5.6 BIOLOGICAL RESOURCES

The Bullard Energy Center (BEC) plant site is located approximately 1.25 miles southeast of the intersection of Herndon Avenue and North Golden State Boulevard, at 5829 North Golden State Boulevard, in the City of Fresno. The proposed plant site is a 12.3-acre parcel zoned M-1 (light industrial use) and is located in an industrial area that is currently used as a truck depot, and construction equipment fabrication and storage yard (see Figure 3.1-1, Site Location Aerial).

The temporary construction laydown and parking site is a 9.2-acre parcel located immediately to the north of the plant site. Power line easements run across the western portion of the laydown area from south to north. This area is essentially flat, with a slight slope to the southeast.

The existing biological resources within the study area and within a 1-mile radius around the plant site are the subject of this section. In addition, the potential impacts to biological resources as a result of the project are assessed. Refer to Figure 3.1-2, General Vicinity, for a map of the project site and vicinity.

5.6.1 Affected Environment

The project site was historically agricultural land, and in more recent decades, was re-zoned and developed into a trucking dispatch and maintenance facility. As a result of agricultural, industrial, commercial, and residential use in the area, very minimal native vegetation is present within the study area or vicinity. The plant site is located within a paved active truck depot construction equipment and storage yard. The temporary construction laydown area is a 9.2-acre section of an existing open field consisting of approximately 22 acres. This field is dominated by non-native vegetation with some scattered native vegetation.

5.6.1.1 Survey Methods

Biological field surveys were conducted by URS biologist, Johanna LaClaire, on August 31, 2006 according to the California Energy Commission (CEC) regulations (CEC 2000). Refer to Appendix N, Biology Resources, for a copy of the biologist's resume. The "project area" is defined as the area that could potentially be directly disturbed during project construction, and includes the power plant site, construction laydown and parking areas, electric transmission line, access road, sub-station expansion, and natural gas line. The "project survey area" includes the project area and a buffer of a 1-mile radius surrounding the BEC where field surveys were conducted for botanical and wildlife resources.

Prior to conducting field surveys a review of literature was performed including a search of the California Native Plant Society (CNPS) Inventory of Rare Plants Database (2006) and California Natural Diversity Database (CNDDB) in order to determine special-status species known to occur or that could potentially occur within the project survey area. The following U.S. Geological Survey (USGS) 7.5-minute quadrangles were searched for records of special-status species: Madera, Gregg, Lanes Bridge, Friant, Bioloa, Herndon, Fresno North, Clovis, Kerman, Kearney Peak, Fresno South, and Malaga quadrangle. The project survey area is within the Herndon quadrangle, and all of the surrounding quadrangles were searched (see Figure 5.6-1, Regional Map of Biological Resources).

The reconnaissance field survey included walking transects through the plant site, construction laydown and parking area, and pipeline linears and visually scanning areas within the 1-mile buffer (see Figure 5.6-2, CNDDB Sensitive Species Map). All botanical and wildlife species observed were documented, and all plant communities and habitat that could support potentially occurring special-status species listed in Table 5.6-1, Special-Status Species with Low Potential to Occur in the Project Area, were described. All plant and wildlife species observed during the survey within the project and buffer areas are listed in Table 5.6-2, Plant Species and Wildlife Observed During Field Survey. Plant nomenclature follows Hickman (1993).

TABLE 5.6-1
SPECIAL-STATUS SPECIES WITH LOW POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status[1]	Occurrence
Wildlife			
Burrowing owl	*Athene cunicularia*	CSC	Last seen in 2000, 0.25 mile east of Highway 41, 1.4 miles north of Avenue 12, 8 miles northwest of Friant.
Horned lark	*Eremophila alpestris*	CSC	Last official documentation in the area in 1992 north of Lanes Bridge on the San Joaquin River.
San Joaquin pocket mouse	*Perognathus inornatus inornatus*	BLM	Last seen in 1986 approximately 4.5 miles southwest of the BEC.
Fresno kangaroo rat	*Dipodomys nitratoides exilis*	FE, SE	Last seen in 1898 approximately 3.5 miles southeast of the BEC along the Southern Pacific Right-of-Way.
American Badger	*Taxidea taxus*	CSC	Last seen in 1998 approximately 1.5 miles northeast of the BEC.
San Joaquin kit fox	*Vulpes macrotis mutica*	FE, SE	Last documented in the area in 1993 along Highway 99 just west of the BEC.

U.S. Fish and Wildlife Service (Federal)
BLM = Bureau of Land Management Sensitive Species
FE = Endangered (In danger of becoming extinct throughout all or a significant portion of its range.)
FC = Federal Candidate (Candidate for FT or FE listing.)
FSC = Species of Concern (Sufficient information exists which warrants concern over that species' status and warrants study.)
FT = Threatened (Likely to become endangered in the foreseeable future in the absence of special protection.)

California Department of Fish and Game (State)
CSC = Species of Concern (Information exists which warrants concern over that species' status and warrants study.)
SE = Endangered (In danger of becoming extant throughout all or a significant portion of its range.)
SC = State Candidate (Candidate for SE or State Threatened [likely to become endangered in the foreseeable future in the absence of special protection.])

California Native Plant Society (CNPS)
CNPS 1B = plants that are rare, threatened, or endangered in California and elsewhere

TABLE 5.6-2
PLANT SPECIES AND WILDLIFE OBSERVED DURING FIELD SURVEY

Common Name	Scientific Name
Birds	
American crow	*Corvus brachyrhynchos*
European starling	*Sturnus vulgaris**
Black phoebe	*Sayornis nigricans*
House finch	*Carpodacus mexicanus*
Plants	
Amaranth	*Amaranthus* spp.*
Giant ragweed	*Ambrosia trifida*
Wild oats	*Avena fatua**
Mule fat	*Baccharis salicifolia*
Ripgut grass	*Bromus diandrus**
Soft chess	*Bromus hordeaceus**
Yellow star thistle	*Centaurea solstitialis**
Spurge weed	*Chamaesyce spp.*
Pigweed	*Chenopodium album**
Bind weed	*Convolvulus arvensis**
Horseweed	*Conyza canadensis**
Bermuda grass	*Cynodon doctylon**
Jimson weed	*Datura wrightii*
Dove weed	*Eremocarpus setigerus*
Eucalyptus	*Eucalyptus* spp.*
Fescue	*Festuca* spp.*
Fig	*Ficus* spp.*
Common sunflower	*Helianthus annus**
Tarplant	*Hemizonia parryi* ssp. *parryi*
Telegraph weed	*Heterotheca grandifolia*
Summer mustard	*Hirschfeldia incana**
Mediterranean barley	*Hordeum marinum**
Pacific rush	*Juncus effuses*
Prickly Lettuce	*Lactuca serriola**
Spanish clover	*Lotus purshianus*
Cheeseweed	*Malva parviflora**
Olive tree	*Olea europaea**

