

# **ATTACHMENT E      BIOLOGICAL RESOURCES MATERIALS**

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- **BIOLOGICAL RESOURCES  
(SECTION 5.6 FROM 99-AFC-7)**
- **SUMMARY OF CONSTRUCTION COMPLIANCE  
RELATED BIOLOGICAL RESOURCES INFORMATION**

**ATTACHMENT E      BIOLOGICAL RESOURCES MATERIALS**

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BIOLOGICAL RESOURCES  
(SECTION 5.6 FROM 99-AFC-7)

## **5.6 BIOLOGICAL RESOURCES**

This section summarizes information about the affected biotic environment, the environmental consequences of the proposed project, and the mitigation measures for the Pastoria Energy Facility project. Detailed information supporting this summary is found in the Biological Technical Report (Appendix N) based on published literature, records of resource agencies, herbaria, and field surveys.

### **5.6.1 Affected Environment**

The biological information presented in this section was gathered during surveys for special-status species (discussed in Section 5.6.1.3) conducted during the period of March 1999 to July 1999. The plant site, construction laydown area, access roads, transmission lines and pipelines, with the exception of Alternate Route 3B, were surveyed. Additional surveys will be conducted between March 1, 2000 to June 15, 2000 to gather information on species occurrences on the 6-mile extension of Fuel Gas Line Alternate 3B, a recent alternative addition. However, a description of biological resources for Alternate 3B, including special-status species, is provided based on 1999 surveys conducted by Impact Sciences for the proposed Tejon Ranch Habitat Conservation Plan (HCP).

#### **5.6.1.1 Habitat Types**

Natural habitats in the project rights of way for linear facilities include non-native grassland, freshwater marsh, and riparian scrub. Other habitats that occur in the project area are ruderal (weedy) and agricultural. The dominant habitat is non-native grassland with scattered ruderal fields along the existing aqueduct right of way. Freshwater marsh and riparian scrub occur in a narrow corridor along the banks of Pastoria Creek and other small ephemeral drainages. A total of 169 plant species were identified during project-related surveys. Descriptions of the habitat types, aquatic resources, maps of their occurrences in the project survey area, and a list of all plant species observed are provided in Appendix N, Biological Technical Report.

#### **5.6.1.2 Wildlife**

There were 22 mammal species, 63 bird species, 5 amphibian species, and 10 reptiles species identified in the project area during the field surveys. Since avian species are mobile, they do not tend to be restricted to specific habitat types. However, some species occur in certain habitats on a regular basis and others are somewhat restricted to certain habitat types. Amphibians were observed in aquatic habitats. Mammals and reptile species were observed in all but aquatic habitats.

### **5.6.1.3 Survey Results for Special-Status Species**

The biological surveys for this project were focused on species that are federal- or state-listed as threatened or endangered; species proposed for listing; candidate species; and species of special concern. Special-status species and survey methodologies were approved by the CEC, CDFG, and USFWS. The list of target species is presented in Table 5.6-1. Survey methodologies are described in Appendix N, Biological Technical Report.

The survey results presented in this section are based on the 1999 surveys for the Pastoria Energy Facility project and are complemented by surveys conducted by Impact Sciences in the same general area in 1999 for the proposed Tejon Ranch HCP. Walking surveys were conducted in all areas, except cultivated agricultural land on the west side of the project area. Night-driving, mammal tracking and trapping, and aquatic surveys were conducted throughout the project area, as described in the Biological Technical Report, Appendix N. Species accounts and survey results of all special-status species are included in the Biological Technical Report, Appendix N, which includes maps illustrating specific species occurrence locations and habitat types.

Field surveys resulted in the documentation of the following special-status species occurrences within the survey corridor for the preferred project components:

- American Badger
- San Joaquin Pocket Mouse
- Burrowing Owl
- California Horned Lark
- Ferruginous Hawk
- Golden Eagle
- Loggerhead Shrike
- Northern Harrier
- Prairie Falcon
- Purple Martin
- Sharp-shinned Hawk
- Tricolored Blackbird
- Western Spadefoot Toad
- San Joaquin Coachwhip
- Unidentified Lily Species

None of these species are state- or federally-listed. Three listed species, blunt-nosed leopard lizard, San Joaquin kit fox, and Swainson's hawk, occur along the alternate Fuel Gas Supply Lines (Routes 3A and 3B). Refer to the Biological Technical Report in Appendix N for a complete description of the survey records. The San Joaquin kit fox may potentially utilize the project area south of the alternate fuel gas supply line routes for occasional foraging and

as a passageway to the southern edge of the Central Valley. However, the blunt-nosed leopard lizard is not expected to occur along the preferred gas line route (Route 3) because the habitat is poor, comprised of dense, exotic brome grasses with little open space for movement and burrowing. The leopard lizard is not expected to occur south of Sebastian Road. The Swainson's hawk was observed flying over the project area.

Table 5.6-2 summarizes the occurrence of occupied and potential habitat for special-status plant and wildlife species. Some wide-ranging species, mostly birds, use most of the project area as foraging habitat. The non-native grassland traversed by the northern-most portion of the pipeline route is more likely to support the habitat for special-status species such as blunt-nosed leopard lizard. Although the power plant site is more disturbed than the pipeline route land, it provides foraging habitat for the following special-status bird species: northern harrier and prairie falcon. In addition, several watercourses and offsite ponded water provide habitat for special-status species such as western spadefoot toad.

#### **5.6.1.4 Economically Important Species**

Economically important species that could occur in the vicinity of the project consist of small game, large game, and furbearing species such as mule deer and feral pig. The relative abundance of these species is generally low.

#### **5.6.1.5 Special Environmental Areas in the Project Vicinity**

The Significant Natural Areas Program (SNAP) is part of the CDFG's Natural Heritage Division. It was established in 1981 under Fish and Game Code Sections 1930-1933. SNAP was mandated to develop and maintain a data management system of natural resources, identify the most significant natural areas in California, ensure recognition of these areas, seek long-term perpetuation of these areas, and provide coordinating services for other public agencies and private organizations interested in protecting natural areas.

Significant Natural Areas are identified using biological criteria. They are areas supporting extremely rare species or natural communities; areas supporting associations or concentrations of rare species or communities; areas exhibiting representative examples of common or rare communities; and areas of high species diversity or habitat richness. They may occur on public or private land and may be under different levels of protection.

According to information obtained from CDFG's California Natural Diversity Data Base (CNDDDB), there are two Significant Natural Areas (SNA) in the project region, consisting of the Tejon Hills SNA and the Tehachapi Mountains SNA. No preferred project components are within the either SNA. The Tejon Hills SNA parallels the proposed Alternate Fuel Gas Supply Lines (Routes 3A and 3B) to the east.

## **5.6.2 Environmental Consequences**

Biological impacts have been minimized to the extent possible by siting facilities away from sensitive resources. The power plant site is located in a heavily grazed area, adjacent to agricultural lands to the north and a gravel mine to the southeast. Pastoria Creek occurs to the west, beyond which is agriculture. The pipeline and transmission line routes were sited to maximize the use of existing roads and transmission line corridors, reducing the length of new access routes.

The remainder of this section summarizes the potential quantitative and qualitative effects of the project on habitats and species. Temporary and permanent impacts to habitats are presented in Tables 5.6-3 and 5.6-4, respectively. Refer to Table 5.6-5 for a summary of temporary and permanent impacts to special status species habitats (based on the information about surface disturbance presented in Table 3.8-6).

### **5.6.2.1 Power Plant Site and Construction Laydown Area**

**5.6.2.1.1 Construction Impacts.** Construction of the power plant facility will result in both direct and indirect impacts. Direct impacts primarily include loss of habitat and loss of individual wildlife species as a result of grading, digging, or other construction-related activity. Indirect impacts could include degradation and fragmentation of adjacent habitat. These potential impacts are described below.

Approximately 30 acres of non-native grassland will be disturbed and removed during construction of the power plant facility. There will also be temporary disturbance of approximately 25 acres of non-native grassland in the construction laydown area adjacent to the power plant site. Following construction, the laydown area will be revegetated with a Tejon Ranch-approved seed mix.

Construction of the power plant will take slightly less than two years. During that period, particulate emissions, erosion and potential water quality degradation, traffic, and noise have the potential to adversely impact special-status species and their habitat on and near the power plant site. Implementation of the mitigation measures identified within this AFC which specifically address these resources will mitigate these impacts to levels of insignificance.

