City of Brentwood. 1993 (Update 1999). *General Plan*.

City of Livermore. 2008. Title 9. Chapter 9.36. Noise. *Livermore Municipal Code*.

City of Livermore. 2003. *General Plan*.

Contra Costa County. 2008. *Contra Costa County Municipal Code*.

Contra Costa County. 2005. *General Plan*.

Federal Aviation Administration. Airport Contacts Information. Online.  
[http://www.faa.gov/airports\\_airtraffic/airports/airport\\_safety/airportdata\\_5010/](http://www.faa.gov/airports_airtraffic/airports/airport_safety/airportdata_5010/). Site  
visited January 16, 2008.

Google. Google Earth Version 4.2. Software. Program used December 7, 2008.

U.S. EPA. Noise from Construction Equipment and Operations, Building Equipment and  
Home Appliances. 1971.

## POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.42 Impact Discussion

**Question 2.13a – Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

#### *No Impact*

During construction, it is estimated that up to 30 people are anticipated to be working on the project at any given time—three crews of eight workers, two helicopter crews of two personnel, and up to three construction monitors—for a period of 3.5 months. It is anticipated that approximately 30 to 50 percent of the labor force required for construction will be local hires. The remaining workers are expected to commute from outside of the project area. Because construction will be temporary and the workforce will be relatively small, the project will not result in a significant permanent increase in population. Because the project involves the reconductoring of existing transmission lines, operations and maintenance of the lines will be conducted by existing PG&E employees and will not result in the hiring of new personnel. Therefore, there will be no impact.

**Question 2.13b – Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

#### *No Impact*

Project construction and operations and maintenance will be conducted within an existing transmission line corridor and adjacent areas. No housing will be displaced and there will be no impacts to existing housing. Therefore, no replacement housing will be needed and there will be no impact.

**Question 2.13c – Would the project displace substantial numbers of people, necessitating the construction of replacement house elsewhere?**

***No Impact***

Project construction and operations and maintenance will not result in the displacement of any residents because it will be conducted within an existing transmission line corridor. Additionally, PG&E will use helicopter flight paths that will avoid residential areas to the extent feasible. Therefore, no residents will be temporarily displaced, and construction of additional housing elsewhere will not be necessary. As a result, there will be no impact.

**1.0.43 References**

City of Antioch. 2003. *General Plan*.

City of Brentwood. 1993 (Update 1999). *General Plan*.

City of Livermore. 2003. *General Plan*.

## PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities (the construction of which could cause significant environmental impacts), in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.44 Impact Discussion

#### Question 2.14a.i – Would the project result in substantial adverse physical impacts to fire protection?

##### *No Impact*

Emergency vehicle access will not be directly impacted during construction because all streets will remain open to emergency vehicles at all times throughout construction. Increased vehicle traffic and brief closures (approximately 10 to 15 minutes) may occur while pulling the conductor across freeways and roadways, if flaggers are used, or during the installation and removal of crossing structures. While this could indirectly impact fire service access, emergency vehicles will be provided access even in the event of temporary freeway or road closures. In addition, PG&E will obtain encroachment permits and coordinate with the local agencies as required. As a result, there will be no impact to fire protection services.

#### Question 2.14a.ii – Would the project result in substantial adverse physical impacts to police protection?

##### *No Impact*

As described in the response to Question 2.14a.i, emergency vehicle access will not be directly impacted during construction. Brief road closures may occur during construction; however,

emergency vehicles will be provided access even in the event of temporary freeway or road closures. As a result, there will be no impact to police services.

**Question 2.14a.iii – Would the project result in substantial adverse physical impacts to schools?**

***No Impact***

The project will not increase the temporary demand for school enrollment because it does not perceptibly increase local population during the short duration of construction. The majority of the workforce will be local; therefore, school enrollment will not be affected and no new schools will be necessary as a result of the project. As a result, there will be no impact to schools.

**Question 2.14a.iv – Would the project result in substantial adverse physical impacts to parks?**

***No Impact***

There are nine recreational facilities that are crossed by the project. Section 2.15 Recreation provides more information regarding potential impacts to recreational facilities. Construction of the project will not significantly increase the local population nor will it reduce the number of park facilities, so no new parks will be needed. As a result, there will be no impact.

