EXECUTIVE SUMMARY

1. INTRODUCTION/BACKGROUND

On April 13, 2001, Pacific Gas and Electric Company (PG&E) filed an application (A.01-04-012) with the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity (CPCN) for the Los Banos-Gates 500 kV Transmission Project (Proposed Project). According to PG&E, the Proposed Project is needed to decrease congestion on the electric transmission route known as "Path 15"[1]. The Proposed Project is intended to improve system reliability by reducing or eliminating the need for load interruptions in Northern California due to constraints on Path 15, reduce overall energy supply costs to consumers in the Independent System Operator (ISO) grid, primarily in Northern California, and unify the California energy market by allowing increased power transfers between Northern and Southern California. According to PG&E's schedule, the Proposed Project would be built and operational by 2004.

The CPUC is the state lead agency for purposes of conducting environmental review of A.01-04-012 in compliance with the California Environmental Quality Act (CEQA). A Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) was prepared for the Los Banos-Gates Transmission Project and certified in 1988. However, utility participation in the project was not approved by the CPUC. Consistent with the requirements of CEQA, the CPUC is now preparing a Supplemental EIR (SEIR) to update the analysis of potential environmental effects of the Proposed Project and alternatives, and to propose measures to mitigate any significant effects identified.

CEQA Guidelines §15163(a) state that a Supplemental EIR should be prepared if "only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation." Because the Proposed Project is essentially identical to that proposed in 1986 and the circumstances and analysis indicate that relatively minor additions and changes are necessary to update the prior analysis, the Supplemental EIR was determined to be the appropriate form for CEQA compliance. The SEIR identifies the potential for new significant impacts in the areas of biological resources, air quality, and safety, and presents substantially updated mitigation measures in all environmental issue areas that will more effectively reduce impacts on the environment.

Sections B and C of this SEIR present relevant comparison information for the Proposed Project as well as project alternatives, including the No Project Alternative, that were considered in the 1988 FEIS/EIR. CEQA did not require an evaluation of new or different alternatives in this SEIR because either the impacts of the Proposed Project could be adequately addressed based on the existing set of alternatives or no new feasible alternatives were identified which would substantially reduce one or more significant effects on the environment.

The purpose of this SEIR is to update information on the environmental setting and environmental impacts, and to identify the environmentally superior alternative for use by the CPUC in conducting the

[1] Path 15 is a series of high-capacity transmission lines that connect Northern and Southern California. These transmission lines also link the Pacific Northwest and Oregon to Southern California.

proceeding to determine whether to grant PG&E's requested CPCN. As presented in analysis in this document, the environmentally superior alternative is the Proposed Project (Western Corridor), with Alternative Segment 2A.

2. DESCRIPTION OF PROPOSED PROJECT AND ALTERNATIVES

CEQA Guidelines Section 15126.6 requires that, in addition to evaluation of the Proposed Project, an EIR evaluate feasible alternatives. This SEIR considers PG&E's Proposed Project (Western Corridor), one complete alternative corridor (Eastern Corridor), four Alternative Segments of the Western Corridor, and the No Project Alternative.

2.1 PROPOSED PROJECT (WESTERN CORRIDOR)

The major elements of PG&E's Proposed Project include:

- Construction of approximately 84 miles of 500 kV overhead transmission line following a route called the Western Corridor, between the Los Banos Substation and the Gates Substation;
- Realignment of the existing Los Banos-Midway No. 2 500 kV transmission line into Gates Substation;
- Modifications to Los Banos and Gates Substations to accommodate the new transmission line and realignment; and
- Reconductoring or upgrading portions of the Gates-Arco-Midway 230 kV transmission line.

The Proposed Project would be located in the western portion of the San Joaquin Valley, as illustrated in Figure ES-1. The Los Banos Substation, the northern terminus, is approximately 10 miles west of the City of Los Banos, just south of State Route 152 (SR-152) near San Luis Reservoir in western Merced County. The Gates Substation, the southern terminus of the new 84-mile transmission line, is approximately 5 miles southwest of Huron, in southern Fresno County. Upgrades to the existing Gates-Arco-Midway 230 kV transmission line are within Kings and Kern Counties. The Proposed Project area is mostly grassland and generally parallels the foothills of the Coast Range, Interstate 5 (I-5), and two existing 500 kV lines known as the Pacific Intertie. The straight-line distance between the Los Banos and Gates Substations is approximately 80 miles.

The Western Corridor that is studied in this SEIR is approximately 1,500 to 2,000 feet wide, but the actual right-of-way that PG&E will use for project construction and operation will be 200 feet wide.

2.2 PROJECT ALTERNATIVES

2.2.1 Eastern Corridor Alternative

The Eastern Corridor Alternative, as also illustrated in Figure ES-1, would connect the Los Banos and Gates Substations by following a path that is generally located on the east side of I-5 on the western fringe of the San Joaquin Valley. This entire route is also approximately 84 miles long. The primary objective in the design of this alternative corridor was to parallel existing 230 kV transmission lines to the extent possible. The Eastern Corridor Alternative accomplishes this objective along most of its route.

Figure ES-1

Proposed Project and Alternatives

[See link on webpage]

The Eastern Corridor Alternative would parallel the existing 230 kV line (with the new 500 kV transmission line located approximately 130 feet east of that line), which leaves the Los Banos Substation to the south-southeast and continuing for approximately 68 miles. The Eastern Corridor Alternative would diverge from the 230 kV lines at the southernmost end because of the proximity of the 500 kV lines in this area; the route was modified to allow the Eastern Corridor Alternative to pass through agricultural fields a north-south or east-west direction to minimize impacts on agricultural operations. This orientation would reduce the impacts on existing agricultural land uses by siting the corridor parallel or perpendicular to established agricultural practices (e.g., irrigation or spraying).

Approximately 90 percent of the Eastern Corridor Alternative is composed of intensive, irrigated farmlands. The California Aqueduct, a Delta-Mendota Canal, and the Outside Canal are within the northern third of the corridor and represent the major water conveyance systems present within the corridor.

2.2.2 Western Corridor Segment Alternatives

The primary routing objective for the Western Corridor was to parallel the existing 500 kV line wherever possible, while maintaining the required minimum separation of approximately 2,000 feet. Following are the alternative segments that were designed and the reasons for their creation.

- **Segment 2A**. This 12.9-mile segment provides a route option avoiding the Los Banos Reservoir recreation area while maintaining adequate separation from the Intertie.
- **Segment 4A.** This segment is 9.0 miles long and provides a route option that would be to the west of Little Panoche Reservoir, rather than crossing near the dam which is an area more heavily used for recreation.
- **Segments 6A and 6B**. There are two separate alternatives to Proposed Segment 6: only one of these segments (6, 6A, or 6B) would be constructed. **Segment 6A,** 10.3 miles long, would cross primarily agricultural land but avoids oil field equipment. **Segment 6B**, 11.7 miles long, is the westernmost routing option, crossing oil field equipment, oil wells, and water wells, but avoiding most cultivated agricultural land.

2.2.3 No Project Alternative

In accordance with CEQA requirements, this SEIR evaluates the No Project Alternative that must include (a) the assumption that conditions at the time of the Notice of Preparation (i.e., baseline environmental conditions) would not be changed since the Proposed Project would not be installed, and (b) the events or actions that would be reasonably expected to occur in the foreseeable future if the project were not approved. Two general possibilities are considered:

- **No Action Taken by PG&E**. In this scenario, authorization would not be granted for construction of the Proposed Project or any of the project alternatives. Although project objectives would not be achieved, no environmental impacts would occur since there would be no new construction.
- **Reasonably Foreseeable Actions**. If neither the Proposed Project nor any alternative were approved by the CPUC, PG&E or other entities could implement alternative courses of action intended to improve Path 15 capacity constraints. These actions are speculative at this time; however, PG&E has identified the following actions that could be considered: (1) New generation projects (power plants) could be constructed North of Path 15; in fact, several projects are currently under construction, or (2) Smaller Transmission System Upgrades could occur, in which a 400 to 500 MW capacity increase to Path 15 could be obtained by installation of a second 500 kV/230 kV transformer bank at the Gates Substation and reconductoring of the Gates-Panoche 230 kV transmission line.

3. SUMMARY COMPARISON OF THE PROPOSED PROJECT AND ALTERNATIVES

3.1 INTRODUCTION

CEQA requires that an EIR determine which of the Proposed Project or Alternatives is environmentally superior. This SEIR applies an assessment methodology to achieve this goal, which includes establishing an environmental baseline, updating information in the 1988 FEIS/EIR regarding environmental impacts of the Proposed Project and Alternatives, evaluating feasible mitigation measures, and comparing this information to reach a conclusion.

3.2 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

For the reasons briefly summarized below, this SEIR concludes that the Proposed Western Corridor (including Segments 1, 2A, 3, 4, 5, and 6) is determined to be the environmentally superior alternative. This determination was based on impact analysis in the following 10 environmental issue areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Minerals
- Hydrology and Water Resources
- Land Use and Recreation
- Public Safety, Health, and Nuisance
- Socioeconomics and Public Services
- Transportation and Traffic
- Visual Resources

3.2.1 Western Corridor Vs. Eastern Corridor

Both the Western Corridor and the Eastern Corridor Alternative were designed to follow established transmission corridors. The Proposed Western Corridor was developed in order to minimize impacts on agricultural land and to parallel, but maintain a safe (2,000 foot) distance from, the existing 500 kV lines. This corridor is generally described as non-cultivated/non-irrigated hilly land used primarily for livestock grazing.

The Eastern Corridor Alternative was designed to follow existing transmission corridors (primarily, a 230 kV line) and to minimize impacts to recreation, waterways, and cultural and biological resources. This corridor is primarily agricultural, and crosses more roadways and major travel corridors.

The 1988 FEIS/EIR concluded that the Western Corridor was environmentally superior primarily due to the extensive and unmitigable agricultural impacts in the Eastern Corridor and because the Western Corridor is less visible. Although the Western Corridor project presented more conflict with vegetation and wildlife, as well as cultural and paleontological resources, these impacts could be substantially reduced or eliminated with proper siting, careful construction practices, and adequate mitigation.

The conclusions of this SEIR regarding the comparison of the Western Corridor with the Eastern Corridor Alternative are presented in Table ES-1 below.

Table ES-1 SEIR Conclusions: Western Vs. Eastern Corridors

Issue Area	Preferred Corridor	Issue Area	Preferred Corridor
Air Quality	Eastern	Land Use & Recreation	Western
Biological Resources	Eastern	Public Safety, Health, and Nuisance	Western
Cultural Resources	Eastern	Socioeconomics & Public Services	No Preference
Geology, Soils, & Minerals	Western	Transportation & Traffic	Western
Hydrology & Water Resources	Eastern	Visual Resources	Western

This SEIR identified the following related and significant and unmitigable (Class I) impacts for the Eastern Corridor: loss of use of productive agricultural land, loss of agricultural soils, impacts on agricultural equipment and operations, safety impacts on aerial applicators, and effects on irrigation practices.

Based on information presented in this SEIR, the strongest preferences in favor of the Eastern Corridor are in biological and cultural resources. Based on available information, most impacts in these two issue areas are mitigable to less than significant levels if mitigation recommended in Section C is implemented. However, without completion of site-specific biological surveys at defined tower sites and access roads, the effectiveness of mitigation for impacts on special status wildlife species is not assured so a significant impact on special status species is identified in this SEIR. Despite this, the significant land use and safety impacts on the Easter Corridor result in this SEIR confirming the conclusion of the 1988 FEIS/EIR in finding the Western Corridor to be the environmentally superior alternative.

3.2.2 Western Corridor Alternative Segments

Alternative Segment 2A is Preferred to Proposed Segment 2. The FEIS/EIR determined that Proposed Segment 2 was preferred over Western Corridor Alternative Segment 2A. This SEIR does not identify any significant unmitigable impacts associated with either segment. However this SEIR concludes that Alternative Segment 2A is preferred because of the potential long-term impacts of Proposed Segment 2 to recreation and visual resources.

Proposed Segment 4 is Preferred to Alternative Segment 4A. Both this SEIR and the FEIS/EIR determined that Proposed Segment 4 was preferred and that no significant unmitigable impacts occur on this segment. Alternative Segment 4A would have somewhat greater biological and geologic impacts and is one-half mile longer than the proposed segment, increasing overall construction impacts and imposing additional towers on permanent views.