TABLE 5.6-2
PLANT SPECIES AND WILDLIFE OBSERVED DURING FIELD SURVEY

Common Name	Scientific Name
Knotweed	*Polygonum arenastrum**
Rabbit's foot grass	*Polypogon monspeliensis**
Fremont cottonwood	*Populus fremontii*
Firethorn	*Pyracantha* spp.*
Curly dock	*Rumex crispus**
Narrowleaf willow	*Salix exigua*
Gooding's willow	*Salix goodingii*
Russian thistle	*Salsola tragus**
Brazilian pepper tree	*Schinus terebinthifolius**
Sandspurry	*Spergularia* spp.
Vinegar weed	*Trichostema lanceolatum*

Notes:
*Non-native species.

5.6.1.2 Plant Communities

Most of the project survey area was either industrial and residential development or disturbed ruderal vegetation with very little native species. The laydown area was recently tilled in some areas, highly disturbed and dominated by non-native annual grasses and weeds such as Bermuda grass (*Cynodon dactylon*), wild oat (*Avena fatua*), and prickly wild lettuce (*Lactuca serriola*) with scattered native annual species such as vinegar weed (*Trichostema lanceolatum*), tarplant (*Hemizonia parryi* ssp. *parryi*), dove weed (*Eremocarpus setigerus*), and Jimson weed (*Datura wrightii*). South and outside the boundary of the laydown area, a small patch of willow-Fremont cottonwood woodland including Fremont cottonwood (*Populus fremontii*), Gooding's willow (*Salix goodingii*), narrow-leaved willow (*Salix exigua*), and Pacific rush (*Juncus effuses*) is present. While it is unlikely the project will cause a disturbance, the area should be avoided. No vegetation was present within the power plant site, which is currently an active trucking facility. All project linears are along existing road edges that are either commercial or residential development, fig orchards, or consist of disturbed ruderal vegetation with a few scattered natives similar to those observed in the laydown area and a few ornamental trees such as Olive (*Olea europaea*).

5.6.1.3 Wetlands

The only potential Army Corp of Engineers jurisdictional wetland present within the vicinity of the project was the aforementioned small patch of the willow-Fremont cottonwood woodland, which is outside the boundary of the laydown area. The Epstein canal west of Highway 99 that historically crossed West Bullard Avenue was no longer aboveground due to residential development. The San Joaquin River is 2.5 miles north of the power plant site. There are

several ditches in the project survey area and vicinity; however, none of these were observed aboveground during the reconnaissance survey.

5.6.1.4 Wildlife Community

The BEC and adjacent areas provide limited habitat for few wildlife species due to industrial, commercial, residential, and agricultural development in the vicinity of the project area. Only a few species of birds were observed during the field survey. Most of the species detected, such as house finch (*Carpodacus mexicanus*), European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), and black phoebe (*Sayornis nigricans*) are typically found in disturbed/developed areas. The only evidence of breeding activity in the project area was a kestrel size nest in the transformer towers just north of the laydown area. Raptors are protected by California Department of Fish and Game (CDFG); however other than a possible kestrel nest, none of the wildlife or sign of wildlife observed was sensitive. No reptile or mammal sign was observed.

5.6.1.5 Special-Status Species

Plants

No special-status plant species were observed during the field survey and there are no records in the CNDDB within the project survey area. The CNDDB lists one special-status plant species, Sanford's arrowhead (*Sagittaria sanfordii*), as historically or potentially present within the project vicinity. Sanford's arrowhead is a CNPS 1B listed species that occurs in wetland habitats. It was last documented in 1980 approximately 3 miles northeast of the BEC. This species is likely to have been extirpated from the project vicinity due to the conversion of native vegetation to agriculture and development. Few native plant species were observed within the project area. Although these observations are limited due to the survey being conducted in late summer outside of the blooming period for many annual plant species, no special status annual plant species are known or have potential to occur in the project study area due to a high amount of soil disturbance due to tilling of open fields and no special status records for annual plant species are known in the project vicinity.

Wildlife

No special-status wildlife species were observed during the field survey and there is only one record in the CNDDB within the project survey area, the San Joaquin kit fox (*Vulpes macrotis mutica*). The CNDDB lists the following nine sensitive wildlife species as historically present and potentially occurring in the project vicinity: hairy orcutt grass (*Orcuttia pilosa*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Hurd's metapogon robberfly (*Metapogon hurdi*), California tiger salamander (*Ambystoma californiense*), burrowing owl (*Athene cunicularia)*, California horned lark (*Eremophila alpestris actia)*, San Joaquin pocket mouse *(Perognathus inornatus inornatus)*, Fresno kangaroo rat *(Dipodomys nitratoides exilis)*, and American badger *(Taxidea taxus)*. Several of the special status species in the region are highly associated with vernal pool habitat such as the California tiger salamander and hairy orcutt grass. Since vernal pool habitat is not present within the project area, these species are not expected to occur in the project area. Hurd's metapogon robberfly is thought to be extirpated

from the area since it was last seen in 1922. The nearest record of valley elderberry longhorn beetle to the project area was last documented in 1989 along the San Joaquin River 1 mile north of Herndon. This species is not expected to occur in the project study area due to lack of suitable riparian habitat along a river or stream. Only a few sensitive wildlife records are located within agricultural or developed areas in the project vicinity and thus have a low potential to occur in the project area. These sensitive species include the burrowing owl, California horned lark, San Joaquin pocket mouse, Fresno kangaroo rat, American badger and San Joaquin kit fox. These special-status species that have a low potential to occur in the project area are discussed further below and listed in Table 5.6-1, Special-Status Species with Low Potential to Occur in the Project Area.