The plant site and construction laydown area provide foraging habitat for the following special-status species: golden eagle, northern harrier, prairie falcon, California horned lark, and tricolored black bird. A temporary loss of 25 acres associated with the construction laydown site is not considered a significant impact because of the abundance of foraging habitat elsewhere in the region. A permanent loss of 30 acres of foraging habitat is also a less than significant impact partially due to the abundance of available habitat in the region and

also because the non-native grassland at the plant site is degraded from adjacent mining activities to the east and agriculture to the north and west.

Western spadefoot toad is known to breed offsite in the active gravel pit mine pond to the southeast. The plant site and construction laydown may provide foraging and terrestrial burrowing habitat for this species. The pond is approximately 1,000 feet from the laydown area. The toad population is likely to be more abundant nearer to the pond. Hence, temporary loss of 25 acres associated with the construction laydown site is not considered a significant impact. The permanent loss of 30 acres associated with the power plant site, which is approximately 1,500 feet from the pond, is not expected to cause a significant impact to this species.

Construction activities for this project are likely to result in noise levels of less than 80 dBA at a distance of 400 feet. These noise levels are lower than those generated by the gravel mine operation. Amphibians and reptiles are more sensitive to noise impacts than most other species because of their physical interface with the substrate. If they are in burrows near heavy equipment, they could suffer hearing damage. Studies by Bondello (1976) on desert iguanas (*Dipsosaurus dorsalis*) show that extended exposure (1 to 10 hours) to low noise frequencies (115 dBA) resulted in hearing loss. A 500-second exposure at 115 dBA resulted in decreased hearing response in Mojave fringe-toed lizards (*Uma scoparia*) (Brattstrom and Bondello, 1983).

Construction work at the plant site could result in noise levels that could affect western toad individuals occurring near the power plant site and construction laydown area. These impacts are difficult to assess. They will be restricted to the areas where noise levels are at or above 95 dBA (estimated to be within about 300 feet of construction activities). The noise impacts are not considered significant because toads occurring at the plant site and construction laydown area are probably limited in number due to the distance from the breeding pond at the gravel mine.

Although not detected at or near the power plant site during project surveys, the San Joaquin kit fox is known to occur farther north and could travel to the plant site. Construction activity could alter travel patterns, or more likely, attract kit fox, an innately curious animal. No adverse impact is expected because construction activities are common in the region from agriculture, mining, and pump station operations. In addition, surrounding available habitat, including agricultural lands which kit fox are known to traverse, would provide alternate routes for movement in the project area. Based on the availability of adjacent, undeveloped land uses, the power plant is unlikely to prevent the east-west movement of potentially occurring San Joaquin kit fox. Thus, impacts to individuals or the movement pattern of this species are less than significant.

**5.6.2.1.2 Operations and Maintenance Impacts.** Operation of the power plant will generate traffic, noise, and air emissions from fuel burning and cooling tower drift; introduce exterior lighting; and cause the potential for avian collisions.

**Air Emissions and Traffic.** As discussed in Section 5.2, air emissions will be strictly regulated and will be below significance levels. The power plant, which will operate up to 24 hours a day, will generate minor additional traffic, due to a staff of about 35 permanent employees. However, the traffic generated by the project will be minor when compared to the existing traffic on Edmonston Pumping Plant Road and in the adjacent oil fields. Traffic impacts will be below levels of significance. Traffic at night can be especially hazardous to nocturnal species, including the San Joaquin kit fox. Typically, there would be approximately 4 to 5 employees managing the facility throughout the night; hence, traffic impacts at night would be minor.

**Lighting.** Exterior lighting may alter the nighttime behavior of small mammals near the power plant. Predators, such as coyotes and owls, may also be attracted to the site, resulting in alterations of the predator-prey relationships in the local vertebrate community and subsequent losses of prey items. This impact is expected to be less than significant because these species are accustomed to nighttime lighting from the adjacent gravel mine and the nearby lighting at the Edmonston Pumping Plant and Pastoria Substation.

**Potential Collisions with Stacks.** The power plant stacks would be a maximum of 215 feet high. The stacks are unlikely to present a hazard to birds because they are relatively large and easy to see.

## **5.6.2.2 Transmission Line (Route 1)**

**5.6.2.2.1 Construction Impacts.** There is a single proposed transmission line route (1.38 miles long) located adjacent and parallel to an existing high-voltage Southern California Edison transmission line corridor. The assumed 140-foot wide right of way for this route traverses mostly non-native grassland (19.3 acres), some ruderal habitat (3.7 acres) along the aqueduct right of way, and crosses Pastoria Creek at one location. Transmission line construction will avoid all impacts to creek habitats. In all cases, transmission towers or poles will be sited to avoid wetland areas. Temporary construction impacts to non-native grassland are less than significant, based on the abundance of this habitat in the region and because it will be restored following construction.

Short access routes will be developed to connect existing roads to new tower locations. These access routes will be used for construction, operation, and maintenance of the transmission line. Habitat loss from installation of the transmission towers and development of the access routes will be 0.1 acre of non-native grassland. These impacts are considered less than

significant because the route follows an existing disturbed corridor and because of the abundance of this non-native habitat throughout the region.

Construction activity will potentially result in temporary loss of foraging, nesting and burrowing habitat and in potential for direct harm to individual animals in the construction area. Special-Status species occurring within the transmission line corridor include the following bird species: golden eagle, ferruginous hawk, northern harrier, California horned lark, and tricolored blackbird. These species utilize the non-native grassland habitat for foraging with the exception of the horned lark, which is known to breed throughout the region. Impacts associated with the temporary relocation of these species during construction would be less than significant due to the abundance of foraging habitat and nesting habitat (for the horned lark) in the region.

As with the proposed power plant site, the impacts of construction and operation of the transmission line will be reduced to below levels of significance by the mitigation measures described in Section 5.6.3.

**5.6.2.2.3 Operation and Maintenance Impacts.** Impacts from operation and maintenance activities may potentially occur in two ways: avian collision/electrocution and adverse impacts from requirements necessary for routine and/or emergency access.

**Potential Avian Collisions with Transmission Lines.** The transmission structures do not constitute a significant threat for avian collisions because they are quite visible, there are no large populations of waterfowl nearby, and the structures are not located in a migration pathway. In addition, the transmission structures and lines are located adjacent to an existing transmission line corridor, further reducing potential collisions.

**Avian Deaths by Electrocution.** There is a potential for electrocution if birds collide with transmission lines or if raptors perch on towers in such a manner as to complete an electrical contact (touching two or more live lines or a live line and a grounded surface). However, electrocution is unlikely to occur on the proposed transmission line (230 kV line) because the distances between conductors, or between conductors and the ground wire, are so large that it is unlikely a bird could complete a circuit and be electrocuted. Electrocution is a hazard on smaller distribution lines where the lower voltages allow shorter distances between conductors. The transmission lines constructed for this project would have a minimum distance of approximately 16 feet for completion of a circuit (from the A-phase conductor to the C-phase conductor on the tubular steel pole).

**Inspection and Repair.** The transmission lines would be inspected periodically to examine the structural integrity of the towers and to inspect the insulators. Minor repairs to the insulators or towers would not cause surface disturbance outside the immediate tower area. The same roads used during construction would be used for repairs. Implementation of the

mitigation measures discussed in Section 5.6.3 would reduce these impacts to levels below significance.

**Emergency Response.** Emergency situations may require access to one or more areas. For most transmission lines, emergency situations occur infrequently. The same access roads or routes used during the annual inspections would be used for emergency access. Traffic could result in the direct take of potentially occurring San Joaquin kit fox, should they be utilizing the project area for forage or movement across the southern edge of the valley floor. Implementation of the mitigation measures discussed in Section 5.6.3 would reduce these impacts to levels below significance.

### **5.6.2.3 Water Supply Pipeline (Route 2)**

**5.6.2.3.1 Construction.** Supplying raw water to the power plant would require a 0.05-mile long pipeline stub providing connection to the Wheeler Ridge-Maricopa Water Line. Route 2 (the proposed water supply pipeline) would carry water from the existing water line to the power plant. Construction of the short pipeline would cause temporary disturbance of approximately 0.5 acre of non-native grassland. There were no special-status species identified along this corridor, with the exception of the California horned lark which is common in the region; however, construction techniques will be designed to minimize ground disturbance. These techniques are described in the mitigation plan and compensation package as presented in Section 5.6.3. Temporary impacts to non-native grassland would not be significant because of the abundance of this habitat type in the region.