Proposed Segment 6 is preferred to Alternative Segments 6A and 6B. Both this SEIR and the FEIS/EIR determined that Proposed Segment 6 is preferred over the two alternative segments. The diverse land uses in these segments make analysis difficult: Alternative Segment 6B (in the oil fields and west of agricultural lands) is preferred in Land Use, Public Safety, and Socioeconomics because it avoids agricultural land uses which have associated significant and unmitigable (Class I) impacts related to Alternative Segment 6A's potential effects on agricultural operations/equipment and aerial spraying. Segment 6A (in agricultural land) is preferred in biological and cultural resources, geology, and

hydrology because it would avoid the oil field and habitat impacts of Alternative Segment 6B. The FEIS/EIR selected Proposed Segment 6 because it offered an opportunity to minimize impacts on both agricultural land and oil operations. Proposed Segment 6 may have a significant unmitigable impact related to aerial spraying, but Segment 6B is 1.2 miles longer than Proposed Segment 6, requiring additional construction impacts and long-term visibility of more towers. Overall, Proposed Segment 6 appears to be the best solution to minimizing impacts in this area. Therefore, Proposed Segment 6 is environmentally superior to Alternative Segments 6A and 6B.

3.2.3 Western Corridor Vs. No Project Alternative

Two courses of action are currently envisioned as possible under the No Project scenario: the construction of new generation north of Path 15 and smaller transmission upgrade activities.

The environmental impacts of large thermal (natural gas fired) power plants can be significant, especially with respect to air quality, water resources, biological resources, and visual resources. By contrast, the environmental impacts of constructing a transmission line are substantially less because the operational impacts are insignificant. Therefore, the Proposed Project (or any transmission related alternative) is environmentally superior to the new generation option under the No Project Alternative.

The environmental impacts of transmission upgrades would have impacts that are much less extensive and severe than those of the Proposed Project, particularly for smaller upgrades to provide an additional 400 to 500 MW of capacity. Therefore, if the need is justified for only 500 MW or less, this alternative is environmentally superior to the Proposed Project.

4. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact Assessment Methodology. The analysis within each issue area began with an examination of the FEIS/EIR, the environmental setting at the time that document was prepared, and the impacts and mitigation measures presented. Then the current environmental setting was evaluated in order to determine the changes in the setting since the FEIS/EIR was prepared. The regulatory setting, which includes applicable government rules, regulations, plans, and policies, was reviewed for changes since 1988, and this information is also presented. For the purpose of this document, and pursuant to CEQA Guidelines, the baseline used for the impact analysis reflects conditions at the time of issuance of the Notice of Preparation (July 10, 2001).

The most noticeable change in the environmental setting of the project area since preparation of the FEIS/EIR is that agricultural land use has increased. Other changes relate to the regulatory environment (e.g., air quality regulations, lists of threatened and endangered species). A third type of change since preparation of the FEIS/EIR is the methodology now used for impact analysis differs from that used in 1986 (e.g., visual resources and evaluation of seismic hazards).

The SEIR then addresses the environmental consequences and potential impacts that the Proposed Project and the Alternatives would have related to each issue area. This SEIR identifies over 70 separate impacts in 10 environmental issue areas for the Proposed Project and Alternatives. About

two-thirds of these impacts are mitigable to less than significant levels with implementation of recommended mitigation measures. The following impacts are identified as significant and unmitigable:

- Engine emissions from construction equipment (Proposed Project and all alternatives)
- Loss of agricultural soils and loss of productive agricultural lands (along the Eastern Corridor Alternative)
- Transmission towers and lines presenting safety hazards to aerial applicators (along the Eastern Corridor Alternative and the southern portion of the Western Corridor).
- Potentially significant impacts on special status plant and wildlife species (Western Corridor).

Impacts were evaluated in each issue area using the following system of classification of the impacts:

Class I: Significant; cannot be mitigated to a level that is not significant
Class II: Significant; can be mitigated to a level that is not significant
Class III: Adverse, less than significant
Class IV: Beneficial impacts.

The impacts of the No Project Alternative are summarized in Section 4.11. Growth-inducing impacts, significant irreversible changes, and cumulative impacts are summarized in Section 4.12.

Mitigation Measures. CEQA Guidelines (Section 15226.4) require that an EIR describe feasible measures that could minimize significant adverse impacts. The FEIS/EIR recommended 64 mitigation measures for the proposed project and alternatives. This SEIR presents about the same number of measures, but the mitigation measures in the SEIR are considerably more rigorous, requiring specific compliance documentation and actions that were omitted from the FEIS/EIR. Within each issue area, the mitigation measures from the FEIS/EIR are presented and the disposition of those measures is explained (i.e., whether the measure has been incorporated into a new measure, retained, or eliminated). Once an impact was identified, diligent effort was taken to identify mitigation measures that will reduce the impact to a level that is not significant. Since some reviewing agencies require a demonstration of reduction of impacts to the maximum extent possible, mitigation measures were identified for all classes of impacts (except beneficial impacts). The mitigation measures recommended by this study have been identified in the impact assessment sections and presented in a Mitigation Monitoring Program table at the end of the analysis for each issue area.

The following sections summarize the findings from the environmental analysis for each of the 10 environmental issue areas evaluated in the SEIR.

4.1 AIR QUALITY

The entire Proposed Project and Alternatives area is within the San Joaquin Valley Air Basin (SJVAB). This air basin is classified as “severe non-attainment” for the Federal ozone standard, “serious non-attainment” for the State ozone standard, and “serious non-attainment” for the Federal standard for small particulate matter (PM_{10}). Emissions associated with either the Proposed Project or Alternatives would contribute to the overall decline in air quality in the SJVAB.

Since the issuance of the 1988 FEIS/EIR, air quality in the SJVAB has declined. As a result, the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) has established construction emissions thresholds for ozone precursors. The Proposed Project or Alternatives would exceed this threshold, creating a significant impact because emissions would be over threshold levels even with implementation of mitigation.

Impacts of the Proposed Project. The Proposed Project would create significant air emissions during construction (short-term). The pollutants of greatest concern to the SJVUAPCD are particulate matter less than 10 microns (PM_{10}) and ozone precursor emissions [reactive organic compounds (ROC) and nitrogen oxides (NO_x)]. PM_{10} construction emissions can be mitigated to levels that are less than significant. However, as stated above, despite mitigation measures, NO_x emissions generated during construction activities would remain significant because pollutant levels would exceed APCD guidelines.

Mitigation Measures for the Proposed Project. Three mitigation measures are recommended. Fugitive dust emissions (PM_{10}) would be reduced by the SJVUAPCD's required control measures, as well as additional measures controlling construction equipment and activities. Two additional measures are designed to reduce NO_x construction emissions, but impacts of ozone precursor emissions remain significant.

Comparison of Alternatives. The Alternatives would have the same types and levels of impacts (construction PM_{10} and NO_x emissions) that are associated with the Proposed Project. The Eastern Corridor Alternative would have fewer air quality impacts than the Proposed Western Corridor because fewer new access roads would be required and construction would occur primarily in irrigated land.

4.2 BIOLOGICAL RESOURCES

Construction of the Proposed Project could result in temporary or permanent impacts to vegetation and wildlife species and their habitats. All identified impacts to biological resources are potentially significant, but mitigation recommended in this SEIR would reduce most impacts to less than significant levels. Significant impacts could remain to special status plant and wildlife species; this impact cannot be further determined until tower and access road locations are defined and biological surveys are completed. The list of plant and animal species in the project area has changed substantially due to considerable changes to the legal status of many plant and animal species since the 1988 FEIS/EIR. While the FEIS/EIR determined that all biological impacts would be mitigable to less than significant levels, this SEIR identifies that a significant impact on special status plant and wildlife species may occur.

Impacts of the Proposed Project. Impacts include the direct removal of plants or of wildlife habitat, wildlife mortality caused by construction vehicles, and the risk of bird collision with towers and transmission lines. Construction occurring in sensitive habitats (wetlands or riparian areas) would be more likely to affect sensitive plants and wildlife. There are 37 sensitive plant species that could be

present in the project area, but only 9 have been observed in surveys. Eight species of special status wildlife were observed in the project area.

Mitigation Measures for the Proposed Project. Twelve mitigation measures are recommended to reduce impacts on biological resources, including the following:

- Pre-construction surveys for rare plants, wetland/riparian habitat, and wildlife
- Use of exclusion flagging or fencing to mark and protect sensitive vegetation communities
- Selectively placing towers to span sensitive habitats
- Maximizing the use of existing access roads
- Restoration of disturbed areas or off-site compensation for permanent vegetation losses
- Implementing a *Worker Environmental Awareness Program* for construction crews
- Scheduling project activities to avoid critical breeding seasons and establishing buffer zones around nests and burrows
- Installing bird flight diverters in areas with high bird use to reduce bird collision impacts.

After implementation of these measures, if residual impacts to special status plant and/or animal species remain, PG&E would be required to consult with appropriate resource agencies to determine specific additional actions that would offset remaining impacts to listed species.

Comparison of Alternatives. The Eastern Corridor Alternative would have far fewer impacts to species and their habitats because it passes primarily through agricultural lands, eliminating impacts to all but a few special status plant and wildlife species that grow, den, burrow, and forage in agricultural land. Consequently, from a biological standpoint, the Eastern Corridor Alternative is strongly preferred over the Western Corridor.

4.3 CULTURAL RESOURCES

Archaeological expeditions in the San Joaquin Valley have discovered archaeological, ethnographic, and historic artifacts as old as 12,000 years old that define distinct cultural traditions and provide a link to the development of human history.

Since publication of the 1988 FEIS/EIR, several additional cultural sites have been recorded along the Proposed and Alternative corridors. In addition, mitigation measures have been substantially strengthened to ensure that cultural resources would be protected during construction. With implementation of these expanded mitigation measures, this SEIR concludes that all impacts on cultural resources would be less than significant.

Impacts of the Proposed Project. The Proposed Project could affect National Register and/or California Register prehistoric, ethnographic/contemporary, and historic era eligible cultural resources. The most serious impact would be the destruction or disturbance of cultural resources during construction. Project construction could also affect recorded cultural resources in several parks, Wilderness Study Areas, and recreational areas. The Proposed Project would require access roads to remote areas previously inaccessible, resulting in an increased potential for vandalism or inadvertent

disturbance of unknown resources. All these impacts would be less than significant with implementation of recommended mitigation.

Mitigation Measures for the Proposed Project. Five mitigation measures are recommended to reduce cultural resource impacts to less than significant levels. Measures require PG&E to develop a Cultural Resources Management Plan covering all project activities, and defining actions to be taken if resources are discovered. Pre-construction field surveys and the identification and recording of any previously unrecorded cultural resources are required. Mitigation measures also require consultation with Native Americans and with land management agencies or parks to identify specific known resources that should be avoided.

Comparison of Alternatives. The Eastern Corridor Alternative would affect fewer cultural resources than the Western Corridor because it would pass through areas that have been disturbed, and are also located farther from the areas that were historically more occupied. In addition, because the Eastern Corridor Alternative has had more heavy agricultural uses, potential historic resources in that area would likely have already been destroyed or recovered.

4.4 GEOLOGY, SOILS, AND MINERALS

The Proposed Project and Alternatives are located along the boundary of the Diablo Range of the Coast Ranges and the Central Valley physiographic provinces, dividing the rough varied terrain of the hills and mountains from the nearly level plains of the valley floor.

The environmental setting of the Proposed Project area has not significantly changed since the publication of the FEIS/EIR with respect to the geology, soils, mineral and paleontologic resources of the region; however, the general understanding of the processes underlying the observed conditions have advanced and seismic standards have changed. The SEIR presents a revision of the seismic hazard analysis reflecting changes in the governing regulations and an improved understanding of the faulting in the Project area. Five revised mitigation measures are proposed, which, if implemented, would ensure that all impacts would be less than significant.

Environmental Impacts of the Proposed Project. Specific impacts associated with the Proposed Project and Alternatives include the potential for surface fault rupture and strong ground shaking. Certain soil characteristics can affect project facilities. Existing landslides and potentially unstable slopes are present throughout the foothills of the Diablo Range, and erosion and/or destabilization of slopes could occur as a result of construction activities, particularly access roads. The permanent conversion of agricultural soils to a non-agricultural use is considered a significant impact, but all other impacts are mitigable to less than significant levels.

Mitigation Measures for the Proposed Project. Five mitigation measures are proposed to minimize the effects of hazardous geologic conditions. These measures require site-specific geotechnical testing to define soil conditions and faults, avoidance of unstable slopes, and development of a Paleontologic Resources Monitoring Plan.

Comparison of Alternatives. The Eastern Corridor Alternative would have greater impacts than the Western Corridor for two reasons. It has greater potential for loss of agricultural soils and there is a potential hazard from hydrocompactive soils (which could cause differential settlement and tilting or twisting of transmission line support structures).