**Question 2.14a.v – Would the project result in substantial adverse physical impacts to other public facilities?**

***No Impact***

No work is anticipated on any tower foundations or footings, and most construction activities will occur aboveground. However, installation of crossing structures, which involves minor subsurface work and potential impacts to overhead utilities, may be necessary at some locations (Refer to Section 1. Project Description for more information about crossing structures). Before any subsurface work occurs, PG&E will contact the Underground Service Alert to verify the locations of existing underground utilities. Prior to commencing work in close proximity to existing overhead utilities, PG&E will coordinate with other utilities, phone companies, and cable companies to avoid any potential construction-related impacts to these utilities.

Representatives from all aerial utilities crossed by the project will be notified and invited to be on site for monitoring during construction. These standard measures will ensure that existing utilities are not impacted.

A temporary shoofly will be located just outside of the existing Lone Tree Substation in the City of Antioch. The shoofly will be installed for the purpose of maintaining looped service to Lone Tree, Cayetano, North Dublin, Vineyard, and Los Positas substations. Without the shoofly, the loss of a single line would result in an outage to customers. With the installation of the shoofly to protect against an outage, there will be no impacts.

The project will not result in the need for additional government or public services, such as schools or parks, because the project will not induce population growth. Since the displacement of existing homes will not occur, no new construction is required elsewhere. Once the project is constructed, there will be a positive impact on utilities because this project will increase both

electric reliability and capacity for existing and future electric customers within Alameda and Contra Costa counties. No other permanent impacts to utilities will occur.

#### **1.0.45 References**

City of Antioch. 2003. *General Plan*.

City of Brentwood. 1993 (Update 1999). *General Plan*.

City of Livermore. 2003. *General Plan*.

Google. Google Earth Version 4.2. Software. Program used December 8, 2008.

## RECREATION

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.46 Impact Discussion

**Question 2.15a – Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

#### *Less-Than-Significant Impact*

The project will create a nominal temporary increase in population as a result of construction, but will not put additional demand on existing recreational facility use.

As summarized in Table 9: Recreational Areas Near the Project, the existing lines cross the Country Manor Park, Prewitt Family Park, Shadow Lakes Golf Club, Deer Ridge Golf Club, John Marsh/Cowell Ranch Property of the California Department of Parks and Recreation, Los Vaqueros Watershed, and an unnamed residential park. Visitors that frequent these facilities may be exposed to increased noise, dust, and odors for a short duration from construction equipment and helicopter use. PG&E does not anticipate the closure of any recreational trails; however, if temporary closure of any trail is deemed necessary for safety reasons or jurisdictional requirements, advance notice of trail closure will be provided in coordination with the relevant company, agency, or organization. PG&E may also use some of the larger paved, gravel, or dirt trails for project access. Because there are several other recreational areas, including cycling trails, in the vicinity and construction activities are limited in duration, impacts will be less than significant.

A portion of the parking lot for the interpretation center at the northern entrance to the Los Vaqueros Reservoir will be utilized for Pull Site 8B. Additionally, Pull Site 8A/Landing Zone 1 will be located adjacent to the parking lot. Crossing structures will be placed where the lines cross the entrance road during pulling activities. These activities are anticipated to have a less-than-significant impact on the recreational use of the Los Vaqueros Reservoir, as they will be

short-term and temporary in nature. The southern entrance to the watershed will be unaffected during construction of the project.

**Table 9: Recreational Areas Near the Project**

<b>Name</b>	<b>Recreational Activities</b>	<b>Location</b>
Country Manor Park	Walking, biking	Tower 2/19 to Tower 3/21
Hillcrest Park	Walking, biking	Approximately 0.25 mile east of Tower 2/15
Prewitt Family Park	Waterpark	Tower 3/25 to Tower 4/27
Knoll Park	Walking, biking	Approximately 0.25 mile east of Tower 4/26
Unnamed small residential park	Walking, biking	Between Tower 6/40 and Tower 6/41
Shadow Lakes Golf Club	Golf	Tower 6/41 to Tower 7/43
Deer Ridge Golf Club	Golf	Tower 7/44 to between Tower 8/49 and Tower 8/50
John Marsh/Cowell Ranch Property of the California Department of Parks and Recreation	Tours, hiking	From between Tower 8/49 and Tower 8/50 to between Tower 10/63 and Tower 11/64
Los Vaqueros Watershed	Hiking, biking, fishing, equestrian use	From between Tower 10/63 and Tower 11/64 to Tower 19/103
Springtown Preserve	Bird watching	Adjacent to the project from Tower 21/116 to Tower 22/122

Three recreational facilities—Springtown Preserve, Knoll Park, and Hillcrest Park—are located within 0.25 mile of the project, but are not crossed or directly adjacent to the project. Impacts to these facilities are not anticipated during construction because the towers within the closest proximity to these recreational areas will not be modified. Additionally, reconductoring work will be conducted within the existing transmission line corridor and will not result in impacts to any of these recreational facilities. The project will not involve additional housing or long-term population immigration that will generate a permanent increase in park use. Therefore, there will be no impact.