**5.6.2.3.2 Operation, Maintenance, and Emergency Response.** The water supply pipeline would be surface-inspected periodically. Emergency situations occur infrequently and would require immediate access. These potential impacts would be reduced to levels less than significant by the mitigation measures described in Section 5.6.3.

### **5.6.2.4 Fuel Gas Supply Pipeline (Route 3)**

The proposed Fuel Gas Supply Pipeline (Route 3) route is approximately 11.65 miles long and would connect the power plant site to the existing Kern River-Mojave Gas Pipeline. Impacts would be temporary in nature, and assuming a 50-foot wide right of way, would encompass a total of about 71 acres.

**5.6.2.4.1 Construction.** Construction of the proposed fuel gas supply line would result in the temporary disturbance to mostly non-native grassland habitat (47.9 acres). Several ephemeral drainages that support freshwater marsh habitat occur along this route. The total temporary impacts at these crossings would be 0.1 acre. Other temporary impacts (totaling 23 acres) would occur within road rights of way adjacent to agricultural fields. Impacts to

these habitat types are considered less than significant due to the temporary nature of the impact and because the habitats are common in the region.

Special-status species are known to occur along the proposed fuel gas supply pipeline. Impacts to the species are described below.

**American badger** is known to forage along Route 3. Construction-related impacts would be temporary in nature and would cause this species to relocate temporarily. This impact would be less than significant based on the abundance of available habitat in the region and the short-term nature of the impact.

**Burrowing owls** are known to nest and forage in the non-native grassland surrounding Route 3. No active burrows were identified within the right of way, although potentially active burrows were observed adjacent to the right of way. Mitigation measures are designed to protect this species.

**Special-status bird species**, including California horned lark, golden eagle, loggerhead shrike, northern harrier, prairie falcon, purple martin, Swainson's hawk, and tricolored blackbird, are known to forage along the project right of way and adjacent lands, with the exception of the horned lark which breeds throughout the region. These impacts are considered less than significant based on the abundance of available habitat in the region and the short-term nature of the impact.

**San Joaquin coachwhip** occurs in the non-native grassland within the project right of way. Potential impacts to this species may occur during construction activities; however, impacts are expected to be less than significant based on the abundance of available adjacent habitat, mitigation measures, and the short-term nature of the construction activities.

**An unidentified lily species, in the genus *Calochortus***, is found along the project right of way for Route 3 at milepost (MP) 7.5. The status of this species is currently unknown and is treated as a locally sensitive resource until its identification is established. Impacts to this species would occur as a result of the pipeline construction; however, mitigation measures would reduce impacts to a less than significant level. These measures include collecting and replanting bulbs and seed that occur in the area of impact and fencing off adjacent populations during construction.

Although not detected along the proposed fuel gas supply line (Route 3) during project surveys, the San Joaquin kit fox is known to occur farther north and might be attracted to construction activities. Impacts from Route 3 construction are considered less than significant following the implementation of the mitigation measures listed in Section 5.6.3.

**5.6.2.4.2 Operation, Maintenance, and Emergency Response.** The fuel gas supply line will be visually inspected on a routine basis. Impacts from routine activities are unlikely to be significant. Emergency situations occur infrequently but would require immediate access. Following resolution of emergency situations, the Applicant will consult with USFWS and CDFG as needed on clean-up and repair activities in the grassland habitat. All disturbances will be restored with a Tejon Ranch-approved grassland seed mix. Because the pipeline will be buried and the grassland will be restored, there will be no ongoing impacts to habitats.

### **5.6.2.5 Alternate Fuel Gas Supply Pipeline (Route 3A)**

Alternate fuel gas supply pipeline Route 3A is 13.8 miles long and connects the power plant site with the existing Kern River-Mojave Gas Pipeline to the north, similar to Route 3, but at a tie-in point farther to the north. Impacts would be temporary in nature and, assuming a 50-foot wide right of way, would impact a total of approximately 84 acres.

**5.6.2.5.1 Construction.** Construction of the alternate fuel gas supply line would result in the temporary disturbance to mostly non-native grassland habitat (70.87 acres). Several ephemeral drainages that support freshwater marsh habitat occur along this route. Temporary impacts at the crossings would affect 0.13 acres. Other impacts (totaling 13 acres) would occur within road rights of way adjacent to agricultural fields. Impacts to these habitat types are considered less than significant due to the temporary nature of the impact and because the habitats are common in the region.

Special-status species are known to occur along Route 3A. Impacts to the species are previously described and are similar to Route 3. In addition to those species identified along Route 3, two additional listed species are noted as occurring within the Route 3A right of way and are described as follows:

**San Joaquin kit fox** are known to forage in the vicinity of Route 3A. Denning habitat was not observed during the field surveys. Direct mortality and injury of individuals could occur if kit fox dens are established prior to construction activities. Thus, impacts are potentially significant, but mitigable (refer to Section 5.6.3, Mitigation Measures).

**Blunt-nosed leopard lizard** is known to occur in the open grassland habitats north of Sebastian Road along the dirt access road and within the terraces along Tejon Creek. Direct mortality and injury of individuals could occur during construction in the occupied habitat. Thus, impacts are potentially significant, but mitigable (refer to Section 5.6.3, Mitigation Measures).

**5.6.2.5.2 Operation, Maintenance, and Emergency Response.** The fuel gas supply line will be inspected periodically. Impacts from routine activities are unlikely to be significant. Emergency situations occur infrequently but would require immediate access. Following

resolution of emergency situations, the Applicant will consult with USFWS and CDFG as needed on clean-up and repair activities in the grassland habitat. All disturbances will be restored with a Tejon Ranch-approved grassland seed mix. Because the pipeline will be buried and the grassland will be restored, there will be no continued losses from operation of the fuel line and impacts are less than significant.

#### **5.6.2.6 Alternate Fuel Gas Supply Pipeline (Route 3B)**

Alternate fuel gas supply pipeline Route 3B is 18.2 miles long and connects the power plant site with the existing Kern River-Mojave Gas Pipeline to the north past Comanche Point. Impacts are temporary in nature and, assuming a 50-foot wide right of way, would impact a total of approximately 110 acres.

**5.6.2.6.1 Construction.** Construction of Route 3B would result in the temporary disturbance to mostly non-native grassland habitat (96.85 acres). Several ephemeral drainages that support freshwater marsh habitat occur along this route. Temporary impacts at the crossing would affect 0.15 acres. Other impacts (13 acres) are within road rights of way adjacent to agricultural fields. Impacts to these habitat types are considered less than significant due to the temporary nature of the impact and because the habitats are common in the region.

Special-status species are known to occur along Route 3B, based on 1999 survey results for the Tejon Ranch HCP. Impacts to the species are previously described and are similar to Routes 3 and 3A. Both San Joaquin kit fox and blunt-nosed leopard lizard are known to occur along Route 3B and impacts are considered significant but mitigable, as described for Route 3A.

**5.6.2.6.2 Operation, Maintenance, and Emergency Response.** The fuel gas supply line will be visually inspected on a routine basis. Impacts from routine activities are unlikely to be significant. Emergency situations occur infrequently but would require immediate access. Following resolution of emergency situations, the Applicant will consult with USFWS and CDFG as needed on clean-up and repair activities, as well as reclamation efforts, in the grassland habitat. Because the pipeline will be buried and the grassland will naturally regenerate, there will be no continued losses from operation of the fuel line and impacts are less than significant.

#### **5.6.2.7 Wastewater Discharge Line (Route 4)**

Construction of the wastewater discharge line (Route 4) would result in the temporary disturbance of 15 acres of non-native grassland habitat. Although not detected along Route 4 during project surveys, the San Joaquin kit fox might be attracted to construction activities and could be impacted during construction. Mitigation measures are designed to avoid these

impacts and reduce potential impacts to less than significant. Following construction, a reclamation plan will be implemented, as described in Section 5.6.3 Mitigation Measures. Thus, there will be no permanent loss of habitats and no significant impacts.