4.5 HYDROLOGY AND WATER RESOURCES

The Proposed Project is located along the transitional zone between the eastern edge of the Diablo Range and the western edge of the San Joaquin Valley, and crosses or approaches several stream courses, water supply reservoirs, canals, irrigation ditches, and several oil and water wells. Impacts to surface water hydrology and water quality, groundwater hydrology and water quality, and the geomorphology of stream courses were considered.

This SEIR includes a more thorough reporting of hydrologic conditions (including flooding, groundwater, water quality, and wetland issues) that were not addressed in the FEIS/EIR. These issues are addressed in detail, and eight detailed mitigation measures are recommended.

Impacts of the Proposed Project. Construction of the Proposed Project could result in the following hydrologic impacts, each of which would be less than significant with mitigation:

- Alteration of existing drainage patterns could cause increased runoff and erosion
- Accidental discharge of construction-related contaminants (including fuels) could contaminate surface drainages or groundwater
- Excavation for tower foundations and substations could impair groundwater quality.

Mitigation Measures for the Proposed Project. Eight mitigation measures are proposed to reduce potential significant hydrologic impacts to less than significant levels. Erosion, sediment loading, contamination, and other surface water quality impacts would be controlled through development of a comprehensive Erosion Control Plan, a Storm Water Pollution Prevention Plan, Hazardous Substance Control and Emergency Response Plan, and an environmental training program. Impacts to groundwater hydrology and quality would be reduced by reviewing contamination data prior to selecting the final transmission line alignment. Contaminated soil or groundwater that is encountered during construction would be disposed of and treated if necessary. Transmission towers would not be sited in 100-year floodplain locations.

Comparison of Alternatives. The Eastern Corridor Alternative is preferred over the Western Corridor in the area of Hydrology and Water Quality for several reasons. Construction along the flatter Eastern Corridor Alternative will involve less potential erosion, runoff, and sediment transport impacts. The Eastern Corridor Alternative also requires fewer creek, reservoir, and other important wetland crossings (i.e., Salt and Ortigalita Creek wetlands). The Eastern Corridor Alternative does not pass through the oil fields in the Coalinga area and therefore has a smaller chance of encountering contaminated soil or water in that area. The Eastern Corridor Alternative does pass through areas with potentially shallower groundwater depths than the Western Corridor, but this issue is considered less significant than the other impacts addressed above for the Western Corridor.

4.6 LAND USE AND RECREATION

The Proposed Project and Alternatives cross mainly private land under Merced and Fresno County jurisdictions and the jurisdiction of several public agencies including: the U.S. Bureau of Land Management (BLM); U.S. Bureau of Reclamation (BOR); California Department of Water Resources (CDWR); California Department of Parks and Recreation (CDPR); and California Department of Fish and Game (CDFG). Transmission line siting can create a variety of potential land use conflicts, but most of these (i.e., with residential properties, agricultural operation areas, canals, oil field areas, dams, recreation areas, and pipelines) can be avoided during final alignment of the transmission line. The primary land use concern is interference with agricultural operations because these operations cannot be avoided along several portions of the Proposed and Alternative Corridors.

The land use impact assessment methodology and impact conclusions remain consistent with the 1988 FEIS/EIR. However, due to the increase in agricultural production along the Proposed Project route, the impacts on agriculture along this route are more prevalent than they were in 1988. Along the Proposed Project route, more land is now devoted to intensive agriculture, and agricultural production has also increased along the Eastern Corridor Alternative.

Impacts of the Proposed Project. Impacts related to agriculture include interference with irrigation practices or agricultural operations and loss of productive agricultural land. These potentially significant impacts can be reduced to levels that are less than significant with implementation of mitigation measures. One exception is the southern section of the proposed route, where impacts related to interference with agricultural operations (specifically aerial spraying) are identified as significant and unmitigable.

Mitigation Measures for the Proposed Project. A combination of 10 mitigation measures would reduce the impacts of a variety of construction activities to less than significant levels. Nine other measures are recommended to reduce potential conflicts with specific land uses. These conflicts could be minimized by coordination with landowners, resulting in final design of the tower locations to minimize impacts on specific agricultural practices.

Comparison of Alternatives. Along Proposed Western Corridor, fewer land uses would be permanently affected than along the Eastern Corridor Alternative where the right-of-way is used for intensive farming, including row crops and permanent crops. Due to the predominance of intensive farming, particularly in permanent crops, these agricultural impacts are considered significant and unavoidable for the Eastern Corridor Alternative.

4.7 SOCIOECONOMICS, PUBLIC SERVICES, AND UTILITIES

Socioeconomics and public services are analyzed for Merced, Fresno, and Kings Counties in the San Joaquin Valley. The project area is predominantly characterized by farmland and grazing land. The unemployment rate is relatively high throughout the project area, and all three counties are estimated to grow in population by nearly 50 percent over the next 20 years. All public services are adequately provided in the project area.

The region surrounding the Proposed Project has experienced dramatic population growth since the publication of the FEIS/EIR. This SEIR presents updated data from the 1990 and 2000 Censuses. However, no difference in overall impact results since the Project and Alternatives would be located in sparsely populated areas of Merced and Fresno Counties.

Impacts of the Proposed Project and Alternatives. Impacts to socioeconomics and public services would be similar for the Proposed Project and Alternatives. A minor beneficial impact would result from the project-generated local purchase of consumable materials, and motels and restaurants could benefit from temporary increases in demand. Construction of the transmission line could result in minor disruption of grazing and crop activity and oil production activities, but this disruption could be reduced to a less than significant level if PG&E coordinates with landowners in tower and line placement. Many parts of the Proposed Project and Alternatives would be difficult to access by public fire personnel and would make it necessary for the construction crews to have on-site equipment and procedures in place to minimize the risk of fire and to quickly eliminate any small fires that might be started.

Mitigation Measures for the Proposed Project and Alternatives. One mitigation measure would require PG&E to submit a Fire Prevention and Suppression Plan to the CPUC for approval prior to construction.

Comparison of Alternatives. The overall level of impact on Western and Eastern Corridors is similar. While the Western Corridor avoids most agricultural land, it would have a greater likelihood of fire, which would places demands on public fire response services.

4.8 PUBLIC SAFETY, HEALTH, AND NUISANCE

For both the Proposed Project and Alternatives, safety, health and nuisance issues associated with transmission line construction and operation include exposure to electric and magnetic fields (EMF); the potential for radio, television, or electrical equipment interference; noise from construction and operation; and safety hazards created by transmission towers to airplanes in agricultural areas.

The SEIR evaluates the same issues considered in the 1988 FEIS/EIR, and the conclusions are similar. No significant impacts are identified for EMF, interference, or noise. However, this SEIR identifies significant and unmitigable impacts associated with the safety hazard of transmission lines to aerial applicators.

Impacts of the Proposed Project and Alternatives. EMF exists in the environment both naturally and as a result of human activities that use electricity. Additional EMF will be generated as a result of the Proposed Project. The CPUC has not adopted any specific limits on EMF, but has issued a decision to create a research program (described below), and requires the use of "low-cost" or "no-cost" mitigation measures for transmission lines and substations such as those included by PG&E in the Proposed Project. Power lines can also generate high frequency energy and EMF that can interfere with broadcast signals or electronic equipment. These interference problems tend to be associated with loose or worn hardware, so the sources of interference can usually be located and corrected.

Transmission lines in agricultural areas present a safety hazard for aerial applicators ("crop dusters") because they present additional obstacles that pilots must avoid. Mitigation is recommended to reduce the level of impact of new transmission lines and towers. However, in some locations, due to the orientation of lines crossing the fields, the safety hazard would remain significant and unmitigable.

Mitigation Measures for the Proposed Project and Alternatives. Two mitigation measures would reduce impacts on radio and television interference to a less than significant level. The measures require PG&E to limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide during the design and construction process. An additional mitigation measure addresses the potential for induced currents and shock hazards in joint use corridors, requiring PG&E to identify objects that have the potential for induced voltages and to work with the affected parties to determine proper grounding procedures. To help reduce the impact to aerial applicators, mitigation requires that PG&E provide written notification to all aerial applicators of when the new transmission lines and towers will be erected, along with recent aerial photos or topographic maps clearly showing the new lines and towers.

Comparison of Alternatives. The Proposed and Alternative Corridors are similar with respect to EMF health effects, noise, induced currents, or radio/television interference. Safety impacts to aerial applicators would be substantially more severe along the Eastern Corridor Alternative than the Western Corridor.

4.9 TRANSPORTATION AND TRAFFIC

A transmission line project can affect roadways during construction by causing increased or congested traffic, or by damaging road surfaces. The 1988 FEIS/EIR did not include analysis of these issues.

Impacts of the Proposed Project. Impacts involve increased traffic levels associated with material and supply haul trips and commuting workers, stringing transmission line conductors over Caltrans and county roads resulting in potential lane closure and disruption to bus transit services, and construction vehicles potentially damaging road surfaces.

Mitigation Measures for the Proposed Project. Four mitigation measures are proposed. One would require installation of temporary poles and netting across I-5 and other State Routes when conductors need to cross these roadways. Additional measures requires consultation with Coalinga Transit personnel and development of traffic control plans for locations where the lines would cross Caltrans or county roads. The last mitigation measure requires that roads disturbed by construction vehicles be properly restored to ensure long-term protection of road surfaces.

Comparison of Alternatives. The Proposed Western Corridor would have slightly less severe impacts than the Eastern Corridor Alternative because the Eastern Corridor Alternative crosses more heavily traveled roads.

4.10 VISUAL RESOURCES

The project area landscapes are comprised primarily of low, rolling grass-covered hills and level grazing land and agricultural fields. Since this type of terrain typically offers few screening opportunities, tall structures such as transmission line towers tend to be very visible if located in close to moderate proximity to roads or other points of public visual access, such as parks and recreation areas. The industrial character of transmission line structures also creates visual contrast with the more natural character of the rural agricultural setting. The primary issue of concern for the Proposed Project and Alternatives is the project's potential to degrade views from local and regionally important roadways (Interstate 5 [I-5]; State Routes 33, 152, and 198; Eldorado Road; and Jayne Avenue) and recreation areas (Los Banos Creek State Recreation Area and Little Panoche Reservoir).

The Project area has not undergone substantial development since the FEIS/EIR was published. However, a considerable amount of open grazing land has been converted to irrigated agriculture, particularly along the southern half of the proposed Western Corridor, and these changes are noticeable in the landscape. The SEIR uses an updated visual resource analytical methodology, but the conclusions reached (all impacts would be less than significant) are the same as those of the FEIS/EIR.

Impacts of the Proposed Project. Most segments of the Proposed Project would experience no significant visual impacts because they are either sufficiently distant from the primary points of public visual access or within the viewshed of the two existing 500 kV transmission lines. The Western Corridor would be visible to the west of Los Banos Creek Recreation Area, but it would be sufficiently distant from the primary use areas that a significant visual impact would not occur. The corridor would pass immediately adjacent to Little Panoche Reservoir and is prominent in views from both the reservoir and Little Panoche Road. Although the resulting visual impact is adverse, it is less than significant due to the presence of the existing two 500 kV transmission lines in the viewshed. Proposed Segments 6 and 7 would be located in close proximity to local roads and I-5 (where it would be crossed by the line). In this area, the resulting visual impact would be adverse but still less than significant.

Mitigation Measures for the Proposed Project. The Proposed Project does not create any potentially significant visual impacts, so no mitigation measures are required. Two measures are suggested, however, based on measures recommended in the 1988 FEIS/EIR. One would ensure that the visual impacts of construction activities remain less than significant and the second would require tower siting to minimize use of hilltops and to use non-reflective materials in construction.

Comparison of Alternatives. The Western Corridor is generally preferred over the Eastern Corridor Alternative due to its more remote location and/or typically greater distance from I-5, which provides the primary visual access in the project study area.

4.11 NO PROJECT ALTERNATIVE

CEQA requires an evaluation of the No Project Alternative that must include (a) the assumption that conditions at the time of the Notice of Preparation (i.e., baseline environmental conditions) would not be changed since the Proposed Project would not be installed, and (b) the events or actions that would

be reasonably expected to occur in the foreseeable future if the project were not approved. These two scenarios are addressed below.

The No Project Alternative could have two components: new generation north of Path 15 and different transmission upgrades. The environmental impacts of large thermal (natural gas fired) power plants can be significant, especially with respect to air quality, water resources, biological resources, and visual resources. The environmental impacts of a transmission line, because the operational impacts are insignificant, would be substantially less than those associated with power generation. However, because power plants are constructed by merchant power generators or local utilities, their construction will likely proceed regardless of whether Path 15 is built.