Many sensitive plant and animal species in the southern San Joaquin valley occupy the same habitats: desert scrub, chenopod scrub, subshrub scrub, grassland, and alkali playa. These rare habitats represent a unique area of endemism in California. More endemic vertebrate species co-occur in the San Joaquin Valley than anywhere comparable in the continental U.S. (U.S. Fish and Wildlife Service [USFWS] 1998). Farming, urbanization, land reclamation, pest control, and other human disturbance have eliminated up to 95 percent of the habitat that once dominated the region, and many of the plants and animals that once ranged widely throughout the southern San Joaquin Valley have been decimated, and now only occur in a few scattered populations in the remaining natural areas.

Burrowing Owl

The burrowing owl is a state species of concern. The burrowing owl is a yearlong resident of open, dry grassland and desert habitats. They are also found as residents in grass, forb, and open shrub stages of pinyon-juniper, and ponderosa pine habitats. This small owl is found the length of the state of California in appropriate habitats and has been found as high as 5,300 feet in Lassen County. They are not found in the humid northwest coastal forests. Outside California, this bird is found in southwestern Canada, the western U.S., Florida, and northern Alaska (http://www.delta.dfg.ca.gov/gallery/ burowl.asp).

The decline of this species was recognized as early as the 1940s. The decline is attributable to the conversion of grasslands and pasturelands to agriculture and to the destruction of ground squirrel colonies by plowing and poisoning. The burrowing owl is unique because it lives in the abandoned burrows of ground squirrels. They modify the burrows to suit their needs by digging. It is one of the few diurnal owls and can be seen in the day perched on fence posts or near the entrance to their burrow.

This species was last seen in 2000, well outside the project area, east of Highway 41, 1.4 miles north of Avenue 12, and 8 miles northwest of Friant. Since the open fields are regularly tilled, highly disturbed, and surrounded by development, there is only a low potential for this species to occur within the open fields of the project area.

Horned Lark

The horned lark is a bird of shortgrass prairies, seashores, agricultural fields, sparse brushlands, deserts, and other open habitats throughout North America. In California, the horned lark may be common in grazed pastures, bare fields, and other agricultural settings, but nests are extremely vulnerable to destruction from agricultural equipment or trampling. In addition, loss

of habitat is a considerable threat to this species. Horned larks eat mainly seeds, but will also eat insects during the breeding season. This is the only true lark native to the Americas. The horned lark is a California species of concern due to widespread, long-term population declines in the state (http://www.mbr-pwrc.usgs.gov/bbs/grass/a4740.htm).

The nearest CNDDB record of horned lark to the project area is along the San Joaquin River north of Lanes Bridge. It was last observed in 1992. Since it is well outside of the project area and has not been observed in the last 10 years in the project vicinity, there is only a low potential for this species to occur in open fields within the project area.

San Joaquin Pocket Mouse

The San Joaquin pocket mouse is a U.S. Bureau of Land Management (BLM) sensitive species that occurs in annual grassland and oak savanna. Its range includes the Coast Ranges, foothills of Sierra Nevada, Tehachapis, and Mojave Desert. It forages almost exclusively at night, and spends the day in a simple burrow. The species enters torpor during periods of low temperatures and/or low food availability, and is not active aboveground during much of the winter. (http://www.mercednccp-hcp.net/vollmar/chapters/chapter_08.pdf)

The diet of the pocket mouse consists of seeds and soft bodied insects. Seeds of grasses, forbs, and shrubs such as *Atriplex* are the main food source and soft bodied insects such as cutworms and even grasshoppers are also eaten. The breeding season for the San Joaquin pocket mouse is from March to July and the females have at least two litters of four to six young per litter (http://www.delta.dfg.ca.gov/reports/stanriver/sr4411.asp).

This species was last seen in 1986 approximately 4.5 miles southwest of the BEC. Since it has not been observed in 20 years and is well outside the project area, there is only a low potential for it to occur within the project area.

Fresno Kangaroo Rat

The Fresno kangaroo rat is a federal and state endangered species known to occur in grassland and alkali desert scrub communities on the San Joaquin Valley floor. Its historical geographic range was in Merced, Kings, Fresno, and Madera counties. Recently they have been found only in alkali sink communities from 200 to 300 feet in elevation. Currently there are no known populations within its historical geographic range in Merced, Madera, and Fresno counties. The last record of a Fresno kangaroo rat in Fresno County was in 1992 at the Alkali Sink Ecological Reserve. Fresno kangaroo rats collect and carry seeds in fur-lined external cheek pouches. Their diet consists primarily of seeds, but they may also eat some types of green herbaceous vegetation and insects. Breeding is likely initiated at the onset of the rainy season. Fresno kangaroo rats shelter in ground burrows that are dug by them or their predecessors. Burrows are usually found in relatively light, sandy soils in raised areas.
(http://esrpweb.csustan.edu/speciesprofiles/profile.php?sp=dinie)

The nearest CNDDB record for this species is approximately 3.5 miles southeast of the BEC. It was last observed at this location in 1898. Although it was last seen in 1992 at the Alkali Sink Ecological Reserve in Fresno County, it is not likely to occur in highly developed areas of the county, so this species is not expected to occur in the project area.

American Badger

The American badger is a state species of concern. Its range in the U.S. is from the west coast to Texas, Oklahoma, Missouri, Illinois, Ohio, Michigan, and Indiana. It is also found in southern Canada in British Columbia, Manitoba, Alberta, and Saskatchewan. It occurs in open habitats such as prairies, plains, farmland, and edges of woods. Its diet consists of small burrowing mammals such as ground squirrels, rats, gophers, and mice. Badgers mate in July and August and by March females give birth. Dens and burrows are important to badgers for sleeping, resting, hunting, storing food, and giving birth. (http://www.nhptv.org/natureworks/americanbadger.htm)

The nearest record to the project area was last seen in 1998 approximately 1.5 miles northeast of the BEC. There is a low potential for this species to occur within the project area.