**Question 2.15b – Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

***No Impact***

The project will not involve the construction of new or the expansion of existing recreational facilities. Additionally, construction of this project will occur within PG&E’s existing

transmission line corridor, using existing roads, and will not involve the creation of a new utility corridor through recreational facilities. Therefore, there will be no new permanent impacts to recreational facilities associated with these activities.

#### **1.0.47 References**

Contra Costa Water District. Los Vaqueros Watershed. Online:

<http://www.ccwater.com/losvaqueros/>. Site visited December 8, 2008.

Google. Google Earth Version 4.2. Software. Program used December 8, 2008.

Springtown Preserve. Online: <http://www.springtownpreserve.org/>. Site visited December 8, 2008.

## TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in substantial safety risks caused by a change in air traffic patterns, including either an increase in traffic levels or a change in location?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.48 Impact Discussion

**Question 2.16a – Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?**

#### *Less-Than-Significant Impact*

Project-related truck traffic will be limited to transporting supplies to and from construction areas along the transmission line corridor. Approximately 30 truck trips to and from the

transmission towers and pull sites each day will be required for the reconductoring work. It is estimated that up to 30 people per day will work during peak construction times. Personnel will generally drive to the worksite at the beginning of the day and leave at the end of the day, with fewer people traveling to and from the worksite throughout the day. This will result in between approximately 30 and 40 personal vehicle roundtrips each day during peak construction times. PG&E will encourage carpooling to the project site to reduce personal-vehicle traffic in the project area to the greatest extent possible.

This project-related traffic will result in a slight increase in the existing daily traffic, but will not cause changes in the established Level of Service<sup>14</sup> (LOS) in and around the project area. In addition, this slight increase in traffic will be temporary, dispersed over the entire project, and short-term. As a result, impacts to traffic will be less than significant.

Traffic flow may also be disrupted during conductor pulling over other roadways during the installation and removal of crossing structures, or if flaggers are used during pulls instead of temporary crossing structures. Roads may be closed for 10 to 15 minutes during the pull of each conductor, for a total of two to four closures at each crossing. The pulls will be conducted during low-volume traffic times (i.e., on weekend mornings between 5:00 a.m. and 10:00 a.m.). PG&E will obtain encroachment permits and coordinate with the local agencies as required prior to conducting the pulls. Because these closures will be isolated, temporary, short in duration, and coordinated with local regulatory agencies, the project will not significantly disrupt traffic.

Operations and maintenance of project facilities will not result in significant impacts to transportation and traffic in the project area. The recondored transmission lines will be operated in the same manner as the existing lines where current operation activities occur and traffic impacts are insignificant. PG&E does not anticipate that any additional trips beyond those currently required for their facilities to operate or maintain the recondored lines; therefore, operations of the project will not result in any new traffic impacts.

**Question 2.16b – Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

***No Impact***

As stated previously, the project-related construction traffic will result in a slight increase in the existing daily traffic. This slight increase in traffic will be temporary, dispersed over the entire project, and short-term—lasting approximately 3.5 months. Roads spanned by the project may require a temporary closure to through traffic (approximately 10 to 15 minutes), but this will occur during non-peak traffic times to the extent possible. The temporary project-related traffic increase and periodic, short-term road closures will cause no impact to the existing LOS standards.

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<sup>14</sup> LOS is based on traffic congestion, which is measured by dividing traffic volume by roadway capacity. The resulting number, known as the volume-to-capacity (V/C) ratio, usually ranges from 0 to 1.0. The V/C ratings are divided into six LOS categories, A through F, representing conditions ranging from unrestricted traffic flow (A) to extreme traffic congestion (F).

The operations and maintenance of the project after construction will not require any additional traffic over pre-project conditions; therefore, there will be no impact.