The No Project Alternative also includes the possibility of a smaller transmission system upgrade that could provide an additional 400 to 500 MW of capacity between the Los Banos and Gates Substations. This transmission upgrade would have impacts that are much less extensive and severe than those of the Proposed Project.

4.12 GROWTH INDUCING EFFECTS

CEQA requires a discussion of the ways in which a project could be an inducement to growth. Potential growth-inducing impacts of the proposed Los Banos-Gates 500 kV Transmission Project could be manifested in two fundamental ways:

- Growth resulting from the direct and indirect employment needed to construct and operate the Proposed Project.
- Growth resulting from the additional power that would be transmitted by the Proposed Project.

Growth resulting from the direct and indirect employment needed to construct and operate the Proposed Project or Alternatives is unlikely. ~~Construction crews for the project are expected to come from within PG&E, with an emphasis on use of workers from the local San Joaquin Valley Area. It is likely that 50 percent of the workers may come from outside the local area, but these workers would not be expected to permanently relocate with their families.~~ None of the construction crews are expected to come from within PG&E. PG&E believes that contractors for construction of the new 500 kV line, substation modifications, and the 230 kV reconductoring work will most likely come from out of state, but less skilled workers may come from the local area. Since PG&E would be contracting much of the labor force from out of state, a large portion of the labor force will remain in the project area for the duration of construction. The construction period for the Proposed Project is considered short term, therefore; no members of the labor force would be expected to permanently relocate their families, so employment patterns in the area are unlikely to change as a result of the project. ~~Given the relatively high unemployment rates in the project area and the large local labor force in the construction industry, the project itself would not significantly affect the employment patterns of the area.~~ Over the long term, operation of the Proposed Project or Alternatives would require very few employees.

Growth resulting from the additional power transmitted by the Proposed Project or Alternatives is also unlikely. For California, Path 15 has been operated as a means of importing energy from Northern to Southern California during the winter and exporting energy from Southern to Northern California during the summer. The driving force behind the need to expand the electrical service capacity along Path 15 is to bring reliability in energy service for both Northern and Southern California, and to drive down the costs of wholesale electricity for all California residents. Neither the Proposed Project nor Alternatives would result in the generation of more electricity, just the ability to more effectively transfer existing electricity between Northern and Southern California. Although all three counties in

the project area anticipate a doubling of the population over the next twenty years, this growth is anticipated to occur regardless of construction of an approved project.

4.13 CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Sections 15120/15355 require a discussion of cumulative environmental impacts that may result from multiple projects that are reasonably foreseeable and that would be constructed or operated during the life of the Proposed Project. The CEQA discussion of cumulative impacts is not related to any evaluation of project need based on consideration of multiple projects. The issue of project need will be addressed in the CPUC proceeding to determine whether to grant PG&E's CPCN request in A.01-04-012.

This SEIR identifies 12 cumulative projects that would have at least some portion of their area within proximity to the Proposed Project Corridor and facilities or Alternative Corridors and facilities. Most of the future developments identified are either outside of the proposed corridor or are not scheduled for construction at the same time as the Proposed Project. Therefore, for most issue areas these future developments would not result in cumulative impacts. Potential cumulative impacts identified in the SEIR are addressed below.

- Construction of the cumulative projects could further exacerbate the significant NO_x emission impacts and the potentially significant PM_{10} emission impacts (PM_{10} emissions would be controlled by requirements of the San Joaquin Valley Unified APCD) estimated for the construction of the Proposed Project or Alternatives. Therefore, the project's incremental effect would be cumulatively considerable.
- The increasing conversion of open space to agricultural land, urban uses, petroleum extraction, strip mining, canals, pipelines and evaporation and percolation basins in the western San Joaquin Valley contribute to an overall loss of Valley floor and upland habitat for plants and animals. Therefore, the impacts on special status plant species from implementation of the Proposed Project are considered to be cumulatively considerable. In addition, because the impacts of the Proposed Project itself are considered to be potentially significant, potential cumulative impacts to special status wildlife species and their habitat throughout the region is also considered to cumulatively considerable.

5. PUBLIC PARTICIPATION AND AREAS OF CONTROVERSY

5.1 PUBLIC PARTICIPATION

Three actions have been taken to ensure public involvement in and awareness of the CEQA analysis of the Los Banos-Gates Project:

(1) **Publication of a Notice of Preparation (NOP) of a Supplemental EIR and Notice of Public Scoping Meetings** soliciting comments from affected public agencies and from the public. On July 9, 2001, 200 copies of the NOP were mailed to agencies and members of the public.

(2) **Public Scoping Meetings.** Two meetings were held on July 24, 2001, one at Los Banos City Hall, Council Chambers (1:30 p.m.) and one at Harris Ranch Conference Center (7:00 p.m.).

(3) **Information Sources.** Establishment of an Internet web site, electronic mail address, a telephone hotline, and local Information Repositories.

5.2 PUBLIC NOTICE OF DRAFT SUPPLEMENTAL EIR RELEASE

A Notice of Release of the Draft Supplemental EIR will be sent to property owners and occupants on or adjacent to PG&E 's Proposed Project and the alternative routes in October 2001, including information on how to review or obtain copies of the Draft Supplemental EIR.

5.3 PUBLIC REVIEW PERIOD

In compliance with CEQA Guidelines, the CPUC provides a public review period of 45 days for the Draft SEIR. This public review period commences upon release of the Draft SEIR, on October 5, 2001, and goes through November 19, 2001. Written comments on the Draft SEIR may be submitted at the informational meetings and Public Participation Hearings, discussed below, or via facsimile transmission on the SEIR Hotline (**559-272-2107**), e-mail at the SEIR e-mail address (Path15@AspenEG.com), or postal mail at:

Billie Blanchard
California Public Utilities Commission
c/o Aspen Environmental Group
235 Montgomery Street, Suite 800
San Francisco, CA 94104

Written comments must be received by **November 19, 2001**. Please remember to include your name and return address in whatever form you make your written comments.

EIR Information and Repository Sites

Five repository sites have been established in the Proposed Project area to provide information about the project to people in the area, and SEIR-related documents are also available at the CPUC in San Francisco. Copies of the SEIR will be mailed to agencies and parties to the CPUC's General Proceeding, and a limited number of copies will be available for distribution upon request to the

CPUC's Project Manager (contact information on previous page). SEIR-related documents and project information, including the Draft SEIR, will be available upon their release to the public at the locations listed below.

Coalinga District Library
305 North Fourth Street
Coalinga, CA
(559) 935-1676

Huron Public Library
26050 "O" Street
Huron, CA
(559) 945-2284

Hanford Public Library
401 N. Douty Street
Hanford, CA
(559) 582-0261

Los Banos Public Library
1312 Seventh Street
Los Banos, CA
(209) 826-5254

Fresno Free Library
2420 Mariposa Street
Fresno, CA
(559) 488-3195

CPUC Central Files
505 Van Ness Avenue
San Francisco, CA
(415) 703-2045

A telephone hotline for project information has been established at **(559) 272-2107**. This number receives voice messages and faxes.

SEIR information is also available on the Internet, including Proposed Project information and the Draft SEIR. The address below links to CPUC's Los Banos-Gates 500 kV Transmission Project web page (A.01-04-012):

http://www.cpuc.ca.gov/Environment/info/aspen/path15/path15.html

5.4 AREAS OF CONTROVERSY

This Draft SEIR reflects comments made by agencies and the public from the time the CPUC published its Notice of Preparation (July 10, 2001) through September 1, 2001, as well as continuing consultation with local jurisdictions and other agencies throughout preparation of this Draft SEIR. Comments and concerns received were related to the following issues:

- Effects on agricultural lands and oil fields
- Biological impacts of the Western Corridor
- Visual degradation of the landscape
- Negative effect on property values and potential loss of use of land between adjacent parallel corridors.

Agricultural, biological, and visual impacts are summarized in Section 4.6, 4.2, and 4.10 of this Executive Summary, and addressed in more detail in the SEIR Sections C.7, C.3, and C.11, respectively. Consistent with CEQA, the SEIR does not analyze the potential economic impacts of the Proposed Project and Alternatives. CEQA is not intended or designed to protect against a possible decline in the commercial value of property adjacent to a project *(Hecton v. People of the State of California, 1976, 58 Cal.App. 3d 653, 656)*. Therefore, any possible reduction of property value does not constitute a CEQA impact (and would not be expected indirectly to create environmental impacts), and is not analyzed for purposes of determining an environmentally superior alternative.

6. IMPACT SUMMARY TABLE

The Impact Summary Table that follows is a complete, condensed presentation of the significant environmental impacts and mitigation measures for the proposed Los Banos-Gates 500 kV Transmission Project. Full descriptions of the Proposed Project and each of the alternatives can be found in Part B of the SEIR. The complete environmental analyses, along with the recommended mitigation measures for the Proposed Project and for each of the alternatives, are set out fully in Part C of the SEIR. Each impact identified in the SEIR is listed, followed by the impact determination, relevant mitigation measure(s), and statement of whether there is a residual impact.

Table ES-2 Summary of Impacts: Proposed Project

Impact	Impact Class	Effect	Mitigation	Residual Impact
AIR QUALITY				
2-1: PM_{10} emissions from construction disturbance	II	Less than significant with mitigation	**A-1:** The following procedures for reducing fugitive dust shall be implemented. Records documenting personnel awareness and the wind speed log shall be maintained at the construction site and shall be provided to CPUC's environmental monitor upon request. In order for the items listed below to be modified, the Applicant would be required to provide the CPUC with SJVUAPCD written approval of such modifications prior to the commencement of construction activities. • Traffic speeds on unpaved roads shall not exceed 15~~5~~ mph, except on portions of project access roads that are in designated areas where blunt-nosed leopard lizards are known to occur and/or within the Project ROW. Per Mitigation Measure **B-8**, the designated speed limit within those areas is 10 mph (see Section C.3.3.5.2). PG&E shall insure that all project personnel (including contractors, subcontractors, and service company representatives) sign a statement acknowledging their awareness of the unpaved road speed limit restriction. The signed statement shall specify that 15~~5~~ mph is the maximum speed limit on any unpaved road, except on project access road that are in designated areas where blunt-nosed leopard lizards are known to occur and/or within the Project ROW, where the maximum speed limit is 10 mph. • Wash off all truck tires and equipment leaving the construction site. PG&E shall insure that all project personnel (including contractors, subcontractors, and service company representatives) sign a statement acknowledging their awareness that tires and equipment leaving the construction site are to be washed. • Suspend excavation and grading activity when winds exceed 20 mph for a sustained period of 10 minutes, as measured by an anemometer. PG&E shall measure the wind speed with the anemometer when moderate to high winds occur, based on the fair judgment of a designated PG&E representative. PG&E shall maintain a written log to be maintained at the construction sites that documents day, time, and wind speed of each measurement.	Less than significant
2-2: Construction equipment exhaust emissions of ozone precursors (ROC and NO_x)	I	Potentially significant	**A-2:** Construction equipment shall be maintained in tune, per manufacturing specifications. PG&E/contractor shall provide a maintenance schedule for all vehicles and equipment. PG&E/contractor shall provide a certification from a third-party certified mechanic stating the timing of all internal combustion construction equipment engines has been properly maintained. PG&E/contractor shall re-certify each piece of construction equipment/vehicle based on the respective manufacturer maintenance schedule. Certifications shall be provided to the CPUC before the start of construction, and on an ongoing basis as new equipment is brought to the construction site. **A-3:** Vehicles shall not idle in excess of ten minutes. PG&E shall ensure that project personnel operating vehicles (including contractors, subcontractors, and service company representatives) sign a statement acknowledging their awareness of the idling restrictions and these records shall be maintained at the construction site for inspection by the CPUC environmental monitor.	Significant
2-3: Equipment emissions related to inspection and maintenance of the Proposed Project	III	Less than significant	No mitigation measures	None