San Joaquin Kit Fox

The San Joaquin kit fox historically ranged throughout the San Joaquin Valley from Contra Costa County in the north to northern Santa Barbara County in the south. Currently the kit fox still has a wide distribution; however, kit fox numbers are greatly reduced and populations are isolated from one another. Kit foxes primarily live in grassland and to a lesser extent, shrub and agricultural habitats. Kit foxes predominantly eat rodents, ground squirrels, rabbits and hares, and ground-nesting birds. Kit fox pups are born in late winter and early spring, and the male provides most of the food for the female while she is nursing. Kit foxes change dens frequently, and often enlarge existing ground squirrel burrows in order to make new dens. Predation or competitive exclusion of kit foxes may occur in the presence of coyotes, introduced red foxes, domestic dogs, bobcats, and large raptors. Human threats to kit fox include destruction of habitat, habitat degradation, predator and pest control programs, and accidents caused by proximity to humans such as electrocution, roadkills, and suffocation from accidental burial in dens. Finally, natural factors such as drought, flooding, and rabies cause a significant percent of kit fox deaths. The San Joaquin kit fox is currently listed as an endangered species by both the federal government and the state of California (USFWS 1998).

The nearest CNDDB record of San Joaquin kit fox to the project area is adjacent to the west side of the BEC along Highway 99. It was last recorded in the project vicinity in 1993. Considering the detection date is over 10 years ago and there has been a significant increase in development in this area over that time, it is not likely that the kit fox would occur in the project area, but there is a possibility of it occurring in the project area on rare occasion.

5.6.1.6 Special Environmental Areas in the Project Vicinity

A Special Environmental Area within the project vicinity is the San Joaquin River approximately 2.5 miles to the northwest of the project area. The location of the San Joaquin River is shown on Figure 5.6-1, Regional Map of Biological Resources.

5.6.2 Environmental Consequences

Potential and expected direct and indirect impacts to biological resources are discussed below. Significant impacts are those that would involve the loss of a sensitive plant or wildlife species,

or degradation of their habitat. The project would have significant impacts to vegetation and wildlife if it would:

- Cause a fish or wildlife population to drop below self-sustaining levels (California Environmental Quality Act [CEQA] Guidelines, Section 15065 (a))
- Threaten to eliminate a plant or animal community (CEQA Guidelines, Section 15065 (a))
- Substantially affect, reduce the number, or restrict the range of unique, rare, or endangered species of animal or plant, or the habitat of the species (CEQA Guidelines, Section 15065 (a), Appendix G (c), Appendix I (II.4.b) and (II.5.b))
- Substantially diminish or reduce habitat for fish, wildlife, or plants (CEQA Guidelines, Section 15065 (a), Appendix G (t))
- Interfere substantially with the movement of resident or migratory fish or wildlife species (CEQA Guidelines, Appendix G (d))
- Change the diversity of species, or number of any species of plants (including trees, shrubs, grass crops, and aquatic plants) or animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects) (CEQA Guidelines, Appendix I (II.4.1) and (II.5.a))
- Introduce new species of plants or animals into an area, or act as a barrier to the normal replenishment of existing species (CEQA Guidelines, Appendix I (II.4.c) and (II.5.c))
- Deteriorate existing fish or wildlife habitat (CEQA Guidelines, Appendix I (II.5.d))
- Conflict with any regional Habitat Conservation Plans (HCPs)

The above criteria are used to evaluate the project's impacts to plant communities and wildlife. The potential impacts associated with the construction and operation of the BEC are discussed below.

5.6.2.1 BEC Site

The project would not result in significant impacts to biological resources because it would not:

- Cause a fish or wildlife population to drop below self-sustaining levels
- Threaten to eliminate a plant or animal community
- Substantially affect, reduce the number, or restrict the range of unique, rare, or endangered species of animal or plant, or the habitat of the species
- Substantially diminish or reduce habitat for fish, wildlife, or plants
- Interfere substantially with the movement of resident or migratory fish or wildlife species
- Change the diversity of species, or number of any species of plants (including trees, shrubs, grass crops, and aquatic plants) or animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects)
- Introduce new species of plants or animals into an area, or act as a barrier to the normal replenishment of existing species
- Deteriorate existing fish or wildlife habitat

- Conflict with any regional HCPs (the project would be in compliance with PG&E San Joaquin Valley Operations & Maintenance Draft HCP)

Less-than-significant impacts associated with the project construction and operations are discussed further below.

Site Preparation and Construction Impacts

The project includes the installation of two GE LMS100 natural gas-fired CTGs, emission control equipment, one cooling tower, process water treatment equipment, and transmission equipment. Off-site improvements include a new 9,500-foot natural gas pipeline, a 1,500-foot sewer line, a 300-foot water supply line, and re-conductoring of approximately 2 miles of the Herndon-Kearney 230 kV transmission line. Construction of these new facilities, including site grading, would have minor impacts to native plant species because the project area has very little native vegetation. In addition, impacts to common native wildlife species in the project area would be very minimal because the area is highly disturbed and there was little sign of animal activity in the project area during the field survey. Some individuals of common terrestrial wildlife species may be adversely affected by heavy equipment or vehicles in the construction area. This impact is considered adverse, but not significant due to the relatively small area affected.

Air Emissions and Noise

Increase in air emissions (Section 5.2, Air Quality) and noise (Section 5.12, Noise) as a result of the construction of the power plant are not expected to cause significant impacts to wildlife. The project survey area provides limited habitat for wildlife due to a high amount of development. Most of the wildlife observed at the site includes species that are often found in disturbed or developed areas and are expected to adapt to the new noise levels and air emissions.

Operations and Maintenance Impacts

Potential impacts to biological resources as a result of the operations and maintenance associated with the project include air emissions, noise, and collision hazards. These potential impacts are discussed further below.