#### **5.6.2.8 Access Road**

Construction of the access road would result in the temporary loss of approximately 8 acres of non-native grassland and 0.03 acre (1200 square feet) of freshwater marsh habitat where the access road crosses a side channel to Pastoria Creek. A culvert will be installed in this drainage to protect creek flows. Permanent impacts would result from the conversion of 4 acres of non-native grassland habitat for the final road design. There are no recorded special-status species along this route with the exception of California horned lark, which is known to breed throughout the region. Construction impacts to the California horned lark would be temporary and less than significant. The permanent conversion of 4 acres of non-native grassland habitat and the loss of 0.03 acre of freshwater marsh at the creek crossing are also not considered significant impacts, based on the small area of impact and the abundance of these resources in the region.

Western spadefoot toad is known to breed offsite in the active gravel pit mine pond to the east. The access road may provide foraging and terrestrial burrowing habitat for this species. The pond is at least 1,000 feet from the access road. The toad population is likely to be more abundant nearer to the pond. Hence, the temporary loss of 8 acres and permanent loss of 4 acres of grassland habitat associated with the access road is not expected to cause a significant impact to this species.

Traffic could result in the direct take of potentially occurring San Joaquin kit fox should they be utilizing the project area for forage or movement across the southern edge of the valley floor. Implementation of the mitigation measures discussed in Section 5.6.3 would reduce this impact to a less than significant level.

#### **5.6.2.9 Impacts to Economically Important Resources**

Construction of the project would not reduce hunting opportunities or the level of hunter success for birds, small game species, or fur-bearing species unless construction activities directly interfered with hunting activities. This is an unlikely occurrence because much of the project area is located on private land that is not readily accessible for public hunting. Large game hunting would likewise not be affected by the project for the same reason. Hunting is regulated by Tejon Ranch and will be prohibited in the immediate area during construction.

### 5.6.3 Mitigation Measures

The Applicant has developed an overall project mitigation plan to reduce impacts to less than significant levels. The mitigation plan includes take avoidance measures to protect listed special-status species. It requires preconstruction surveys to locate individuals or populations that can be avoided or relocated. The biological mitigation plan also includes a worker education program; some operational conditions (e.g., speed limits and trash control); avoidance of high-value resources (e.g., blunt-nosed leopard lizard populations); and requirements for rehabilitation of temporarily disturbed areas. Compensation for both temporary and permanent losses of habitat is also provided. The final implementation of the plan will incorporate results of the preconstruction surveys conducted immediately before construction begins.

Table 5.6-2 lists locations and potential habitat for each listed species. This information will assist in implementation of species-specific mitigation measures for avoidance and minimization of impacts to species considered in this analysis. This information will be refined during the preconstruction surveys to be performed in the spring of 2000.

- BIO-1.** Transmission line towers, access roads, and pulling sites will be sited to avoid creek habitats. All wetland areas will be avoided to the extent possible.
- BIO-2.** Transmission lines and towers will be designed, i.e., conductor span widths etc., to reduce the risk of electrocution for large birds.
- BIO-3.** An employee orientation program will be conducted by the Applicant for all construction and operation workers in the project area. Training will be offered at the start of work. New workers joining the work force will be trained within 15 days of arrival on the job site.

The program will consist of a briefing of environmental issues relative to the project, including an explanation of endangered species concerns to contractors, their employees, and other personnel involved in the project. The education program, presented by persons knowledgeable in endangered species biology and legislative protection, will include a discussion of San Joaquin kit fox and blunt-nosed leopard lizard biology; the habitat needs of these species; their occurrence in the project area; their status under the federal and California Endangered Species Acts; and measures being taken for the protection of these species and their habitats during construction and operation of the project. Similar information will also be provided for all other special-status species that are found in the project survey area. A fact sheet conveying this information will be distributed to all personnel who enter the project site. Upon completion of the orientation, employees will sign a form stating that they attended the program and understand all mitigation measures.

These forms will be filed at the Applicant's offices and will be accessible to USFWS, CDFG, and CEC staff.

**BIO-4.** No more than 14 days prior to initiation of construction in each portion of the Project Area, the Applicant will hire a qualified biologist acceptable to the USFWS, CDFG, and CEC to conduct a preconstruction survey. The biologist will re-inventory the lands (including a 500-foot-wide buffer zone around each area) that will be subject to vegetation clearance and/or grading for the occurrence of listed species and species of special concern.

The area to be re-inventoried does not include agricultural lands, but only those areas that will be disturbed by construction of the pipeline and the associated 500-foot-wide buffer area. The project areas subject to surveys include the power plant site, new access road, and fuel gas supply pipeline route or an alternative, whichever is selected as the final route design.

During the survey of any particular area, the status of active burrowing owl nests and blunt-nosed leopard lizard occupied habitat (alternate Routes 3A and 3B only) will be flagged for avoidance. Pre-construction surveys will be conducted for new kit fox dens, burrowing owl burrows, badger dens, and locations of the unidentified lily. These resources will be flagged for avoidance as described below.

**A.** Should any San Joaquin kit fox dens be identified during the pre-construction surveys, an exclusion zone shall be established using the distances below. The exclusion zone shall be marked by wooden or metal stakes connected by flagging or by other fencing approved by USFWS and CDFG. If a known kit fox den is identified, it will be protected by fencing, not flagging. Each avoidance zone will have the following distance measured outward from the den entrances or the edge of the plant population:

- Potential kit fox den 50 feet
- Known kit fox den 100 feet
- Kit fox natal den (occupied and unoccupied) Contact USFWS
- Atypical kit fox den 50 feet
- Plant population 50 feet

Avoidance zones will be maintained until all construction activities have been completed, and then they will be removed. If specified avoidance zones cannot be established for any reason, USFWS and CDFG will be contacted for guidance prior to ground disturbing activities on or near the subject den. After kit fox dens have been determined to be empty in accordance with the procedures outlined below, they will be covered with plywood that is firmly

secured to prevent access by kit foxes. The covers will not be installed more than 14 days prior to the start of construction. The covers will remain in place for the duration of construction, after which time they will be removed.

- B.** If avoidance of any kit fox den within the project area is not practicable and the den may be unavoidably damaged or destroyed by project actions, the following procedure will be implemented. Prior to surface-disturbing activities, any such potential but unoccupied kit fox den will be completely excavated and then backfilled and compacted to preclude later use by kit foxes during the construction period.

Potential but unoccupied kit fox dens will be excavated without further notification to USFWS or CDFG, provided that the following conditions are satisfied: (1) the den classification is determined by a qualified wildlife biologist; and (2) the excavation is conducted by or under the direct supervision of a qualified wildlife biologist.

However, if the wildlife biologist classifies the den as a known kit fox den or as a known, suspected, or potential natal den, the Applicant or its representative will contact CDFG Region 4 Office and the Sacramento USFWS Office to discuss the reasons that avoidance is not possible. Depending upon the circumstances, the Applicant recognizes that USFWS and CDFG may require alternate avoidance measures or may authorize den excavation. Upon verbal or written concurrence from USFWS and CDFG, the den will be excavated by, or under the direct supervision of, a qualified wildlife biologist. For purposes of this requirement, any den with three or more entrances shall be considered a potential kit fox natal den.

If, after following all procedures in the standardized recommendations, the qualified biologist is unable to successfully ensure protection of individual kit foxes, USFWS and CDFG will be contacted for further guidance.

The Applicant will replace kit fox dens slated for destruction during construction activities should any dens be identified during the pre-construction surveys. The replacement ratio will be 2:1 for natal dens and 1:1 for non-natal dens. Prior to destruction of an active den, an artificial replacement den will be constructed outside the avoidance zone. Replaced dens will be constructed according the CDFG and USFWS policy in effect at that time.

- C.** If avoidance of the unidentified lily is not feasible during temporary construction disturbances, the Applicant will collect seed, if seed is available,

and conserve topsoil to be re-spread in the disturbed area as part of the reclamation effort.

- D.** If a burrowing owl nest is identified during the pre-construction surveys, construction work within 500 feet will be delayed until fledglings have left the nest.
- E.** If an active badger den is identified during the pre-construction surveys, construction work within 500 feet will be delayed until the badger vacates the den.