Impact	Impact Class	Effect	Mitigation	Residual Impact
BIOLOGICAL RESOURCES				
3-1: Temporary and permanent loss of sensitive vegetation communities	II - III	Depending on species: Less than significant with mitigation or less than significant	**B-1:** A jurisdictional delineation of wetlands within the proposed transmission line corridor shall be performed by PG&E and verified by the U.S. Army Corps of Engineers before specific avoidance measures can be developed. Similarly, a formal mapping and assessment of alkali and riparian habitat will be required to satisfy CDFG 1601 (Streambed Alteration Agreement) requirements, if project activities (i.e., construction roads) cross the beds or banks of jurisdictional streams. Surveys, mapping, and assessment shall be performed at least 60 days before start of construction and results of these surveys (identification of wetlands, alkali, and riparian habitat) shall be utilized to define areas that are to be avoided in tower siting and location of access roads and other project components. The Project Biologist (defined in Mitigation Measure **B-12**) shall evaluate all proposed tower sites and identify those that are located within 200 feet of identified wetlands, alkali, and riparian habitat. A report summarizing habitat findings with respect to tower locations, along with copies of all maps and assessments shall be submitted to the CPUC for review and approval. **B-2:** Pre-construction surveys shall be performed for identification of all special status plant and animal species within 200 feet of project construction activities (including towers, access roads, and work areas). Special status species, as well as jurisdictional wetlands and riparian habitat (as determined from Mitigation Measures **B-1** and **B-6**, and as identified during 1986 and 2001 field surveys), shall be flagged prior to the start of construction of any project components. The CPUC shall be notified prior to the start of flagging activities so a CPUC-designated biologist may observe these activities. Maps and reports identifying locations of special status plants and animals found in pre-construction surveys, as well as proposed exclusion-fence locations, shall be provided to the CPUC's approved biological monitor for review and approval prior to the start of construction. To the extent possible, construction activities within significant plant communities will be avoided by placing towers so as to span these areas, maximizing the use of existing access roads, and minimizing the construction of new access roads, using temporary spur roads. Prior to confirming final transmission corridor design, the locations of all project components (towers, roads, temporary work areas, etc.) shall be defined on a map that also illustrates locations of wetlands, riparian habitat, and special status plants and wildlife, and this shall be provided to the CPUC for review and approval. **B-3:** Under conditions where impacts to wetlands, alkali, and riparian habitats cannot be avoided, PG&E shall either restore temporarily disturbed areas to pre-construction conditions following construction or provide off-site compensation for permanent vegetation losses. Where on-site restoration is planned for mitigation of temporary impacts, the Applicant shall develop a Habitat Restoration Plan, which will be submitted to the CPUC and the U.S. Army Corps of Engineers (for wetlands), the California Department of Fish and Game (CDFG) (for riparian habitat), and the Regional Water Quality Control Board (RWQCB) at least 60 days prior to the start of any construction for their review and approval. The plan shall contain information for natural community mitigation, including specifying the location of habitat type to be created, details on soil preparation, seed collection, planting, maintenance, and monitoring for on-site restoration efforts. Quantitative success criteria will also be presented. The mitigation objective for affected significant natural plant communities will be restoration to pre-construction conditions as measured by species cover, species composition, and species diversity. Success criteria will be established by comparison with reference sites approved by the appropriate agencies. Creation or restoration of habitat shall be monitored for five years after mitigation site construction to assess progress and identify problems. Remedial actions will be taken during the five-year period if necessary to	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			ensure the success of the restoration effort. **B-4:** If the CPUC-approved Project Biologist (defined in Mitigation Measure **B-12**), in consultation with project engineers, determines that restoration of temporary impacts is not feasible or where permanent impacts (i.e., loss of habitat) to significant plant communities occur from access road or tower installation, off-site mitigation shall be negotiated at agency-approved mitigation banks or otherwise, to a level acceptable by the CPUC, USFWS, CDFG, or USACE. **B-5:** A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist(s) provided by PG&E and approved by the CPUC prior to the commencement of construction activities. Training materials and briefings shall include but not be limited to, discussion of the Federal and State Endangered Species Acts, the consequences on noncompliance with these acts, identification and values of sensitive species and significant natural plant community habitats, fire protection measures, hazardous substance spill prevention and containment measures, and review of mitigation requirements. This training program shall also incorporate the provisions of Mitigation Measure **H-3** (Hydrology and Water Resources). Training materials and a course outline shall be provided to the CPUC for review and approval at least 30 days prior to the start of construction. PG&E shall provide to the CPUC a list of construction personnel who have completed training, and this list shall be updated by PG&E as required when new personnel start work. No construction worker may work in the field for more than 5 days without receiving the WEAP.	
3-2: Temporary and permanent loss of special status plant species or their habitats	II - III	Ranges between less than significant with mitigation to less than significant	**B-2** through **B-4** (above) and **B-6a:** Prior to construction, comprehensive rare plant surveys shall be conducted (or compiled from previous surveys) for all plants that have been identified within the study area and those plants with the potential to occur in the study area (as defined in Tables C.3-3 and C.3-4). Surveys shall be conducted within appropriate areas along the selected construction ROW and in areas susceptible to surface disturbance by construction vehicles or personnel. Surveys of the selected alignment (if not covered in 2001 spring survey) shall be appropriately timed to cover the blooming periods of the nine special status plant species known to occur in the area (April, May, and July). Maps depicting the results of these surveys will be prepared and will include other recently mapped special status plant occurrences in the area to ensure that the full scope of rare plant habitat in the project corridor vicinity is delineated. Locations of these special status plant populations will be provided to construction personnel. Any special status plant occurrences located within 200 feet of the approved project construction corridor will be fenced prior to the start of any construction, and if feasible, towers or other project components shall not be placed in areas where these plant populations have been identified. Maps and reports, as well as proposed fence locations, shall be provided to the CPUC's approved biological monitor for review and approval prior to the start of construction. An exception to the fencing requirement would be the gypsum-loving larkspur. Because of the widespread distribution of this plant throughout the project area, it would not be feasible to fence off all of these plant communities. Instead, fencing would be placed in the most concentrated areas of gypsum-loving larkspur at the direction of the CPUC-approved Biological Monitor. **B-6b:** PG&E shall present to the CPUC within 30 days of project approval a report evaluating use of Tubular Steel Poles (TSPs) rather than lattice towers for the transmission line. The report shall evaluate the technical feasibility of using TSPs for this project, and shall present diagrams illustrating the poles, their footing	Potentially significant (see Impact **3-11**)