Air Emissions

The operational sources of emissions associated with the BEC include two turbine stacks which will generate emissions from the combustion of natural gas, a stack for the firewater pump engine, and the cooling tower. Impacts to wildlife in the area as a result of these emissions are less than significant because the common wildlife that occurs in the vicinity of the project area is expected to adapt to these conditions. Modeled ground-level concentrations of criteria air pollutants, including particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), volatile organic compounds (VOCs), and carbon monoxide (CO) that would be emitted from emissions at the BEC site are below levels that would cause violations of the ambient air quality standards or contribute significantly to existing violations (see Section 5.2, Air Quality). Significance levels for air emissions along with ambient air quality standards are set to protect human health and ecosystems. Since native vegetation is minimal within a 1-mile radius of the

plant site, only minor impacts to native vegetation associated with air emissions and subsequent ground deposition are anticipated. Fig or other orchards in the area are not expected to have a detectable reduction in growth or significant visible damage from salt deposition.

In the air quality modeling analysis for the proposed BEC site, nitrogen or sulfur deposition was not analyzed, since the Project emissions will not trigger Federal Prevention of Significant Deterioration (PSD) requirements. However, a very crude estimate of the maximum incremental deposition of nitrogen and sulfur near the project site was determined by multiplying the maximum model-predicted annual average concentrations of NO_2 and SO_2 by an approximate deposition velocity of 0.02 meter/sec and separating out the elemental nitrogen and sulfur components. The results show that the maximum deposition levels adjacent to the facility would be 0.115 kg nitrogen per hectare per year and sulfur deposition would be 0.0063 kg sulfur per hectare per year. Maximum deposition rates due to the BEC operational emissions were conservatively calculated from the predicted peak air pollutant concentrations, and were found to be at generally undetectable levels within 1,000 feet of the site. Even these very low deposition patterns are considered to be highly conservative because the worst-case-scenario modeling upon which they are based assumes full conversion and deposition of the elemental sulfur and nitrogen in the project exhaust plumes would be accomplished within a much shorter distance from the stack than would actually occur.

Noise

The existing development and power lines in the project area generate some noise near the BEC site. The BEC would generate a greater level of noise than currently exists in the project area. However, this increase in noise levels is projected to contribute to the present background noise levels to produce a combined level of less than 65 decibels, “A” scale (dBA) at the project site boundary. Additionally, there are no sensitive wildlife noise receptors. The potential impacts are considered less than significant because the area is already disturbed by intense commercial, residential, and agricultural use.

Collision Hazards

The two 90-foot-tall turbine stacks associated with the BEC may present a collision hazard for birds. Each of the two units also has a 53 foot high variable bleed vent and silencer stack. There is also a 14-foot-tall (1 foot above a 13-foot-tall building) stack for the firewater pump engine and the cooling tower height is 42 feet. The transmission line structures will be 75 feet tall, which includes a 15-foot-high grounding mast. Birds that would most likely be affected include migrating waterfowl and other species and some migratory song birds that tend to migrate at night. Fog or low cloud cover can further add to the problem. The exhaust stacks will not incorporate lights since because under Federal Aviation Administration (FAA) guidelines, lighting of 90-foot stacks is not necessary for aviation safety. Since the area has low quality habitat for birds, the collision hazards in the area of the BEC site are anticipated to be low and less than significant.

Impacts on Special-Status Species

No federally-listed or state-listed threatened or endangered species are expected to occur at the BEC site due to lack of suitable habitat, so no impacts as a result of the project are anticipated.

Impacts to Wildlife Corridors

Substantial wildlife movement through the area is lacking and the project area is not a significant wildlife corridor, so no significant impacts to wildlife movement are expected.

5.6.2.2 Parking and Laydown

The parking and laydown area is a disturbed open field with very minimal native vegetation, so impacts associated with construction are expected to be slightly more than those discussed for the BEC. Although unlikely, there is a low potential for some special-status species to occur on rare occasion in some of the disturbed open fields within the project area including burrowing owl, horned lark, San Joaquin pocket mouse, American badger, and San Joaquin kit fox. Avoidance and minimization measures listed in Section 5.6.3, Avoidance and Minimization Measures, would be implemented in order to reduce the potential for impacting these species to a level less than significant.

5.6.2.3 Project Linears

Most of the project linears are along roads that are developed with some scattered patches of ruderal vegetation with a few scattered native annual plant species and ornamental vegetation, so impacts associated with construction and operations are expected to be similar to the parking and laydown site in areas with open fields or agriculture. In developed areas of the linears, impacts would be similar to the BEC site.

5.6.2.4 Cumulative Impacts

The purpose of the cumulative impacts discussion for the project is to:

- Identify past, present, and reasonably foreseeable actions within the project vicinity that could affect the same resource(s) as the BEC
- Determine if impacts of the BEC and the other actions would overlap in time or geographic extent
- Determine if the impacts of the project would interact with, or intensify, the impacts of other actions
- Determine if this Application for Certification (AFC) overlaps another existing or planned AFC
- Identify any potentially significant cumulative impacts

Projects that could potentially contribute to cumulative impacts with the BEC are those within the same geographic area of influence. For this cumulative impact assessment, the area of influence is within a 5-mile radius of the BEC. In addition, projects with potential for regional significance are also included in the analysis. Information was gathered on projects that either: (1) have submitted an application for required approvals and permits; (2) have been previously approved and may be implemented in the near future; or (3) are contemplated and reasonably anticipated, but have not been formally proposed. Information for the cumulative impacts assessment was obtained primarily through personal communications. In addition, information from the internet was reviewed. The CEC and City of Fresno also provided information. The

following table shows a list of potential projects considered in the cumulative impact assessment and the timeframe for these projects.

Table 5.6-3 below shows a list of potential projects considered in the cumulative impact assessment and the timeframe for these projects. These projects include residential developments that cover 25.15 acres, and 47.47 acres of a road project converting a connector to a local street. Since these projects are within existing residential and agriculture areas and the BEC and associated linears are located within existing developed areas, no cumulative impacts to biological resources of significance are anticipated as a result of the proposed project.