**Question 2.16c – Would the project result in substantial safety risks caused by a change in air traffic patterns, including either an increase in traffic levels or a change in location?**

***No Impact***

Helicopters will be used for a significant amount of tower and line work, which will temporarily increase air traffic during construction. Helicopter construction activities will be based from the pull sites and helicopter landing zones as shown in Attachment A: Detailed Project Map. The helicopter contractor will coordinate flight patterns with local air traffic control and the Federal Aviation Administration prior to construction to prevent any adverse impacts due to increased air traffic.

There are no airports within 2 miles of the project area where existing air traffic patterns would be affected by project helicopter traffic. Because the use of helicopters will be temporary and limited in duration, there are no airports within 2 miles, and the helicopter contractor will coordinate with the FAA on flight plans, there will be no impacts to air traffic patterns.

The project will not involve the installation of any new facilities, permanent work areas, or access roads. However, the FAA limits construction or alteration of any project more than 200 feet tall, work within 10,000 feet of a public or military-use airport, and/or work within 5,000 feet of a public-use heliport. The increased height of the transmission line structures will not violate any of these restrictions. As a result, there will be no impact.

Occasionally, the line may require maintenance activities performed with the assistance of a helicopter. PG&E does not anticipate an increase in the number of these trips from those currently required to operate and maintain the existing facilities. Operation of the project will, therefore, not impact air traffic patterns or levels.

**Question 2.16d – Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

***No Impact***

Because no new access roads will be constructed as a result of the project, no design features or incompatible uses will result. Likewise, as stated previously, the increased height of the transmission line towers will not create hazards to air traffic. As a result, there will be no impact.

**Question 2.16e – Would the project result in inadequate emergency access?**

***No Impact***

Emergency access will not be directly impacted during construction because all streets will remain open to emergency vehicles at all times throughout construction. Increased vehicle traffic and brief closures (approximately 10 to 15 minutes) may occur while pulling the conductor across freeways and roadways, if flaggers are used, or during the installation and removal of crossing structures. While this could indirectly impact emergency access, as described previously, the increase in traffic will be insignificant and emergency vehicles will be provided

access even in the event of temporary freeway or road closures. As a result, there will be no impact to emergency access.

Operations and maintenance of the project will not result in any additional traffic over pre-project conditions or any planned road closures; therefore, no impact to emergency vehicle access will occur from project operation.

**Question 2.16f – Would the project result in inadequate parking capacity?**

***No Impact***

The project work areas and towers are not located in or adjacent to any public parking lots and construction will not require lane closures that could affect public on-street parking. Construction personnel will park in designated areas that will not impact public parking capacity. As a result, construction will not result in inadequate public parking capacity.

Operation and maintenance activities for the lines and substations will not require any additional parking spaces than pre-project conditions did; therefore, operations and maintenance of the project will result in no impact to public parking capacity.

**Question 2.16g – Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

***No Impact***

The lines will span Union Pacific Railroad (UPRR) tracks used by UPRR and Amtrak at one location between Towers 0/1 and 0/2. PG&E will coordinate with these operators to schedule the crossing so that service is not affected by construction. The line will also span various bus routes that could be indirectly impacted as a result of increased traffic and temporary road closures. Crossing structures will be used to avoid traffic delays along these routes. The line will also span municipal trails along the project alignment; however, PG&E does not anticipate closing them during construction. Because these trails will remain open, they will not be impacted.

Construction will occur within an existing transmission corridor and will not involve any activities that will conflict with transportation policies, plans, or programs. PG&E will obtain encroachment permits to conduct work in public ROWs. Construction of the project will not conflict with any policies supporting alternative transportation. As a result, there will be no impact.

Operations and maintenance activities will not change from their preconstruction state; therefore, rail, bus, and bicycle traffic will not be altered by operation of the project. No impact will result to alternative transportation.

**1.0.49 References**

Amtrak. Amtrak. Online.

<http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/HomePage>. Site visited December 4, 2008.

East Bay Regional Park District. Maps. Online. <http://www.ebparks.org/parks/maps>. Site visited December 4, 2008.

Google. Google Earth Version 4.2. Software. Program used December 7, 2008.

## UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available from existing entitlements and resources to serve the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 1.0.50 Impact Discussion

#### Question 2.17a – Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

##### *No Impact*

Because project construction will only involve tower modification, reconductoring, and minor substation modifications, water use will be minimal and limited to dust control activities and

crewmember consumption. Therefore, no new sources of point or nonpoint water pollution will result from construction and no wastewater treatment requirements established by the Regional Water Quality Control Board will be exceeded. PG&E will employ the same operation and maintenance activities of the transmission lines and substations as it did prior to this project. Therefore, there will be no impact.