Impact	Impact Class	Effect	Mitigation	Residual Impact
			requirements, and the approximate ground disturbance required. The report shall also present visual photosimulations of the TSPs from three locations, approved by the CPUC. A comparison of all of these factors with the proposed lattice towers shall also be provided.	
3-3: Impacts to plant communities by disturbance from vehicles or project personnel	II - III	Ranges between less than significant with mitigation to less than significant	**B-2** (above) and **B-7:** PG&E shall map and flag or fence overland travel routes and project access areas prior to construction or periodic maintenance during operation and shall ensure that vehicles or project personnel do not disturb identified areas. Areas flagged shall include wetland, alkaline areas, riparian, and reservoirs and ponds. The mapping/flagging shall be reviewed by a CPUC-approved biologist prior to use of these routes for construction to ensure adequate protection for sensitive plant communities.	Less than significant
3-4: Disturbance of special status plant species and their habitats	II	Less than significant with mitigation	**B-6a & B-6b** (above)	Less than significant
3-5: Erosion and sedimentation	II	Less than significant with mitigation	**H-1** (see Section C.6, Hydrology and Water Quality)	Less than significant
3-6: Wildlife habitat removal	II - III	Ranges between less than significant with mitigation to less than significant	**B-2** (above) and **B-9** (below)	Less than significant
3-7: Wildlife mortality	II - III	Ranges between less than significant with mitigation to less than significant	**B-5** (above) **B-8:** In order to reduce direct mortality impacts during construction, PG&E shall impose the following conditions on all construction personnel, and these requirements shall be addressed in the WEAP (Mitigation Measure **B-5**): • Vehicles shall not exceed 10 mph on the entire ROW or along designated portions of access roads where blunt-nosed leopard lizards are known to occur ~~unpaved access roads or in the ROW~~. These locations will be determined during pre-construction surveys and ~~These roads shall be~~ identified on project maps ~~and speed limits shall be identified on maps~~ prior to the onset of construction. All other areas along dirt access roads outside the limits of known blunt-nosed leopard lizard habitat shall have a 15 mph speed limit, consistent with Air Quality Mitigation Measure **A-1**. • Litter or other debris that may attract animals shall be removed from the project area; organic waste shall be stored in enclosed receptacles, removed from the project site daily, and disposed of at a suitable waste facility. • No pets will be allowed in the construction area, including access roads and staging areas • Construction crews will be educated regarding sensitive wildlife that could be encountered on highways and how to safely avoid them. Crew behavior shall be monitored by a qualified biologist approved by CPUC.	Less than significant
3-8: Wildlife disturbance from increased human presence	II	Less than significant with mitigation	**B-9:** Pre-construction wildlife surveys (following appropriate survey protocol, as applicable) shall be performed by qualified biologists to locate raptor nests, owl/harrier burrows and other resources defined in Table C.3-11 in or adjacent to the ROW and access road areas. Maps and reports, as well as proposed fence locations, shall	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			be provided to the CPUC's approved biological monitor for review and approval prior to the start of construction. Based on survey results, construction and operation activities shall be scheduled to avoid critical seasons for sensitive wildlife species, as defined in Table C.3-11 below. Specific identified habitats (nests, riparian habitat, burrows, etc.) shall be avoided during specific seasons throughout the construction, operation, and maintenance of the approved project. Travel routes for vehicles, equipment, and personnel will be along existing roads. If such roads are not present, routes will be flagged or fenced and no activities would be permitted outside these areas. If nests, burrows, or other habitat are observed, the avoidance period and buffer distances shown in Table C.3-11 will be implemented. Specific distances from resources (see Table C.3-11) shall be maintained during construction, operation, and maintenance of the transmission line. Travel areas shall be flagged prior to construction (see Mitigation Measure **B-2**), and biological monitors as specified by CPUC will be present during construction to verify that no vehicular travel occurs outside flagged areas. An exemption to a mitigative measure may be approved on a case-by-case basis when deemed appropriate by the designated Project Biologist, CDFG, or USFWS. An exemption would be approved only after a thorough, site-specific analysis determined that a particular species for which the measure was put in place is not present or would not be significantly impacted. Biological monitors will also have the authority to terminate construction activities if any significant adverse effect on special status species is observed.	
3-9: Increased predation and competition	III	Less than significant	No mitigation measures	Less than significant
3-10: Bird electrocution and tower/line collisions	II	Less than significant with mitigation	**B-10:** Prior to installation of conductors, PG&E shall either (a) perform a study to determine the potential for bird strikes in the areas identified below and then, depending on study results, (b) implement bird strike diverters as defined below. The study shall evaluate the actual bird strike incidents at existing transmission lines in the vicinity of the approved project corridor. If this study determines that bird strikes would not constitute a significant impact, compliance with the remainder of this measure would not be required; if PG&E does not complete this study or if study results confirm the potential benefits of bird flight diverters, the remainder of this measure shall be implemented. The protocol for this study (including the time period, survey intervals, and impact significance criteria) shall be approved by the CPUC, the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG). If PG&E does not perform the study defined above or if study results determine that flight diverters would likely be beneficial, PG&E shall install bird flight diverters in the areas defined below to reduce bird collision impacts along the proposed or alternative transmission line corridors: • At the Los Banos Substations on any new ~~equipment and~~ transmission lines • On static lines in the vicinity of the Los Banos Reservoir, from MP 4 to 8 in the Western Corridor or from MP 5 to 8 in the Eastern Corridor Alternative; and • On static lines in the vicinity of the Little Panoche Wildlife Area, between Segment 4 (MP 22 to 24) and Alternative Segment 4A (AMP 22 to 24) in the Western Corridor. Prior to installation of conductors, PG&E shall submit its recommendation for the type(s) and spacing of bird	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			flight diverters in the identified areas to the CPUC, the USFWS, and the CDFG for review and approval. Conductors shall not be installed until the CPUC, in conjunction with USFWS and CDFG, has approved an agreement between PG&E, USFWS, and CDFG regarding the type and spacing of bird flight diverters required; diverters shall be installed within 30 days of installation of conductors. Following installation of all bird flight diverters (line markers), PG&E shall begin a three-year monitoring program in the areas identified above to determine the extent of bird collisions in the project area. Existing unmarked transmission lines in similar high bird-use areas shall be monitored during the same period to allow comparisons for determining line marking effectiveness. The protocol for the study (including identification of unmarked lines to be monitored) shall be submitted to the resource agencies for review and approval prior to installation of conductors on new towers. As part of the design of this monitoring program, PG&E shall submit to the CPUC and the U.S. Fish and Wildlife Service information regarding types of bird collision detection systems, their potential for improving study results, and their cost and feasibility in this area. Based on this information, the CPUC will decide whether such a system will be required for the monitoring study. Annual reports providing bird strike data for the new marked lines and for the existing unmarked lines shall be provided to the CPUC, the USFWS, and the CDFG, and a summary report shall be submitted at the end of the three-year monitoring program. The annual reports shall include a discussion of the apparent effectiveness of the line marking techniques selected, and recommendations regarding modification of the type of line markers used if bird collisions are determined to be frequent. PG&E, after review and input by CPUC, USFWS, and CDFG, shall implement the findings of the annual reports by modifying line markers as needed to minimize collisions.	
3-11: Habitat removal or disturbance of special status plant and wildlife species	~~I~~ II	Significant	**B-2, B-4, B-6, B-8,** and **B-9** (above) and **B-11:** If, after applying Mitigation Measures **B-2, B-4, B-6, B-8** and **B-9**, the CPUC-approved Project Biologist determines that all impacts on special status plant and wildlife species cannot be avoided, PG&E shall initiate FESA Section 7 Consultation with the U.S. Fish & Wildlife Service for Federally-listed species and/or CESA 2080 Consultation will be initiated with the California Department of Fish and Game for State-listed species. These consultations shall determine requirements for obtaining a (FWS) Biological Opinion and/or (CDFG) Incidental Take Permit. PG&E shall obtain any such required Biological Opinion or Incidental Take Permit and, in that process, shall work cooperatively with the appropriate agency or agencies to develop appropriate mitigation measures to offset impacts to the affected species. PG&E shall thereafter implement all mitigation recommendations of the FWS and/or CDFG that result from these consultations. **B-11a:** PG&E shall provide land of equal or better habitat value to the City of Coalinga to compensate for any acreage lost within the City of Coalinga's Habitat Mitigation Bank.	Significant
All Biological Resources Impacts	I - II	Less than significant with mitigation	**B-12:** PG&E shall submit to the CPUC for review and approval the resumes and qualifications of a Project Biologist, who will represent PG&E in the field and be responsible for field decisions on biological issues. In addition, resumes of all other environmental field personnel proposed by PG&E for field enforcement of mitigation measures shall be provided to the CPUC for review and approval. Types of qualifications that will be considered for selecting qualified field personnel include: • Emphasis of undergraduate/graduate degree(s)	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			• Related experience • Special skills such as statistical analysis, experimental design, species identification, vegetation sampling, dependent upon the assignment. Depending on the monitoring objective, individuals will have suitable experience in soil science, botany, ecology, restoration, wildlife observation, and wetland delineation. The objective will be to utilize monitors who can collect and analyze the data required to document mitigation success, problems, and, if necessary, suggest remedial action.	
CULTURAL RESOURCES				
4-1: Construction operations could inadvertently affect known cultural resources within or adjacent to the proposed or alternative corridors	II	Less than significant with mitigation	**C-2:** PG&E shall conduct pre-construction field surveys to locate and record cultural resources within the project right-of-way and related construction facilities and roadways. PG&E shall submit the results from the pre-construction survey to the CPUC at least 30 days prior to construction. If resources are found, they shall be formally recorded and/or updates shall be filed for previously recorded sites according to the procedures defined in the Cultural Resources Management Plan (see Mitigation Measure **C-1**). All resources shall be evaluated in accordance with California Register of Historical Resources criteria. **C-3:** PG&E shall avoid known significant or potentially significant cultural resources in/adjacent to the project corridor. They shall consult with cultural resource professionals (approved by the CPUC) during the siting of the transmission line to avoid cultural resources where possible. If avoidance is not possible, specific procedures shall be followed to minimize resource impact or to record resources that cannot be avoided; these procedures shall be identified and reported in the Cultural Resources Management Plan (see Mitigation Measure **C-1**).	Less than significant
4-2: Previously unrecorded cultural resources could be discovered during ground disturbing construction operations. Construction operations in areas of native soil, especially in the near vicinity of flowing and intermittent water sources and former lagoons/marshy areas, could result in the inadvertent exposure of significant buried prehistoric or historic cultural materials.	II	Less than significant with mitigation	**C-4:** PG&E shall consult with interested Native Americans to identify areas or features of significant or potentially significant Native American concern, and shall develop procedures (to be documented in the CRMP, Mitigation Measure **C-1**) for documentation of or preservation of resources that cannot be avoided. Documentation of consultation and issues discussed shall be provided to the CPUC, at least 30 days prior to construction.	Less than significant
4-3: Project construction could affect parks, Wilderness Study Areas (WSA), and recreational areas that may contain cultural resources	II	Less than significant with mitigation	**C-5:** PG&E shall consult with and implement any site-specific cultural resources requirements mandated by the CPUC, State Office of Historic Preservation, and within the jurisdiction of other agencies (e.g., Bureau of Reclamation, Bureau of Land Management (BLM), the California Department of Parks and Recreation (CAL/DPR). Documentation of consultation and issues discussed shall be provided to the CPUC, at least 30 days prior to construction. Areas and parks that may be affected are the following: • California Aqueduct (owned by the Bureau of Reclamation and managed by the California Department of	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			Water Resources (DWR) • Little Panoche Reservoir (jointly managed by the DWR and California Department of Fish and Game) • Panoche Hills Wilderness Study Area (WSA) (BLM) • San Luis Reservoir State Recreation Area (CAL/DPR) • Los Banos Creek Recreation Area (CAL/DPR)	
All Cultural Resources Impacts	II	Less than significant with mitigation	**C-1:** PG&E shall develop and implement a *Cultural Resources Management Plan* (CRMP) for the project covering pre-construction, construction and post-construction activities. PG&E shall submit the CRMP to the CPUC at least 30 days prior to construction for review and approval. The CRMP shall include procedures for pre-construction field survey, designation and avoidance of cultural resources areas, significance evaluation including potential testing and possible data recovery prior to construction, archaeological monitoring during construction, treatment of the unexpected discovery of cultural resources (including Native American burials), and treatment of significant sites that may be exposed during all phases of the project. The CRMP shall detail the qualifications of the Project Archaeologist, reporting requirements by the Project Archaeologist; designate a location for the curation of cultural materials collected during the project; and, specify that archaeologists and other discipline specialists meet any Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP). The CRMP shall include requirements detailing that prior to construction or ground-disturbing activities, PG&E shall (1) complete cultural resources training for all construction personnel; and, (2) insure that any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits. The CRMP shall include the requirement for and definition of a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential Environmentally Sensitive Areas (ESA) and anticipated procedures to treat unexpected discoveries. Construction personnel shall be trained regarding the recognition of possible buried prehistoric and historic resources during construction. PG&E shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials including Native American burials. Wherever a tower, access road, equipment, etc. must be placed or accessed within 100 feet of a recorded, reported or known archaeological site eligible or potentially eligible for the CRHR, the site will be flagged on the ground as an Environmentally Sensitive Area (ESA). Construction equipment would then be directed away from the ESA, and construction personnel would be directed to avoid entering the ESA. Upon discovery of potential buried cultural materials, work in the immediate area of the find shall be halted and PG&E's archaeologist notified. Once the find has been identified, PG&E's archaeologist will make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be important according to CEQA.	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
GEOLOGY, SOILS, AND MINERALS				
5-1: Unique geologic and paleontologic features	II	Less than significant with mitigation	**G-1:** Prior to construction, PG&E shall develop a Paleontological Resources Monitoring Plan (PRMP) for review and approval by the CPUC, which shall address the treatment of paleontological resources discovered during transmission line construction. The PRMP shall be prepared by a qualified paleontologist; it shall include procedures for significance testing and data recovery. The PRMP shall defer to the Cultural Resources Monitoring Plan (see Mitigation Measure **C-1**) if paleontological resources are found with archaeological resources. The PRMP shall include a requirement for training of construction workers on why vertebrate fossils are important and what they look like. The training shall explain prohibitions against collecting fossils found during construction. The PRMP shall identify areas of high paleontological sensitivity along the approved route, and shall define procedures for evaluation of resources found during construction. It shall define procedures for actions to be taken if paleontological resources are found during construction, procedures for fossil recovery, a data recovery program, and a qualified curation facility.	Less than significant
5-2: Known mineral and energy resources	II	Less than significant with mitigation	**H-9** (see Section C.6, Hydrology and Water Quality)	Less than significant
5-3: Loss of agricultural soils	I - II	Ranges between significant to less than significant with mitigation	**H-1** (see Section C.6, Hydrology and Water Quality)	Significant
5-4: Erosion	II	Less than significant with mitigation	**H-1** (see Section C.6, Hydrology and Water Quality)	Less than significant
5-5: Substantial alteration of topography	II	Less than significant with mitigation	**H-1** (see Section C.6, Hydrology and Water Quality)	Less than significant
5-6: Fault rupture	II	Less than significant with mitigation	**G-2:** In areas where the potential for surface fault rupture exists, PG&E shall perform ~~detailed~~ geotechnical surveys at each tower or substation site to ~~accurately~~ determine the fault locations and the seismic potential of each fault, so that facility locations may be adjusted to avoid this hazard. PG&E shall submit these geotechnical reports to the CPUC for review ~~and site approval~~ prior to the start of construction. Incorporation of standard engineering practices as part of the project shall ensure that persons or structures are not exposed to this geological hazard.	Less than significant
5-7: Earthquake induced ground shaking	III	Less than significant	No mitigation measures	Less than significant
5-8: Expansive, soft, or loose soils	II	Less than significant with mitigation	**G-3:** PG&E shall perform ~~design-level~~ geotechnical investigations including soil sampling~~, free-swell~~ and lab tests, ~~density tests, and soil borings or cone penetrometer tests (CPT)~~ as appropriate, to determine the extent of and potential for expansive, soft or loose soils. PG&E shall develop appropriate design features for locations where potential problems are found to exist. Appropriate design features may include excavation of problematic soils and replacement with engineered backfill, ground treatment such as ground densification, and the use of deep foundations such as piers or piles. PG&E shall submit these geotechnical reports to the CPUC for review ~~and site approval~~ prior to the start of construction. Incorporation of standard engineering practices as part of the project shall ensure that persons or structures are not exposed to geological hazards.	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
5-9: Ground subsidence and settlement	II - III	Ranges between less than significant with mitigation to less than significant	**G-4:** PG&E shall evaluate the potential for subsidence or settlement of approved project facilities due to the presence of compressible or hydrocompactive soils during ~~design-level~~ geotechnical investigations. PG&E shall submit these geotechnical reports to the CPUC for review ~~and site approval~~ prior to the start of construction. The results of the investigations will be used to develop appropriate pre-construction ground treatments, and incorporate foundation and structural designs to accommodate expected settlements. ~~PG&E shall remove or rework near surface deposits found to be potentially susceptible to hydrocompaction prior to placing new engineered fill.~~ Incorporation of standard engineering practices as part of the project shall ensure that persons or structures are not exposed to geological hazards.	Less than significant
5-10: Slope instability and unstable soil conditions	II	Less than significant with mitigation	**G-5:** PG&E shall perform ~~design-level~~ geotechnical surveys to evaluate the potential for unstable slopes, landslides, mudflows, and debris flows along the approved corridors. PG&E shall submit these geotechnical reports to the CPUC for review ~~and site approval~~ prior to the start of construction. Facilities should be located away from steep hillsides, debris flow source areas, the mouths of steep sidehill drainages, and the mouths of canyons that drain steep terrain. Specially designed deep foundations may be used in areas of shallow sliding where unstable slopes cannot be avoided. Incorporation of standard engineering practices as part of the project shall ensure that persons or structures are not exposed to geological hazards.	Less than significant
HYDROLOGY AND WATER RESOURCES				
6-1: Potential for tower construction and road building activities to accelerate hillslope erosion, increase sediment loading to local channels, and reduce surface water quality	II	Less than significant with mitigation	**H-1:** An erosion control and sediment transport control plan shall be submitted first to the CVRWQCB and CPUC for review and approval, and then to Merced and Fresno Counties along with grading permit applications. This plan shall be prepared in accordance with the standards provided in the Manual of Erosion and Sedimentation Control Measures (ABAG, 1981) and in compliance with practices recommended by the Natural Resources Conservation Service. Implementation of the plan will help stabilize graded areas and waterways, and reduce erosion and sedimentation. The plan shall be designed specifically for the hydrologic setting of the approved project, which includes upland slopes, tributary creeks, and larger streams. The plan shall define the specific Best Management Practices (BMPs) that will be adhered to during construction activities. Erosion minimizing efforts such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for example, flagging), vehicle mats in wet areas, and retention/ settlement ponds shall be installed before extensive clearing and grading begins. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during construction activities. Revegetation plans, the design and location of retention ponds, and grading plans shall be submitted to the CDFG for review in the event of construction near waterways. In addition, PG&E shall: • Replant temporarily disturbed areas with a mixture of perennial grasses, forbs, brush, shrubs, and tree species that will provide effective erosion control. Prepare a firm, rough seedbed on fill or cut slopes and apply appropriate types and amounts of fertilizers and seed mixtures. Consider reseeding with native plants only in sensitive areas not subject to grazing. • Restore disturbed surfaces to original conditions, including reseeding or otherwise restoring vegetation on all disturbed slopes exceeding 2 percent, as soon as possible after such grading work is completed or later approved by the Project Biologist. Recontour, prepare the surface, and seed all roads, construction sites, and other disturbed areas not required for project operation and maintenance. • Use standard erosion practices and dust control measures, as defined in mitigation measures for air quality, during construction to protect biological and hydrological resources.	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			• Based on weather conditions as determined by the CPUC's Environmental Monitor, ~~T~~temporarily collect excavated or disturbed soil and place it in a controlled area surrounded by siltation fencing, hay bales, or a similarly effective erosion control technique that prevents the transport of sediment. • Restrict the staging of construction materials, equipment, and excavation spoils to areas at least 100 feet outside of drainage channels or tributaries. • Where tower or substation construction activities occur near a creek or channel, sediment containment methods shall be performed at least 100 feet from the channel. • Upon completion of construction activities, excavated soil shall be replaced and graded to match the surroundings, and surplus soil shall be transported from the site and disposed of appropriately. • Use existing roads for access wherever possible. Roads required for construction but not maintenance shall be removed after construction and surfaces restored to original conditions. • Minimize steepness and unobstructed length of fill slopes. Protect newly constructed fill with appropriate materials to prevent erosion. • Avoid road construction on very steep slopes and avoid work on unstable slopes and rock outcrops. • In agricultural areas where grading occurs, stockpile topsoil and replace after construction. Re-grade to original contours and re-seed in accordance with landowner objectives. • Add soil amendments during revegetation to counteract potential chemical imbalances. • Minimize use of heavy equipment on agricultural land.	
6-2: Increased runoff from tower construction and road building activities	III	Less than significant	No mitigation measures	Less than significant
6-3: Increased stream channel erosion, sediment transport, and alteration of the existing drainage pattern due to road building and construction activities	II	Less than significant with mitigation	**H-1** (above) and **H-2:** Access roads shall be designed to account for anticipated surface runoff and channel flow. Culverts designed to convey flow beneath access roads shall be designed for the specific hydrologic and hydraulic conditions occurring at the site. Culvert design should follow standard practices (Caltrans Highway Design Manual, 1999) and should also include energy dissipation practices (Federal Highway Administration, 1983). It is important that flow velocities are maintained below levels that are capable of causing channel erosion downstream or headward channel incision upstream. PG&E shall submit copies of approved grading and construction plans for new roads ~~Construction plans for new roads shall be submitted~~ to the CPUC for review ~~and approval~~ prior to the start of project construction.	Less than significant
6-4: Surface water and groundwater contamination during construction	II	Less than significant with mitigation	**H-3:** An environmental training program shall be established by PG&E to communicate environmental concerns and appropriate work practices, including spill prevention and response measures, to all field personnel. This training program shall not only describe general environmental concerns and procedures but shall emphasize site-specific physical conditions to improve hazard prevention. For example, all flow paths to the nearest water bodies should be identified to workers and where hazardous materials may specifically impact the site shall be identified. An outline of the training program and monitoring plan shall be submitted to the CPUC for review and approval prior to the start of construction.	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			H-4: A Hazardous Substance Control and Emergency Response Plan (HSCERP) shall be prepared by PG&E and submitted to the CPUC for review and approval. The plan shall include preparations for quick and safe cleanup of accidental spills occurring during construction. This plan will be submitted with the grading permit application. It will prescribe hazardous materials handling procedures for reducing the potential for a spill during construction, and will include an emergency response program to ensure quick and safe cleanup of accidental spills. More specifically, the plan will identify areas where refueling and vehicle maintenance activities and storage of hazardous materials, if any, will be permitted. The plan shall include the following: • All refueling, lubrication, and other machinery or vehicular maintenance activities shall be performed at least 150 feet from any tributary, stream channel, aqueduct or canal. This distance is increased to 500 feet when in the vicinity of identified vernal pool wetlands, or the Los Banos and Little Panoche Reservoirs. • Oil-absorbent material, tarps, and storage drums to contain and control any minor releases of transformer oil shall be used. • Describe the clean-up process if excess water and liquid concrete escapes from tower foundations during pouring. This excess will be directed to bermed areas adjacent to the borings where the water will infiltrate or evaporate and the concrete will remain and begin to set. Once the excess concrete has been allowed to set up (but before it is dry), it will be removed and transported to an approved landfill for disposal.	
6-5: Tower foundation impacts to groundwater hydrology	III	Less than significant	No mitigation measures	Less than significant
6-6: Tower foundation impacts to groundwater quality	II	Less than significant with mitigation	**H-1, H-3,** and **H-4** (above) and **H-5:** Prior to final tower siting, PG&E shall research existing information about the project corridor to identify and avoid areas with potential existing soil and groundwater contamination (where groundwater is shallower than 20 feet). Findings regarding soil and groundwater contamination conditions shall be supplied to the CPUC in coordination with the agency review of the specific alignment and tower locations for the selected transmission line corridor. Before construction begins along the approved alignment, soil sampling ~~and potholing~~ shall be conducted south of project milepost (MP) 66 (as shown on Figure B-1b) at representative intervals, and soil information shall be provided to construction crews to inform them about soil conditions and potential hazards that were not identified in the records searches performed prior to tower siting. If hazardous materials are encountered in either soils or groundwater, work shall be stopped until the material is properly characterized and appropriate measures are taken to protect human health and the environment. If excavation of hazardous materials is required, they shall be handled, transported, and disposed of in accordance with federal, state, and local regulations.	Less than significant
6-7: Erosion and sediment transport at Los Banos and Gates Substations	III	Less than significant	**H-1, H-3,** and **H-4** (above)	Less than significant
6-8: Surface and groundwater quality impacts at Los Banos and Gates Substations	II	Less than significant with mitigation	**H-1, H-3, H-4,** and **H-5** (above)	Less than significant
6-9: Operational impacts to surface and groundwater	III	Less than significant	No mitigation measures	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
hydrology at tower and substation locations				
6-10: Risk of transmission tower damage through flooding or erosion	II	Less than significant with mitigation	**H-6:** Transmission towers shall not be sited within a distance of 200 feet from the edge of stream channels. ~~a designated 100-year floodplain. Prior to final alignment of transmission towers, the Applicant shall evaluate the position of all towers in light of the most recent (July 2001 or later) floodplain delineations in the project area.~~ To demonstrate compliance, PG&E shall provide the CPUC with a map of tower~~s~~ locations relative to stream courses ~~within 100 feet of identified floodplains~~ 30 days prior to the start of construction.	Less than significant
6-11: Operational impacts to surface and groundwater quality at substations	II	Less than significant with mitigation	**H-7:** If PG&E currently has a spill prevention containment and countermeasure (SPCC) pond that collects runoff from the Los Banos, Gates, and Midway Substations, the pond shall be upgraded to accommodate additional flow resulting from the substation modifications. If there is currently no SPCC pond at these substation sites, PG&E shall update its SPCC plan to explain how the additional runoff or potential releases would be accommodated within the substations. PG&E shall submit the updated SPCC to the CPUC for review and approval 30 days prior to energizing the new lines or the new portion of the substations.	Less than significant
6-12: Conflict with operation of water and oil wells within the transmission corridor	II	Less than significant with mitigation	**H-8:** The final tower siting for the approved project shall avoid existing oil and water wells. Wells that cannot be avoided shall be removed or relocated, and the owner shall be compensated by the Applicant. To demonstrate compliance, at least 30 days prior to construction, PG&E shall provide a map showing all oil and water wells within 200 feet of the edge of the ROW.	Less than significant
LAND USE AND RECREATION				
7-1: Temporary construction disturbances	II - III	Ranges between less than significant with mitigation to less than significant	**L-1:** PG&E shall, to the extent feasible, use access roads that were constructed for the existing 500 kV transmission lines. (These roads, many of which are still used for maintenance, with necessary repair, could be used for access with only construction of spur roads that would be necessary to reach individual tower locations.) PG&E shall document compliance with this measure by submitting an access road plan (demonstrating use of existing roads or reasons why existing roads cannot be used) to the CPUC for review and approval at least 30 days before construction. **L-2:** Construction staging areas and pulling sites shall be located adjacent to roads where practical. PG&E shall coordinate with landowners to establish construction areas (such as conductor pulling and splicing areas and construction yards) on non-agricultural land or in areas with less sensitive crops, where feasible. PG&E shall document compliance with this measure by submitting to the CPUC for review and approval, at least 30 days before construction begins, a plan showing construction staging and pulling areas, demonstrating use of non-agricultural land or reasons why agricultural land cannot be avoided. **L-3:** All access roads not required for maintenance by PG&E after construction should be either permanently closed using the most effective and least environmentally damaging methods appropriate to the landowners, or be regraded (recontoured), restored, and revegetated with the concurrence of the relevant landowners. Any damaged recreation, farm, or residential access roads shall be repaired. PG&E shall document compliance with this measure by submitting to the CPUC for review and approval a plan showing methods to restore and revegetate unnecessary access roads. **L-4:** PG&E shall locate new access roads parallel to landform contours where feasible, in order to minimize ground disturbance and/or reduce scarring. Placement of new access roads on permanent crop land (e.g., orchards) shall be avoided, where feasible. PG&E shall document compliance with this measure by submitting an access road plan (demonstrating conformance to landform contours and avoidance of permanent crop land)	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			to the CPUC for review and approval. **L-5:** In agricultural areas where sites would be graded, PG&E shall stockpile topsoil. After construction, topsoil shall be replaced and the site graded to the original contours. If appropriate, the site shall be reseeded in accordance with agency or landowner objectives. PG&E shall document compliance with this measure by submitting to CPUC for review and approval a plan showing methods to stockpile topsoil and restore construction sites. **L-6:** PG&E shall time construction, whenever practical, to minimize disruption of normal seasonal activities for crop and rangeland and to avoid peak use periods at recreational areas. PG&E shall work with the appropriate County agent and farmers to agree to a construction schedule that would avoid the prime crop planting, growing, and harvesting seasons, to the extent possible. PG&E shall submit a construction schedule to the CPUC for review and approval. The schedule shall document how disruptions to agricultural operations will be avoided. **L-7:** At least one month prior to constructing the project, PG&E shall give advance notice of such construction, construction activity schedules, access restrictions, and anticipated disturbances to property owners, residents, and tenants potentially affected by construction activities (within 1,000 feet of project ROW or access roads). The Applicant shall provide adequate access to existing land uses during all periods of construction and shall notify landowners of alternative access. PG&E shall avoid nighttime construction near noise-sensitive land uses (e.g., residences and campers at recreation areas). PG&E shall document compliance with this measure by submitting to CPUC a copy of the notice for review and approval prior to mailing said notice. PG&E shall provide evidence to CPUC that the notice was delivered to landowners and residents within 1,000 feet of the project ROW and access roads. PG&E shall submit to CPUC for review and approval a plan showing how adequate access to existing land uses will be provided during construction. **L-8:** Immediately after removing sections of grazing fencing, PG&E shall construct a temporary barrier across the section of removed fencing so that grazing animals cannot move through the fencing. Immediately after completing construction in the area, PG&E shall repair the section of removed fencing. PG&E shall close all gates immediately after they are opened to allow construction vehicles and equipment access to a construction area. PG&E shall incorporate these requirements into the construction plan and demonstrate to the CPUC that all construction workers are informed of these provisions. **L-9:** PG&E shall include a stipulation in its easement agreements with landowners along the ROW that landowners shall be reimbursed for the value of the crops lost and the cost of any delay or interruption in necessary farming or grazing practices as a result of any interrupted use of cropland or grazing land. Evidence of this stipulation shall be submitted to the CPUC. **L-10:** PG&E shall avoid, to the extent feasible, construction operations that disturb agricultural soil during the wet season (moist soil is generally more susceptible to compaction than dry soil). For any area in which PG&E determines avoidance to be infeasible, PG&E shall provide to the CPUC for review and approval at least two weeks prior to construction at that site, a brief written description of the area and the reasons that avoidance is not considered to be feasible. PG&E shall minimize the use of heavy equipment on agricultural land to avoid soil compaction. Where compaction occurs on agricultural land as a result of construction, the soil shall be ripped to restore adequate	