TABLE 5.6-3
CUMULATIVE PROJECT IMPACTS

Application	Status	Location	Project	Zone
R-06-14 Tract 5690 C-06-52	Pending: Map not yet accepted			
A-05-24 R-05-122	At City Council on July 25, 2006	9.14 acres Southeast corner of North Polk and West Dante	118-unit condominium development	Plan Amendment From neighborhood commercial for 9.17 acres and medium-high density residential for 3.21 acres to the medium-high density residential for 9.17 acres and medium density residential for 3.21 acres Rezone from C-1/UGM to R-1 and R-2/UGM
C-06-117 Tract 5755/ UGM	In review and comment period of process			
C-05-48	At City Council on August 23, 2005; Approved	6.5 acres northeast corner of North Polk and West Palo Alto	80-unit multiple family residential development	R-2/UGM/cz
A-05-25 R-05-123	At City Council on July 25, 2006; Approved	9.51 acres north side of West Bullard between North Grantland and North Bryan	65-dwelling planned unit development	Plan Amendment from medium density residential to medium-high density residential Rezone from AE-20 to R-2/UGM
A-06-19	Filed 8-31-06	47.46 acres	Remove North	Plan Amendment from

TABLE 5.6-3
CUMULATIVE PROJECT IMPACTS

Application	Status	Location	Project	Zone
R-06-55		south side of West Barstow between North Grantland and Veterans Boulevard alignment	Bryan Avenue between Veterans Boulevard alignment and West Shaw Avenue	collector to local street Rezone from AE-5/UGM to R-2/UGM

5.6.3 Avoidance and Minimization Measures

In order to avoid or otherwise minimize impacts to common wildlife, native wetland vegetation, and any potential special-status wildlife species, the following stipulations will be implemented:

- Standard procedures identified in the USFWS general guidelines for construction in areas with potential for the San Joaquin kit fox should be implemented. This includes making sure all trash is disposed of properly and not left uncontained overnight. A designated biologist would be on call in case any kit foxes are found in the project area. The project area would be fenced and all pipes or holes in the ground would be covered as appropriate.
- Pre-construction breeding bird surveys shall be conducted according to CDFG methods to determine if the work area is clear of all breeding birds. Preconstruction surveys shall be also conducted for any nesting raptor species.
- Pre-construction surveys would be conducted for sensitive bird species with potential to occur in the project area such as burrowing owl and horned lark.
- Any existing raptor nests within the BEC project area should be removed during the non-breeding season to minimize potential for nesting in the same location the following year.
- In order to minimize trapping of common wildlife, the BEC will set up fences around construction zones and relocate any trapped wildlife. Fence areas and trenches should be checked regularly by a biological monitor to rescue and relocate any trapped animals.
- Provide biological orientation training for workers on-site to educate them on procedures for minimizing impacts to common wildlife species and any rare occurrences of special-status species that have a low potential to occur in the project area.
- An approved, designated biologist shall implement the above measures.

5.6.4 Mitigation Measures

There are no mitigation measures proposed for biological resources because native vegetation is lacking and special-status species are not expected to occur in the project area.

5.6.5 Applicable Laws, Orders, Regulations, and Standards

Laws, orders, regulations, and standards (LORS) that are applicable or potentially applicable for biological resources associated with the project are discussed below. Table 5.6-3, LORS for

Biological Resources, lists all applicable LORS. Construction and operation associated with the project will adhere to the LORS pertinent to biological resources.

TABLE 5.6-3
LORS FOR BIOLOGICAL RESOURCES

AFC Section	Authority	Administering Agency	Requirements/Compliance
Federal			
Section 5.6.4.1	Endangered Species Act of 1973; 16 USC 1531 *et seq.;* 50 CFR Parts 17 and 222	USFWS	Protection and management of federally listed threatened or endangered plants and animals and their designated critical habitats (terrestrial and avian species). Section 7 Endangered Species Act consultation with USFWS (or Section 10A)
Section 5.6.4.1	National Environmental Policy Act; 42 USC 4321 *et seq.*	USFWS	Analysis of impacts of Federal action
Section 5.6.4.1	Migratory Bird Treaty Act; 16 USC 703-711; 50 CFR Subchapter B.	USFWS	Protection of migratory birds
Section 5.6.4.1	Fish and Wildlife Coordination Act; 16 USC 661-666	USFWS	Conservation of fish and wildlife
Section 5.6.4.1	Clean Water Act of 1977; 33 USC 1251-1376; 30 CFR 330.5(a)(26)	USACE and the RWQCB	Protection of wetlands and limiting of thermal discharges to the marine environment
State			
Section 5.6.4.2	California Endangered Species Act of 1984; California Fish and Game Code 2050-2098.	CDFG	Consultation Requirement
Section 5.6.4.2	California Species Preservation Act of 1970; California Fish and Game Code 900-903	CDFG	Protection and enhancement of the birds, mammals, fish, amphibians, and reptiles of California
Section 5.6.4.2	California Fish and Game Code 4700 and 5515	CDFG	No taking of mammals listed as fully protected
Section 5.6.2.1 and 5.6.5.2	California Fish and Game Code 3503.	CDFG	No taking or possessing of the nests or eggs of birds
Sections 5.6.2.2, 5.6.2.3, and 5.6.5.2	CEQA; California Public Resources Code 21000 et seq.	CEC	Protection of environment
Section 5.6.4.2	California PRC 25523(a); 20 CCR 1752, 1752.5, 2300-2309; Chapter 2, Subchapter 5, Article I, Appendix B, Part (I)	CEC	Protection of environmental quality

TABLE 5.6-3
LORS FOR BIOLOGICAL RESOURCES

AFC Section	Authority	Administering Agency	Requirements/Compliance
Local			
Section 5.6.5.3	City of Fresno 2025 General Plan, Native Plants and Wildlife section of the Resource Conservation Element, and the Open Space/Recreation Element	City of Fresno Planning and Development Department	Ensure that proposed development projects demonstrate a high degree of compatibility with any threatened or endangered species and sensitive biological resources including the San Joaquin River corridor
Section 5.6.5.3	Opens Space Element and Conservation Element of the County of Fresno General Plan	County of Fresno Planning and Resources Development Department	Ensure that proposed development projects demonstrate a high degree of compatibility with any threatened or endangered species and sensitive biological resources

Notes:
AFC = Application for Certification
CDFG = California Department of Fish and Game
CEC = California Energy Commission
CFR = Code of Federal Regulations
LORS = laws, ordinances, regulations, and standards
PRC = Public Resources Code
RWQCB = Regional Water Quality Control Board
USACE = U.S. Army Corps of Engineers
USC = U.S. Code
USFWS = U.S. Fish and Wildlife Service

5.6.5.1 Federal Authorities and Administering Agencies

Endangered Species Act of 1973: 16 USC Section 1531 et seq.; 50 CFR Parts 17 and 222

The Endangered Species Act provides for the protection of threatened or endangered plants and animals and their determined critical habitats. The USFWS is the agency responsible for administering the Act, designating critical habitat, and determining if a species should have a change in listing status. With implementation of the avoidance and minimization measures the BEC does not impact any federally-listed threatened or endangered plants or animals or their designated critical habitats and so the BEC will not violate the Endangered Species Act.