**BIO-5.** Until such time as the Applicant obtains appropriate authorization for take of the state-listed and fully-protected blunt-nosed leopard lizard by the Fish and Game Commission, avoidance protocols would apply in any areas that contain suitable habitat (alternate Routes 3A and 3B) of the blunt-nosed leopard lizard. A qualified biologist will survey areas proposed for project disturbance that contain suitable habitat for the blunt-nosed leopard lizard to determine the likelihood of its presence (see BIO-4). Suitable habitat in the project area consists of non-native grassland, washes, and open areas including dirt roads. Refer to BIO-12 for additional avoidance measures.

**BIO-6.** The plant site construction area boundary will be clearly delineated by stakes, flagging, and/or fencing to minimize inadvertent degradation or loss of adjacent wildlife habitat during facility construction.

**BIO-7.** All project-related vehicle traffic will be restricted to established roads, designated access roads and routes, construction areas, storage areas, and staging and parking areas. Off-road traffic outside of designated project areas will be prohibited. Project-related vehicles will observe a 10-mph speed limit on the private dirt roads in areas with populations of blunt-nosed leopard lizards (Alternate Routes 3A and 3B only). A 20-mph speed limit will be observed in all other project areas except on county roads and state and federal highways.

**BIO-8.** The Applicant will designate a specific individual as a contact representative between the Applicant, USFWS, CDFG, and CEC to oversee compliance with mitigation measures. The Applicant will provide written notification of the contact representative to USFWS and CDFG within 30 days of permit issuance. Written notification will also be provided by the Applicant to USFWS and CDFG during any future times that the designee is changed for any reason.

**BIO-9.** During construction activities, the Applicant will provide a qualified wildlife biologist to monitor all activities that may result in incidental take of listed species

or their habitat. Monitoring would occur along the preferred and alternate fuel gas supply lines. This biologist will ensure that required measures for the protection of endangered species and their habitats are implemented.

**BIO-10.** Compliance inspections will be conducted once per week and an annual compliance report will be provided to the USFWS Sacramento Field Office and the CDFG Region 4 Office. Weekly reports will be maintained by the Applicant for review by USFWS, CEC, and CDFG upon request. The first weekly report shall be prepared within one week of the beginning of surface disturbing activities and subsequent reports shall be prepared for any week during which the monitoring biologist determines that monitoring is necessary for the protection of special-status species.

Inspections will check for compliance with required mitigation measures outlined above. The avoidance zones will be checked to ensure that the signs, stakes, and fencing are intact and that human activities have been restricted in these protected zones.

**BIO-11.** Ground-disturbing activities on transmission lines and pipelines will be limited to daylight hours.

**BIO-12.** To prevent entrapment of San Joaquin kit fox or blunt-nosed leopard lizard or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2 feet deep will either be covered at the close of each working day by plywood or provided with one or more escape ramps constructed of earth fill or wooden planks. The ramps will be located at no greater than 1,000-foot intervals and will be sloped less than 45 degrees. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If, at any time, an injured kit fox is discovered, the procedures in Mitigation Measure BIO-22 will be followed. In the case of trapped animals, escape ramps or structures will be installed immediately to allow the animal(s) to escape, or USFWS should be contacted for advice.

**BIO-13.** Trenches will be inspected for entrapped wildlife each morning prior to onset of construction. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped animals. Any animals so discovered will be allowed to escape voluntarily, without harassment, before construction activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.

**BIO-14.** All construction pipes, poles, culverts, or similar structures with a diameter of 4 inches or greater stored at a construction site for one or more overnight periods will be thoroughly inspected for kit foxes before the subject pipe is subsequently buried,

capped, or otherwise used or moved in any way. Unburied pipes laid in trenches overnight will be capped. If a kit fox is discovered inside a pipe, that section of pipe will not be moved until USFWS has been consulted. If necessary, and under the direct supervision of a qualified biologist, the pipe may be moved only once to remove it from the path of construction activity, until the animal has escaped.

**BIO-15.** Within 45 calendar days of completion of the project, the Applicant will submit to USFWS, CEC, and CDFG a brief post-construction compliance report that includes the following information:

- Dates that project construction occurred
- Pertinent data concerning the Applicant's success in meeting project mitigation measures, and an explanation of failure to meet such measures, if any
- Known occurrences of incidental take effects on listed species habitat, including the specific number of habitat acres disturbed and the specific number of San Joaquin kit fox dens and burrows destroyed, if any
- Any other pertinent information.

**BIO-16.** Upon completion of construction, all areas subject to temporary ground disturbances, including the laydown area, temporary roads installed by the project, pipeline corridors, and pulling areas, will be recontoured if necessary and seeded with a Tejon Ranch-approved grassland seed mix.

An inspection to check for compliance with the reclamation plan will be conducted within 30 days of completion of reclamation and annually for 3 years thereafter. Within 45 days of completion of the first inspection, the Applicant will submit to USFWS, CEC, and CDFG a brief post-reclamation compliance report that includes a description of the reclamation activities and when they were conducted. Within 45 days of subsequent surveys, the Applicant will submit to USFWS, CEC, and CDFG a report that describes the general condition of the vegetation and soil in the reclaimed areas.

**BIO-17.** Creekbeds disturbed during pipeline construction will be recontoured so that drainage patterns are not changed from pre-construction conditions. Native riparian scrub or freshwater marsh plants will be restored in the disturbed sections of the creek.

**BIO-18.** All food-related trash items such as wrappers, cans, bottles, and food scraps generated both during construction and subsequent facility operation will be

disposed of in closed containers and removed at least once a week from the site. Deliberate feeding of wildlife is prohibited.

**BIO-19.** Except for those carried by security personnel, no firearms will be allowed on the project site.

**BIO-20.** No pets will be permitted at the plant to prevent harassment, mortality, or destruction of kit fox dens or predation on wildlife by domestic dogs and cats.

**BIO-21.** Use of rodenticides and herbicides in project areas will be minimized. This is necessary to prevent primary or secondary poisoning of endangered species using adjacent habitats, and to avoid the depletion of prey upon which they depend. All uses will observe label and other restrictions imposed by the US Environmental Protection Agency, the California Department of Food and Agriculture, and other state and federal legislation, as well as the additional project-related restrictions deemed necessary by USFWS. If rodent control must be conducted, zinc phosphide will be used because of its proven lower risk to kit foxes.

**BIO-22.** Any employee who inadvertently kills or injures a San Joaquin kit fox or blunt-nosed leopard lizard, or who finds any such animal either dead, injured, or entrapped, will be required to report the incident immediately to the Applicant's representative. In the case of entrapped listed animals, escape ramps or structures will be installed immediately if possible to allow the subject animal(s) to escape unimpeded.

In the case of injured animals, the Applicant shall immediately notify CDFG. During business hours Monday through Friday, the phone number is (209) 243-4017. For non-business hours, report to (800) 952-5400. Notification shall include the date, time, location, and circumstances of the incident. The Applicant shall follow the instructions of CDFG for the care of the injured animal.

In the case of dead animal(s) that are listed as threatened or endangered, the Applicant shall immediately (within 24 hours) notify USFWS and CDFG by phone or in person and shall document initial notification in writing within two working days of the finding of any such animal(s). Written notification will include the date, time, location, and circumstances of the incident.

Any leopard lizard or San Joaquin kit fox found dead or injured will be delivered to the CDFG immediately for care, analysis, or disposition.

**BIO-23.** Construction activities along alternate Route 3B (if selected) will be minimized during nighttime hours when nocturnal threatened and endangered species (i.e., San

Joaquin kit foxes) are more active. Except as required by worker safety requirements, night lighting will be hooded to direct illumination toward the project area and illumination will be as low as reasonable.

**BIO-24.** Following resolution of any emergency, such as the location of a new den site within a pipeline corridor right of way, or a trapped blunt-nosed leopard lizard, the Applicant will consult with USFWS and CDFG regarding appropriate protection measures for listed species and their habitat that will be implemented during clean-up activities.

#### **5.6.4 Compensation**

This section addresses compensation for impacts that cannot be avoided by project design and the mitigation measures in Section 5.6.3. Compensation is designed to offset impacts to (1) occupied blunt-nosed leopard lizard habitat along Alternate Routes 3A and 3B, and (2) San Joaquin kit fox foraging habitat. The total permanent loss of habitat from this project (power plant site, transmission line towers pads, and access road) is estimated to be no more than 34 acres. As summarized in Table 5.6-4, these permanent impacts are mostly to non-native grassland (34 acres) and minimal impacts to freshwater marsh (1200 square feet). Habitat compensation for the loss of these resources would involve acquiring and protecting similar habitats either at other locations in the project area or at a suitable offset location.