Impact	Impact Class	Effect	Mitigation	Residual Impact
			percolation of irrigation water through the soil strata. PG&E shall incorporate these requirements into the project construction plan and submit the plan to CPUC for review and approval.	
7-2: Conflicts with existing and planned land uses	II	Less than significant with mitigation	**L-11:** PG&E shall coordinate with property owners during final transmission line design and shall, to the extent feasible, align the transmission line, with the review and approval of the CPUC, so as to avoid existing residences, minimize land use conflicts, and maximize the distance between the line and agricultural operations, planned developments, canals, oil fields, dams, recreation areas, and airstrips located within, adjacent to, and near the ROW. PG&E shall document compliance with this measure by submitting a letter or report to the CPUC prior to the start of construction, documenting unavoidable landowner and land use conflicts, why avoidance is not possible, and proposed resolution. **L-18:** Within the area proposed for the Specific Urban Development Plan (SUDP), *The Villages of Laguna San Luis Community Specific Plan*, and the area designated as kit fox corridor, PG&E shall ~~landscape the transmission line ROW and buffer area or otherwise~~ design the area for integration and compatibility with the planned development and with the existing kit fox habitat conservation corridor. Compliance will be determined by CPUC, in consultation with Merced County planning officials, CDFG, and USFWS.	Less than significant
7-3: Long-term conversion/loss of productive agricultural land	I and III	Potentially significant and less than significant	**L-12:** Tower placement shall be adjusted, with review and approval of the CPUC during final project design, to avoid orchards and vineyards, row crops, and furrow-irrigated crops (with tower-to-furrow angles greater than 61 percent), wherever possible. Also when possible, the corridor should avoid more heavily cultivated crops in preference for non-agricultural land or crops such as alfalfa, corn, and small grains. PG&E shall coordinate work with local landowners to place towers in areas that would cause the least impact (e.g., along the edges of fields or adjacent to mid-section farming roads).	Significant in some segments
7-4: Impacts on agricultural equipment and operation	III	Less than significant	**L-12** (above) and **L-13:** When locating towers in row crops is unavoidable, PG&E shall attempt to locate towers in fields with rows that would be parallel, rather than perpendicular, to the transmission line. Transmission lines shall not be placed in diagonal orientations across cultivated fields, to the extent feasible. At least 30 days prior to construction, PG&E shall submit to the CPUC, for review and approval, a tower location plan that indicates agricultural row orientation.	Less than significant
7-5: Interference with irrigation practices	II	Less than significant with mitigation	**L-13** (above) and **L-14:** Where towers must be placed in agricultural fields, transmission lines and towers shall be placed toward the center of fields where feasible. PG&E shall avoid placing towers at the edge of fields where canals or irrigation ditches are located. PG&E shall document compliance with this measure by submitting to the CPUC, for review and approval, a tower location plan that indicates tower location relative to agricultural fields and irrigation systems. **L-15:** PG&E shall avoid siting of towers in fields using mechanical move irrigation systems, and shall attempt to locate them in fields using flood or border check irrigation over those using furrow irrigation. PG&E shall document compliance with this measure by consulting with landowners to identify irrigation systems and by submitting to the CPUC, for review and approval, a tower location plan that indicates avoidance of areas of mechanical move and furrow irrigation systems.	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
7-6: Effects on aerial applications	II	Less than significant with mitigation	**L-13** and **L-14** (above) and **L-16:** When transmission towers are to be installed in or adjacent to agricultural fields, PG&E shall avoid installing them adjacent to existing transmission lines and shall avoid angular joining of corridor segments. PG&E shall document compliance with this measure by submitting to the CPUC, for review and approval, construction plans that show locations of all angle towers in agricultural areas.	Less than significant
7-7: Permanent preclusion of existing, permitted, and planned land uses	II	Less than significant with mitigation	**L-17:** During the right-of-way acquisition process, PG&E shall coordinate with each affected property owner, in order to develop an alignment and specific tower locations, to provide clear information about the right-of-way acquisition process compensation, and construction and maintenance activities, and to understand landowner plans for use of the transmission corridor area in order to minimize the impact of tower and ROW location. PG&E shall document compliance with this measure by submitting to the CPUC written evidence of landowner consultation and a copy of the written information distributed to landowners.	Less than significant
Effects on property values	NA	No CEQA Impact	No mitigation measures	None
Noncompliance with local County General Plan, Policies	II	Less than significant with mitigation	**L-17** (above) **L-18:** Within the area proposed for the Specific Urban Development Plan (SUDP), *The Villages of Laguna San Luis Community Specific Plan*, PG&E shall landscape the transmission line ROW and buffer area or otherwise design the area for integration and compatibility with the planned development. Compliance will be determined by CPUC, in consultation with Merced County planning officials. **L-19:** PG&E shall consult with County officials during the transmission line siting process to evaluate the potential effects on air travel safety. County personnel will review the Proposed Project and PG&E shall submit County recommendations to the CPUC.	Less than significant
SOCIOECONOMICS AND PUBLIC SERVICES				
8-1: Temporary employment	NA	No impact	No mitigation measures	None
8-2 and **8-3:** Temporary and permanent housing	IV	Beneficial	No mitigation measures	Beneficial
8-4: Business in the project area	II, III, and IV	Less than significant with mitigation, less than significant, and Beneficial	No mitigation measures	Less than significant or beneficial
8-5: Institutional activity	NA	No impact	No mitigation measures	None
8-6: Public protection	II and III	Less than significant with mitigation and less than significant	**S-1:** PG&E shall submit a Fire Prevention and Suppression Plan (FPSP). The FPSP shall incorporate measures for prevention and suppression of fire on the ROW and on lands used or traversed by PG&E in connection with the project. The FPSP shall include a list of equipment required by all crews for extinguishing small fires that may be started during construction. PG&E shall provide training to project personnel regarding proper procedures on how to minimize the risk of fire and how to eliminate an existing fire. The FPSP shall be prepared in consultation with all appropriate counties, BOR, and BLM. PG&E shall consult with the California Department of Forestry and Fire for all land in the project area designated as State Responsibility Areas (SRAs). The FPSP will be submitted to the CPUC for review and approval prior to construction. Adherence to the Plan during construction will be monitored by a CPUC-approved construction monitor.	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
8-7: Schools	NA	No impact	No mitigation measures	None
8-8 through **8-11:** Water, wastewater, solid waste, pipelines	III	Less than significant	No mitigation measures	Less than significant
PUBLIC SAFETY, HEALTH, AND NUISANCE				
9-1: Electric and magnetic fields (EMF)	III	Less than significant	No mitigation measures	Less than significant
9-2: Corona and audible noise	III	Less than significant	No mitigation measures	Less than significant
9-3: Radio/television/electronic equipment interference	II	Less than significant with mitigation	**PS-1:** As part of the design and construction process, PG&E shall limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide. PG&E shall provide the CPUC with documentation of compliance prior to energizing the line. **PS-2:** After energizing the transmission line, PG&E shall respond to and document all radio/television/ equipment interference complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be referred by PG&E, within 90 days, to the CPUC's Energy Division for Resolution.	Less than significant
9-4: Induced currents and shock hazards in joint use corridors	II	Less than significant with mitigation	**PS-3:** As part of the siting and construction process, PG&E shall identify objects (such as fences, conductors, and pipelines) that have the potential for induced voltages and work with the affected parties to determine proper grounding procedures (CPUC G.0.95 and the NESC do not have specific requirements for grounding). PG&E shall install all necessary grounding measures prior to energizing the line. Thirty days prior to energizing the line, PG&E shall notify in writing, subject to the review and approval of the CPUC Energy Division, all property owners within and adjacent to the Proposed Project ROW of the date the line is to be energized. The written notice shall provide a contact person and telephone number for answering questions regarding the line and guidelines on what activities should be limited or restricted within the ROW. PG&E shall respond to and document all complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be deferred by PG&E to the Lead Agencies for resolution. The written notice shall describe the nature and operation of the line, and PG&E's responsibilities with respect to grounding all conducting objects. In addition, the notice shall describe the property owner's responsibilities with respect to notification for any new objects, which may require grounding, and guidelines for maintaining the safety of the ROW.	Less than significant
9-5: Effects on cardiac pacemakers	III	Less than significant	No mitigation measures	Less than significant
9-6: Transmission lines in agricultural areas present a safety hazard to aerial applicators	I	Potentially significant	**L-13**, **L-14**, and **L-16** (above) **PS-4:** PG&E shall consult with landowners to determine which aerial applicators cover agricultural parcels within 1 mile of the approved transmission line corridor. PG&E shall provide written notification to all aerial applicators and to the CPUC stating when the new transmission lines and towers will be erected. PG&E shall also provide all aerial applicators and the CPUC with recent aerial photos or topographic maps clearly showing the new lines and towers, as well as all existing PG&E lines and towers within 10 miles of the approved corridor.	Significant in some segments