National Environmental Policy Act: 42 USC Section 4321 et seq.

The National Environmental Policy Act (NEPA) requires an evaluation of the environmental impacts of projects taking place on federal lands or receiving federal funding. The USFWS is the administering agency for the above authority. Evaluation determined that there are only temporary minor impacts to common plants and wildlife associated with the laydown area and project linears. The BEC is in compliance with NEPA.

Migratory Bird Treaty Act: 16 USC Sections 703 – 711; 50 CFR Subchapter B

The Migratory Bird Treaty Act protects most native birds, their eggs, and their nests, and prohibits any taking not in accordance with federal regulation. The USFWS is responsible for administering this Act. Because the project will not result in the deaths of birds or the destruction of any active nests, the BEC will not violate the Migratory Bird Treaty Act.

Fish and Wildlife Coordination Act: 48 Stat. 401, amended; 16 USC 661 et seq.

The Fish and Wildlife Coordination Act requires all federal agencies to coordinate with the USFWS to preserve fish and wildlife when implementing federal actions. The USFWS is responsible for administering this Act. Because there are only minor impacts to biological resources, the BEC will comply with this Act.

Clean Water Act of 1977: 33 USC Section 1251 – 1376; 30 CFR Section 330.5(a)(26)

The Clean Water Act protects wetlands, regulates discharges of pollutants, requires set water quality standards for individual pollutants, and provides a framework for permitted pollutant discharge from a point source. The administering agencies for the Act are the U.S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB). With implementation of avoidance and minimization measures, the only potential wetland within the project area at the laydown area would not be impacted, and thus the BEC will not be in violation of this Act.

5.6.5.2 State Authorities and Administering Agencies

California Endangered Species Act of 1984: California Fish and Game Code Sections 2050 – 2098

The California Endangered Species Act provides for the protection and management of plant and animal species listed as threatened or endangered, or designated as candidates for such listing. This Act requires consultation between the CDFG and other state agencies to ensure that projects do not jeopardize the continued existence of threatened or endangered species or habitats essential for the continued survival of any threatened or endangered species. The administering agency for this act is the CDFG. By implementing the avoidance and minimization measures specified in Section 5.6.3, Avoidance and Minimization Measures, any potential impacts to species listed under this Act, would be avoided or minimized and thus the BEC will not be in violation of this Act.

California Species Protection Act of 1970: California Fish and Game Sections 900-903

The California Species Protection Act includes provisions for the protection and enhancement of the birds, mammals, fish, amphibians, and reptiles of California. The administering agency for this Act is the CDFG. Because there are only temporary minor impacts to common wildlife, the BEC will comply with this Act.

California Fish and Game Code Section 3503

This code section prohibits the taking and possessing of bird eggs and nests. The administering agency for this is the CDFG. Because there will be no disturbance to nesting birds, the BEC will be in compliance with this law.

California Fish and Game Code Section 3511, Section 4700, Section 5050 Section 5515

This code section prohibits the taking of birds, mammals, reptiles, and fish listed as fully protected. The administering agency for these is the CDFG. Because there is only a low potential for listed birds, mammals, reptiles, or fish in the vicinity of the project site, and avoidance and minimization measures identified in Section 5.6.3, Avoidance and Minimization Measures, would reduce any potential impacts, the BEC will be in compliance with this law.

CEQA, Public Resources Code Section 21000 et seq.

The CEQA provides for protection of the environment in the state of California. The administering agency for the above authority with regards to this project is the CEC. Because there are only very few natural resources at the project site and avoidance and minimization measures identified in Section 5.6.3, Avoidance and Minimization Measures, would reduce any potential impacts, the BEC is in compliance with the CEQA.

California Public Resources Code Section 25523(a): 20 CCR Sections 1752, 1752.5, 2300 – 2309, and Chapter 2, Subchapter 5, Article I, Appendix B, Part (i)

These code sections require the CEC to protect environmental quality. The administering agency for the above sections is the CEC with comment by the CDFG. Because there are no rare or endangered species at the project site, the BEC will be in compliance with these code sections.

5.6.5.3 Local Authorities and Administering Agencies

City of Fresno

The proposed project is consistent with the City of Fresno 2025 General Plan, Native Plants and Wildlife section of the Resource Conservation Element, and the Open Space/Recreation Element Objectives and Policies (City of Fresno 2002). The main objectives of the Native Plants and Wildlife section are as follows:

- To provide for long-term preservation, enhancement, and enjoyment of plant, wildlife, and aquatic resources in the Fresno area by protecting, improving, and restoring these resources.
- Maintain and restore, where feasible, the ecological values of the San Joaquin River corridor.
- Support the San Joaquin River Conservancy in its efforts to develop a river parkway that strikes an appropriate balance between facilitating recreational pursuits; protecting water resources; meeting economic and development needs through sand and gravel production; and long-term preservation, enhancement, and public enjoyment of the river's unique and irreplaceable plant, wildlife, and aquatic resources.

The administering agency for the City of Fresno is the Planning and Development Department. The BEC is in compliance with these objectives and associated policies because it does not cause significant impacts to natural resources.