The standard USFWS and CDFG compensation ratios are:

- Three acres of compensation land for each acre of permanent disturbance of habitats
- One and one-tenth acres for each acre of temporary disturbance of habitats.

There are two potential mechanisms for meeting compensation obligations. First, the Applicant would acquire the appropriate offsite acreage of non-native grassland habitat either as a conservation easement or in fee title, deed it to an acceptable land manager (e.g., CDFG, The Center for Natural Lands Management, or other land trust entities), and provide the funds for enhancement of the land (typically fencing or clean-up) and an endowment. The endowment would be used to meet the expense of managing the land. The Applicant would obtain approval from USFWS and CDFG before the easement or fee title is purchased because the land must be consistent with the regional conservation strategy and must provide habitat for the species impacted by the project.

Secondly, compensation lands could be acquired through a mitigation bank set up in the Tejon Ranch HCP in the vicinity of the proposed project. It is unclear when the Tejon Ranch HCP mitigation bank will be established and this may limit the implementation of this compensation alternative.

### 5.6.5 LORS Compliance

The LORS for biological resources are described in Section 7.5.6. The Biological Technical Report (Appendix N) for the project will be submitted to USFWS and CDFG and will supply the information those agencies need for compliance with the federal and state Endangered Species Acts, respectively. The Streambed Alteration Agreement can also be issued by CDFG using the information contained in the Biological Technical Report. In the event that the project impacts jurisdictional wetlands (stream crossings), a wetland delineation report will be submitted to the Corps of Engineers.

This project will not follow the provisions of the Kern County Valley Floor Habitat Conservation Plan (HCP) because the plan has not been submitted to USFWS. Instead, project-specific consultations are being held with USFWS and CDFG. However, the mitigation measures and compensation plan are compatible with the *Recovery Plan for Upland Species of the San Joaquin Valley, California* (USFWS, 1998). It is assumed that USFWS will write the Biological Opinion to ensure that conditions placed on this project are consistent with the general principles of the Kern County Valley Floor HCP. In addition, negotiations are underway with USFWS regarding the need for a project Habitat Conservation Plan and compliance with Section 10 of the Endangered Species Act for an incidental take permit for threatened or endangered species.

### 5.6.6 References

- Bondello, M. 1976. The effects of high intensity motorcycle sounds on the acoustical sensitivity of the desert iguana, *Dipsosaurus dorsalis*. M.S. Thesis, California State University, Fullerton, California.
- Brattstrom, B. and M. Bondello. 1983. Effect of off-road vehicle noise on desert vertebrates. Pp 167-206 in R. Webb and R. Wilshire, eds. Environmental effects of off-road vehicles. Springer-Verlag New York, Inc., New York.
- US Fish and Wildlife Service (USFWS). 1998. Recovery Plan for Upland Species of the San Joaquin Valley, California. Region 1 US Fish and Wildlife Service, Portland, Oregon.

TABLE 5.6-1

SPECIAL-STATUS SPECIES KNOWN TO OCCUR OR POTENTIALLY OCCURRING IN THE PROJECT AREA

Common Name	Scientific Name	Listing Status		
		Federal	State	Other
<b>Mammals</b>				
San Joaquin Antelope Squirrel	<i>Ammospermophilus nelsoni</i>	--	T	
Giant Kangaroo Rat	<i>Dipodomys ingens</i>	E	E	
San Joaquin Pocket Mouse	<i>Perognathus inornatus neglectus</i>	SC	--	
Tehachapi Pocket Mouse	<i>Perognathus alticolus inexpectatus</i>	SC	SC	
American Badger	<i>Taxidea taxus</i>	--	SC	
San Joaquin Myotis	<i>Myotis yumanensis oxalis</i>	SC	SC	
Townsend's Big-eared Bat	<i>Corynorhinus townsendii townsendii</i>	SC	SC	
Western Mastiff Bat	<i>Eumops perotis</i>	SC	SC	
San Joaquin Kit Fox	<i>Vulpes macrotis mutica</i>	E	T	
<b>Birds</b>				
California Condor	<i>Gymnogyps californianus</i>	E	E	
Cooper's Hawk (nesting)	<i>Accipiter cooperi</i>	--	SC	
Sharp-shinned Hawk (nesting)	<i>Accipiter striatus</i>	--	SC	
Golden Eagle	<i>Aquila chrysaetos</i>	--	SC	
Ferruginous Hawk (wintering)	<i>Buteo regalis</i>	SC	SC	
Swainson's Hawk (nesting)	<i>Buteo swainsoni</i>	--	T	
Northern Harrier (nesting)	<i>Circus cyaneus</i>	--	SC	
Burrowing Owl	<i>Speotyto cunicularia</i>	--	SC	
Merlin (wintering)	<i>Falco columbarius</i>	--	SC	
Prairie Falcon (nesting)	<i>Falco mexicanus</i>	--	SC	
Peregrine Falcon	<i>Falco peregrinus anatum</i>	--	E	
Long-eared Owl (nesting)	<i>Asio otus</i>	--	SC	
California Horned Lark	<i>Eremophila alpestris actia</i>	--	SC	
Purple Martin (nesting)	<i>Progne subis</i>	--	SC	
Loggerhead Shrike	<i>Lanius ludovicianus</i>	SC	SC	
Tricolored Blackbird (nesting colony)	<i>Agelaius tricolor</i>	SC	SC	
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	E	
<b>Amphibians</b>				
Tehachapi Slender Salamander	<i>Batrachoseps stebbinsi</i>	SC	T	
Yellow-Bloched Salamander	<i>Ensatina eschscholtzii croceator</i>	--	SC	
Western Spadefoot	<i>Scaphiopus hammondi</i>	SC	SC	
California Red-legged Frog	<i>Rana aurora draytonii</i>	T	SC	

**TABLE 5.6-1**  
**(CONTINUED)**

Common Name	Scientific Name	Listing Status		
		Federal	State	Other
<b>Reptiles</b>				
Blunt-nosed Leopard Lizard	<i>Gambelia sila</i>	E	E	
Southern Rubber Boa	<i>Charina bottae umbratica</i>	SC	T	
San Joaquin Coachwhip	<i>Masticophis flagellum ruddocki</i>	SC	SC	
Southwestern Pond Turtle	<i>Clemmys marmorata pallida</i>	SC	SC	
San Diego Horned Lizard	<i>Phrynosoma coronatum blainvillei</i>	SC	SC	
California Legless Lizard	<i>Anniella pulchra pulchra</i>	SC	SC	
<b>Invertebrates</b>				
Valley Elderberry Longhorn Beetle	<i>Desmocerus californicus dimorphus</i>	T	--	
<b>Plants</b>				
Bakersfield Cactus	<i>Opuntia basilaris</i> var. <i>treleasei</i>	E	E	1B
Piute Mountains Navarretia	<i>Navarretia setiloba</i>	PT	--	1B
Palmer's Mariposa Lily	<i>Calochortus palmeri</i> var. <i>palmeri</i>	SC	--	1B
Kern Buckwheat	<i>Eriogonum kennedyi</i> var. <i>pinicola</i>	SC	--	1B
Coulter's Goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	SC	--	1B
Comanche Point Layia	<i>Layia leucopappa</i>	SC	--	1B
Flax-like Monardella	<i>Monardella linoides</i> ssp. <i>oblonga</i>	SC	--	1B

**KEY**

**Listing Status**

- E Federal/State endangered
- T Federal/State threatened
- PT Federal Proposed threatened
- SC Federal/State Species of special concern  
California Native Plant Society (CNPS) listed
- 1B plants rare, threatened, or endangered