Impact	Impact Class	Effect	Mitigation	Residual Impact
9-7: Intermittent and continuous noise levels during project construction	III	Less than significant	**L-7** (above)	Less than significant
9-8: Operational noise	III	Less than significant	No mitigation measures	Less than significant
TRANSPORTATION AND TRAFFIC				
10-1: Increased traffic levels	III	Less than significant	No mitigation measures	Less than significant
10-2: Lane closures along 500 kV transmission corridor	II	Less than significant with mitigation	**T-1:** PG&E shall place temporary poles and netting across all portions of I-5 and State Routes that would be crossed by the transmission line to ensure that conductors will not fall onto the roadway during the conductor stringing operations. Because the California Highway Patrol (CHP) would be responsible for closing lanes on all state-controlled roadways, the CHP must concur with date and time of PG&E's proposed encroachment prior to the issuance of a Caltrans Encroachment Permit. In addition, PG&E would be required to provide 7 to 10 days notice of the planned encroachment to the applicable Transportation Management Center (a joint CalTrans and CHP agency). **T-2:** Prior to the start of construction, PG&E shall submit traffic control plans to CalTrans District 6 and the Counties of Merced and Fresno as part of the required traffic encroachment permits. Documentation of the approval of these plans and issuance of encroachment permits shall be provided to the CPUC prior to the start of construction.	Less than significant
10-3: Disruption of bus transit services	II	Less than significant with mitigation	**T-3:** PG&E shall consult with Coalinga Transit at least one month prior to construction to develop methods to reduce potential interruptions to bus transit service in the project area. Documentation of this consultation shall be provided to the CPUC prior to the start of construction.	Less than significant
10-4: Adverse effects of aviation activities	NA	No impact	No mitigation measures	None
10-5: Physical damage to roads	II	Less than significant with mitigation	**T-4:** If damage to roads occurs, PG&E will coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired. Roads disturbed by construction vehicles shall be properly restored to ensure long-term protection of road surfaces.	Less than significant
VISUAL RESOURCES				
Visual Impacts in Scenic Corridors	III	Less than significant	**V-1:** Visual disturbance that can result from construction of the transmission line shall be minimized by implementation of the conditions listed below. Prior to the start of construction, PG&E shall submit a plan to CPUC for review and approval that details its procedures for ensuring that these conditions are met. • Temporary facilities, such as construction yards, and conductor tensioning and splicing sites should be sited to minimize disruption of the landscape by landform alteration and vegetation removal • Existing roads will be used for access wherever possible. Minimize number and length of new construction access roads particularly in intensively farmed areas. Use temporary spur roads to towers and remove those roads not required for maintenance. Access roads should be designed to the minimum standards necessary for the construction and maintenance vehicle access. • Locate new access roads parallel to contours of landform wherever feasible. • The limits of construction activities should normally be predetermined, with activity confined within those	Less than significant

Impact	Impact Class	Effect	Mitigation	Residual Impact
			limits. All construction vehicle movement outside the right-of-way should normally be restricted predesignated access or public roads. • No paint or permanent discoloring agents should be applied to rocks or vegetation to indicate survey or construction activity limits. Surveyors, flagging, or other suitable materials should be used to delineate limits. • Where blasting is required for access roads or tower footings, debris should be recovered and removed where practical. • Excavated material or other construction materials should be removed following construction. • In construction areas where excavation is not required, vegetation should be left in place wherever possible and the original contours should be maintained in an undisturbed condition. • Where vegetation is of high density or low diversity is encountered in the right-of-way, clearing to a harsh right-of-way edge should be avoided. Instead, it should be done to emulate natural clearings with irregular edges. **V-2:** In final siting of transmission tower, PG&E shall avoid siting towers on ridgelines and hilltops wherever possible, and shall minimize the number of towers visible from sensitive viewpoints within recreation areas. In areas identified as visually sensitive, the finish on the transmission towers should be dull and non-reflective. Prior to the start of construction, PG&E shall submit to the CPUC for review and approval a siting plan that identifies (a) the tower and conductor finish and its visual properties, (b) all towers that are proposed for ridgelines, and all those visible from State Routes and I-5, and from Los Banos Creek Recreation Area and Little Panoche Reservoir. A visual resources specialist (approved by the CPUC) shall review these locations and determine whether modified locations could reduce the visual impact of the identified towers.	