**Question 2.17b – Would the project result in the construction of new water or wastewater treatment facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?**

***No Impact***

Portable restrooms will be used and maintained during construction and removed after the completion of the project. No impact to local sewer systems will result from the project and no new wastewater treatment facilities will be required. Project construction or operations and maintenance will not directly or indirectly result in new or expanded development. As a result, no extension of a sewer trunk line to serve new development will be required nor will new or expanded water treatment facilities be needed. Therefore, there will be no impact.

**Question 2.17c – Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?**

***No Impact***

The project area will be accessed primarily through existing roads and no grading or blading of these roads is anticipated. All access roads will be restored to near preconstruction conditions once project construction has been completed. Because existing access roads will be used, construction will not increase stormwater run-off. In addition, because the project involves reconducting existing lines within an established corridor and minor modifications to existing substations, the same operations and maintenance activities will be conducted for the new lines. Therefore, the project will not require or result in the need for new stormwater drainage facilities or expansion of existing facilities. Therefore, there will be no impact.

**Question 2.17d – Would the project have sufficient water supplies available from existing entitlements and resources to serve the project?**

***No Impact***

Sufficient sources of potable water are available for PG&E to conduct standard dust and fire-suppressant activities, as well as for crew consumption during construction. Operations and maintenance activities for the project will be conducted in the same manner as previously conducted. Therefore, the project will have no impact on water supplies or entitlements.

**Question 2.17e – Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?**

***No Impact***

During project construction, portable restrooms will be used. Additionally, water use will be minimal and limited to dust control activities and crew consumption. Because the project involves reconductoring of existing transmission lines and minor substation modifications, the same operations and maintenance activities will resume for the new facilities; therefore, no wastewater treatment will be required as part of the project and there will be no impacts to wastewater treatment providers or their capacities.

**Question 2.17f – Would the project be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?**

***Less-Than-Significant Impact***

There are three landfills in the project area—Keller Canyon Landfill in Pittsburg, Altamont Landfill and Resource Recovery in Livermore, and Vasco Road Sanitary Landfill in Livermore. Keller Canyon Landfill has a remaining capacity of approximately 85 percent, Altamont Landfill and Resource Recovery has a remaining capacity of approximately 26 percent, and the Vasco Road Sanitary Landfill has a remaining capacity of approximately 69 percent. The project will not affect landfills because it will generate a small amount of construction waste that can easily be accommodated by the existing landfills located within the project area. In addition, construction waste will be recycled to the maximum extent possible. After tower modifications, reconductoring, and substation modifications have been completed, operations and maintenance of the transmission lines will continue in the same manner as it did prior to this project. Existing landfill capacity levels will be sufficient for the continuation of operations and maintenance activities. As a result, impacts will be less than significant.

**Question 2.17g – Would the project comply with federal, state, and local statutes and regulations related to solid waste?**

***No Impact***

During project construction, PG&E will dispose of all waste in accordance with published national, state, or local standards relating to solid waste. The same operations and maintenance activities conducted for the previous transmissions lines will be conducted for the new lines. PG&E will adhere to all national, state, or local standards for the disposal of solid waste during operations and maintenance of the line. Therefore, there will be no impact.

**1.0.51 References**

California Integrated Waste Management Board. Active Landfills Profile for Keller Canyon Landfill. Online.

<http://www.ciwmb.ca.gov/Profiles/Facility/LandFill/LFProfile1.asp?COID=7&FACID=07-AA-0032>. Site visited December 9, 2008.

California Integrated Waste Management Board. Solid Waste Information System Facility/Site Listing. Altamont Landfill and Resource Recovery. Online. <http://www.ciwmb.ca.gov/SWIS/01-AA-0009/Detail/>. Site visited December 9, 2008.

California Integrated Waste Management Board. Solid Waste Information System Facility/Site Listing. Vasco Road Sanitary Landfill. <http://www.ciwmb.ca.gov/SWIS/01-AA-0010/Detail/>. Site visited December 9, 2008.

**ATTACHMENT A: DETAILED PROJECT MAP**



**ATTACHMENT B: VISUAL SIMULATIONS**