**TABLE 5.6-2**

**OCCURRENCE INFORMATION FOR SPECIAL-STATUS SPECIES**

Milepost		Habitat	Federally- and/or State-listed Species			Federal and/or State Species of Concern													
Start	End	Type	Vuma	Busw	Gasi	Pein	Tata	Acst	Aqch	Bure	Cicy	Spcu	Fame	Eral	Lalu	Agtr	Mafl	Scha	Casp
<b>POWER PLANT SITE</b>																			
--	--	NNG							F										
--	--	NNG									F								
--	--	NNG											F						
--	--	NNG														F			
--	--	NNG												B					
buffer	buffer	NG																	O
<b>CONSTRUCTION LAYDOWN AREA</b>																			
--	--	GM																B	
--	--	NNG												B					
<b>TRANSMISSION LINE (ROUTE 1)</b>																			
0.0	1.38	NNG												B					
0.6	--	NNG									F								
0.9	--	NNG														F			
1.0	--	RS														F			
1.05	--	NNG								F									
1.1	--	NNG							F										
1.38 <sup>l</sup>	--	NNG								F <sup>l</sup>									
1.38 <sup>l</sup>	--	NNG								F <sup>l</sup>									
<b>WATER SUPPLY LINE (ROUTE 2)</b>																			
0.0	0.05	NNG												B					
<b>FUEL GAS SUPPLY LINE (ROUTE 3)</b>																			
0.0	8.27	NNG												B					
0.77	--	NNG										O							
0.775	--	NNG									F								
0.85	--	NNG										O							
1.1	--	NNG										O							
1.3	--	NNG														F			
1.35	--	NNG																	O
1.4	--	NNG		F															
1.6	--	NNG										O							
1.6	--	NNG											F						
1.8	--	NNG										O							
1.8	--	NNG							F										

**TABLE 5.6-2  
(CONTINUED)**

Milepost		Habitat	Federally- and/or State-listed Species			Federal and/or State Species of Concern													
Start	End	Type	Vuma	Busw	Gasi	Pein	Tata	Acst	Aqch	Bure	Cicy	Spcu	Fame	Eral	Lalu	Agtr	Mafl	Scha	Casp
1.9	--	NNG							F										
2.1	--	NNG									F								
2.2	--	NNG							F										
2.55	--	NNG							F										
2.7	--	NNG									F								
3.6	--	NNG									F								
4.4	--	NNG							F										
4.55	--	NNG							F										
4.8	--	NNG	F																
5.0	--	NNG							F										
5.3	--	RU					F												
5.3	--	RU													F				
5.4	--	NNG									F								
5.7	--	RU									F								
5.8	--	NNG										O							
6.0	--	NNG													F				
6.25	7.0	NNG														F			
6.5	--	NNG													F				
7.0	--	NNG																	
7.15	--	NNG							F										
7.5	--	AG															O		
7.5	7.6	NNG																	O
7.6	--	NNG										O							
7.75	--	NNG							F										
8.3	--	AG															O		
8.35	--	NNG									F								
<b>ALTERNATE FUEL GAS SUPPLY LINE (ROUTE 3A) - R3A is same as Route 3 through MP 8.27</b>																			
8.27	11.9	NNG													B				
8.27	9.3	NNG															PF		
9.25	--	NNG																	
9.95	--	NNG										OB							
9.95	--	NNG							PF										
10.15	--	NNG							PF										
10.25	--	NNG										OB							
10.3	--	NNG										PO							

**TABLE 5.6-2  
(CONTINUED)**

Milepost		Habitat	Federally- and/or State-listed Species			Federal and/or State Species of Concern													
Start	End	Type	Vuma	Busw	Gasi	Pein	Tata	Acst	Aqch	Bure	Cicy	Spcu	Fame	Eral	Lalu	Agtr	Mafl	Scha	Casp
10.5	--	NNG							PF										
10.6	--	NNG										PO							
10.75	--	NNG										OB							
10.75	--	NNG			O														
11.8	--	NNG														F			
11.85	--	NNG	F																
12.0	--	AG													PF				
12.6	--	NNG													PF				
<b>ALTERNATE FUEL GAS SUPPLY LINE (ROUTE 3B) Same as R3A through MP 11.9</b>																			
11.9	18.5	NNG												B					
12.15	--	NNG													F				
12.2	--	NNG										B							
12.25	--	NNG							F										
12.3	--	NNG													F				
12.3	--	FM															PB		
12.4	--	NNG			O														
12.6	--	NNG			O														
all	--	NNG												B					
<b>WASTEWATER DISCHARGE LINE (ROUTE 4)</b>																			
0.0	1.7	NNG												B					
0.15	--	NNG						F											
0.5	--	NNG									F								
0.5	--	NNG															PB		
0.9	--	NNG							F										
1.1	1.5	NNG								B									
1.1	--	NNG																PB	
<b>ACCESS ROAD (ROUTE 5)</b>																			
0.0	0.85	NNG												B					

**TABLE 5.6-2**  
**(CONTINUED)**

**LEGEND:**

<u>Code</u>	<u>Scientific Name</u>	<u>Common Name</u>	<u>Code</u>	<u>Scientific Name</u>	<u>Common Name</u>
<b>Federally-listed Species</b>			<b>Species of Concern (continued)</b>		
Gasi	<i>Gambelia silus</i>	Blunt-nosed Leopard Lizard	Casp	<i>Calochortus sp.</i>	Unidentified Lily
Vuma	<i>Vulpes macrotis mutica</i>	San Joaquin Kit Fox	Cicy	<i>Circus cyaneus</i>	Northern Harrier
<b>State-listed Species</b>			Eral	<i>Eremophila alpestris actia</i>	California Horned Lark
Busw	<i>Buteo swainsoni</i>	Swainson's Hawk	Fame	<i>Falco mexicanus</i>	Prairie Falcon
<b>Species of Concern</b>			Lalu	<i>Lanius ludovicianus</i>	Loggerhead Shrike
Acst	<i>Accipiter striatus</i>	Sharp-shinned Hawk	Scha	<i>Scaphiopus hammondii</i>	Western Spadefoot
Agtr	<i>Agelaius tricolor</i>	Tricolor Blackbird	Spcu	<i>Speotyto cunicularia</i>	Burrowing Owl
Aqch	<i>Aquila chrysaetos</i>	Golden Eagle	Pein	<i>Perognathus inornatus neglectus</i>	San Joaquin Pocket Mouse
Bure	<i>Buteo regalis</i>	Ferruginous Hawk	Tata	<i>Taxidea taxus</i>	American Badger

**Habitat Use Codes**

F = foraging  
 O = occupied  
 B = breeding  
 PB= potential breeding  
 PF= potential foraging  
 PO=potential occupied

**Habitat Type**

AG = agriculture  
 FW = freshwater march  
 NG = native grassland  
 NNG= non-native grassland  
 RU = ruderal  
 RS = riparian scrub  
 GM = gravel mine pond

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Footnotes:  
<sup>1</sup> plant site buffer

**TABLE 5.6-3****SUMMARY OF TEMPORARY IMPACTS TO HABITATS  
(IN ACRES)**

<b>Project Component</b>	<b>Habitats</b>					<b>Total Temporary</b>
	<b>Non-native Grassland</b>	<b>Ruderal</b>	<b>Agriculture</b>	<b>Freshwater Marsh</b>	<b>Riparian Scrub</b>	
Power Plant Site	30	--	--	--	--	30
Construction Laydown	25	--	--	--	--	25
Route 1	19.3	3.7	--	--	--	23
Route 2	0.5	--	--	--	--	0.5
Route 3	47.9	--	23	0.1	--	71
Route 3A	(70.87)	(--)	(13)	(0.13)	--	(84)
Route 3B	(96.85)	(--)	(13)	(0.15)	--	(110)
Route 4	14.97	--	--	--	0.03	15
Route 5	7.99	--	--	--	0.03	8
Total with Route 3	145.66	3.7	23	0.1	0.06	172.5
Total (with Route 3A)	(168.63)	(3.7)	(13)	(0.13)	(0.06)	(185.5)
Total (with Route 3B)	(194.63)	(3.7)	(13)	(0.15)	(0.06)	(211.5)

( ) = alternate route.

**TABLE 5.6-4**

**SUMMARY OF PERMANENT IMPACTS TO HABITATS  
(IN ACRES)**

<b>Project Component</b>	<b>Non-native Grassland</b>	<b>Freshwater Marsh</b>	<b>Grand Total</b>
Power Plant Site	30	--	<b>30.0</b>
Route 1 <sup>1</sup> (transmission line)	0.1	--	<b>0.1</b>
Route 5 (access road)	4	0.03	<b>4</b>
Total =	34	0.03	<b>34</b>

<sup>1</sup> Route 1 impacts are related to transmission tower structures.

**TABLE 5.6-5**

**SUMMARY OF IMPACTS TO SPECIAL-STATUS SPECIES HABITATS<sup>1</sup>  
(IN ACRES)**

Common Name Scientific Name	<u>Occupied</u>		<u>Potentially Occupied</u>		<u>Foraging</u>		<u>Potentially Foraging</u>		Total Perm.	Total Temp.
	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.		
<b><u>Federally-Listed Species</u></b>										
<b>Mammals</b>										
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i>	--	--	--	--	34	146	--	--	34	146
<b><u>State-Listed Species</u></b>										
<b>Birds</b>										
Swainson's Hawk <i>Buteo swainsoni</i>	--	--	--	--	--	--	--	47.9	--	47.9
<b><u>Other Special Status Species</u></b>										
<b>Mammals</b>										
American Badger <i>Taxidea taxus</i>	--	--	--	--	34	146	--	--	34	146
<b>Birds</b>										
California Condor <i>Gymnogyps californianus</i>	--	--	--	--	--	--	--	47.9	--	47.9
Sharp-shinned Hawk <i>Accipiter striatus</i>	--	--	--	--	--	--	--	47.9	--	47.9
Golden Eagle <i>Aquila chrysaetos</i>	--	--	--	--	--	146	--	--	--	146
Ferruginous Hawk <i>Buteo regalis</i>	--	--	--	--	--	146	--	--	--	146
Northern Harrier <i>Circus cyaneus</i>	--	--	--	--	--	146	--	--	--	146
Burrowing Owl <i>Speotyto cunicularia</i>	--	0.15	--	146	--	--	--	--	0.15	146
Prairie Falcon <i>Falco mexicanus</i>	--	--	--	--	--	--	--	47.9	--	47.9

**TABLE 5.6-5**

**(CONTINUED)**

<b>Common Name</b> <b>Scientific Name</b>	<b>Occupied</b>		<b>Potentially Occupied</b>		<b>Foraging</b>		<b>Potentially Foraging</b>		<b>Total</b>	<b>Total</b>
	<b>Perm.</b>	<b>Temp.</b>	<b>Perm.</b>	<b>Temp.</b>	<b>Perm.</b>	<b>Temp.</b>	<b>Perm.</b>	<b>Temp.</b>	<b>Perm.</b>	<b>Temp.</b>
California Horned Lark <i>Eremophila alpestris actia</i>	34	146	--	--	--	--	--	--	34	146
Purple Martin <i>Progne subis</i>	--	--	--	--	--	--	--	47.9	--	47.9
Loggerhead Shrike <i>Lanius ludovicianus</i>	--	--	--	--	34	146	--	--	34	146
Tricolored Blackbird <i>Agelaius tricolor</i>	--	--	--	--	34	146	--	--	34	146
<b>Amphibians</b>										
Western Spadefoot <i>Scaphiopus hammondi</i>	--	--	--	--	34	29	--	--	34	29
<b>Reptiles</b>										
San Joaquin Coachwhip <i>Masticophis flagellum ruddocki</i>	--	--	--	146	--	--	--	--	--	146

<sup>1</sup> Table summarizes impacts assuming the preferred Fuel Gas Supply Line (Route 3)

**ATTACHMENT E      BIOLOGICAL RESOURCES MATERIALS**

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SUMMARY OF CONSTRUCTION COMPLIANCE  
RELATED BIOLOGICAL RESOURCES INFORMATION

## **ATTACHMENT E – SUMMARY OF CONSTRUCTION COMPLIANCE RELATED BIOLOGICAL RESOURCES INFORMATION**

### **1.0 PURPOSE**

This Attachment provides a summary of biological resources materials submitted as part of 99-AFC-7, as well as, construction compliance proceedings regarding biological resources for the existing PEF. This summary has been provided to describe the extensive documentation and compliance activities that have occurred as part of the processing of 99-AFC-7, as well as to comply with construction-related requirements. Copies of the reports summarized below are on file at the California Energy Commission (CEC) of the compliance proceedings for the existing PEF (99-AFC-7C).

### **2.0 OVERVIEW**

Construction compliance-related activities passed through two owners, Enron Corporation and, later, Calpine Corporation. Consequently, work for this project was conducted in multiple phases. As originally configured the PEF comprised a 30-acre power plant site, 25-acre construction laydown area, a 1.38-mile long 230 kV transmission line, a 0.5-mile long water supply line, a 11.65-mile long fuel gas pipeline, or alternate fuel gas pipelines of either 13.8 miles or 18.5 miles, a 1.7-mile long wastewater discharge line, and a 0.85-mile long access road. The final project was reconfigured to include a modified 31-acre plant site, 40-acre construction laydown area, 14.01-mile gas pipeline that by-passed part of the original gas pipeline, an expanded construction laydown area, and a modified 0.05-mile water supply pipeline. Construction and operation of the existing PEF is conducted under a license granted by the California Energy Commission (CEC). CEC staff developed Conditions of Certification (COC) to ensure that construction of the project would not create significant direct, indirect, or cumulative adverse impacts to biological resources. This summary describes compliance activities completed to date at the existing PEF.

The Final Biological Resources Report for construction of the PEF plant site is in progress and is expected to be submitted to the CEC in the near future. The most significant issues related to biological resources occurred during construction of the 14.01 mile fuel gas supply pipeline. A Final Biological Resources Report is required following the completion of construction activities to comply with agency requirements as identified in Section 7.0 of the agency-approved PEF Biological Resources Mitigation Implementation and Monitoring Plan, (BRMIMP) and of the United States Fish and Wildlife Service, (USFWS), Biological Opinion. The Final Report includes a summary of calculated habitat disturbance, results of special-status species surveys (Blunt-nosed Leopard Lizard), permit compliance actions, summary of changes in project schedule and components, Target Species, special-status species observations mitigation, Results of special status species surveys (Blunt-nosed Leopard Lizard), measures implemented for special-status species, construction monitoring,

worker training, documents amended for the fiscal year, non-compliance events, take and harassment, agency meetings, common species salvaged and recommendations.

Biology-related agency permits were issued by the CEC, California Department of Fish and Game, (CDFG), USFWS, and U.S. Army Corps of Engineers, (ACOE). Copies of these permits have been docketed at the CEC under separate cover from this application.

### **3.0 BLUNT-NOSED LEOPARD LIZARD SURVEYS**

The Gas Pipeline was re-routed to avoid known Blunt-nosed Leopard Lizard habitat and all areas with a reasonable potential for the occurrence of Blunt-nosed Leopard Lizards. As a permit requirement, ongoing Blunt-nosed leopard lizard Surveys and monitoring for presence of BNLL were implemented on all project construction areas and access roads that occupied natural habitat. Discovery of a population on any of these areas would immediately initiate additional mitigation measures including but not limited to: the stopping of construction, closing of access roads, installation of barrier fencing and re-routing of portions of the pipeline.

### **4.0 CONSTRUCTION SCHEDULE**

#### **4.1 Construction of the Fuel Gas Supply Pipeline**

Prior to the proposed construction of the gas supply line a population of Blunt-nosed Leopard Lizards (*Gambelia sila*) was discovered during the required pre-activity surveys conducted in October 2003. The population was previously undocumented along the proposed route and the species considered unlikely to occur, subsequently Blunt-nosed Leopard Lizards were not included in the original Biological Opinion and no mitigation measures were included in the Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP). Following this discovery, additional biological surveys were completed and are on file as part of the 99-AFC-7C.

#### **4.2 Construction Monitoring**

All construction monitoring was completed by the Designated Biologist or approved biological monitor.

Since June 5, 2001 when approval was received from the CEC to initiate construction. All construction activities requiring ground disturbing activities, such as trenching, clearing, grubbing or boring that have taken place out side of previously disturbed sites or areas that are not fenced were under the supervision of a qualified Biologist.

All drainages cover under the 2000 SWPPP and the 20004 SWPPP for the Gas Pipe Line were delineated, monitored and followed best management practices during construction and re-contouring. Complete daily monitoring forms are available on site.

## **5.0 CONCLUSION**

All future project related traffic, including maintenance, repair or inspections that utilize access roads or the Gas pipeline right of way. Must notify the project Biologist or an approved representative. Written approval should be given prior to operating in areas additionally monitoring or an escort may be required prior to operating in or passing through Blunt-nosed Leopard Lizard Habitat.