County of Fresno

The County of Fresno General Plan open space and conservation elements addresses goals and policies related to natural resources. The *Conservation Element* addresses the conservation, development, and use of natural resources including water, forests, soils, rivers, and mineral deposits. Overlapping the Conservation and Safety Elements, the *Open Space Element* details plans and measures for preserving open space for: protection of natural resources such as wildlife habitat; the managed production of resources such as agriculture and timberland; outdoor recreation such as parks, trails, and scenic vistas; and public health and safety such as areas subject to geologic hazards, flooding, and fires (County of Fresno 2000).

The Natural Resources component has three main goals (County of Fresno 2000):

1. To help protect, restore, and enhance habitats in Fresno County that support fish and wildlife species so that populations are maintained at viable levels. Policies in this section seek to protect natural areas and to preserve the diversity of habitat in the county.
2. To conserve the function and values of wetland communities and related riparian areas throughout Fresno County while allowing compatible uses where appropriate. Policies in this section seek to protect riparian and wetland habitats in the county while allowing compatible uses where appropriate.
3. To preserve and protect the valuable vegetation resources of Fresno County. Policies in this section seek to protect native vegetation resources primarily on private land within the county.

The Mendota Wildlife Area just south of the San Joaquin River is designated as open space. The administering agency for the County of Fresno is the Planning and Resources Development Department. The BEC is in compliance with these goals and associated policies because it does not cause significant impacts to natural resources.

5.6.5.4 Agencies and Agency Contacts

There are no applicable permits related to biological resources.

5.6.5.5 Applicable Permits

There are no applicable permits related to biological resources.

5.6.6 References

California Department of Fish and Game. 2006a. Natural Diversity Database (CNDDB).

_____. 2006b. Central Valley Bay-Delta Branch website http://www.delta.dfg.ca.gov/gallery/shearowl.asp

California Energy Commission. 2000. Rules of Practice and Procedure and Plant Site Certification Regulations.

California Native Plant Society. 2006. Rare Plant Database.

City of Fresno. 2002. 2025 Fresno General Plan. Resource Conservation and Open Space/Recreation Elements.

County of Fresno. 2000. Fresno County General Plan. Conservation and Open Space Element.

Hickman, J.C. 1993. The Jepson manual: higher plants of California. University of California Press, Berkeley and Los Angeles. 1400pp.

The North American Breeding Bird Survey. 2006. http://www.mbr-pwrc.usgs.gov/bbs/grass/a4740.htm

Peeters, Hans and Pam Peeters. 2005. *Raptors of California*. University of California Press, Berkeley and Los Angeles, California.

U.S. Fish and Wildlife Service. 1998. *Recovery plan for upland species of the San Joaquin Valley, California*. Region 1, Portland, OR. 319 pp.

Adequacy Issue: Adequate ____ Inadequate ____

DATA ADEQUACY WORKSHEET

Revision No. ____ Date ____

Technical Area: **Biological Resources** Project: ____ Technical Staff: ____

Project Manager: ____ Docket: ____ Technical Senior: ____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	5.6.1 5.6.1.2 5.6.2 5.6.2.1 5.6.2.2 5.6.2.3 5.6.3 5.6.4		
Appendix B (g) (13) (A)	A regional overview and discussion of biological resources, with particular attention to sensitive biological resources near the project, and a map at a scale of 1:100,000 (or some other suitable scale) showing their location in relation to the project.	5.6 5.6.1 5.6.1.1 5.6.1.2 5.6.1.3 5.6.1.4 Table 5.6-1 Table 5.6-2 5.6.1.5 5.6.1.6		
Appendix B (g) (13) (B)	A discussion and detailed maps at a scale of 1:6,000, of the biological resources at the site of the proposed project and related facilities, and in areas adjacent to them, out to a mile from the site and 1000 feet from the outer edge of linear facility corridors. Include a list of the species actually observed and those with a potential to occur. The discussion and maps shall address the distribution of community types, denning or nesting sites, population concentrations, migration corridors, breeding habitats, and the presence of sensitive biological resources.	5.6 5.6.1 5.6.1.1 5.6.1.2 5.6.1.3 5.6.1.4 Table 5.6-1 Table 5.6-2 5.6.1.5 5.6.1.5 5.6.1.6		

Adequacy Issue: Adequate ____ Inadequate ____

DATA ADEQUACY WORKSHEET

Revision No. ____ Date ____

Technical Area: **Biological Resources** Project: ____ Technical Staff: ____

Project Manager: ____ Docket: ____ Technical Senior: ____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (C)	A description of all studies and surveys used to provide biological information about the project site, including seasonal surveys and copies of the California Department of Fish and Game's Natural Diversity Data Base Survey Forms, "California Native Species Field Survey Forms", and "California Natural Community Field Survey Forms", completed by the applicant. Include the dates and duration of the studies, methods used to complete the studies, and the names and qualifications of individuals conducting the studies.	5.6.1 5.6.1.1 Appendix B		
Appendix B (g) (13) (D)	A discussion of all permanent and temporary impacts to biological resources from site preparation, construction activities, and plant operation. Discussion of impacts must consider impacts from cooling tower drift, and from the use and discharge of water during construction and operation. For facilities which use once-through cooling or take or discharge water directly from or to natural sources, discuss impacts resulting from entrainment, impingement, thermal discharge, effluent chemicals, type of pump (if applicable), temperature, volume and rate of flow at intake and discharge location, and plume configuration in receiving water.	5.6.2 5.6.2.1 5.6.2.2 5.6.2.3 5.6.3 5.6.4		
Appendix B (g) (13) (E)	A discussion of the following:			
Appendix B (g) (13) (E) (i)	All measures proposed to avoid and/or reduce any adverse impacts;	5.6.2.1 5.6.3		
Appendix B (g) (13) (E) (ii)	All measures proposed to mitigate any adverse impacts, including any proposals for off-site mitigation; and	5.6.4		
Appendix B (g) (13) (E) (iii)	Any educational programs proposed to enhance employee awareness in order to protect biological resources.	5.6.3		

Adequacy Issue: Adequate ____ Inadequate ____

DATA ADEQUACY WORKSHEET

Revision No. ____ Date ____

Technical Area: **Biological Resources** Project: ____ Technical Staff: ____

Project Manager: ____ Docket: ____ Technical Senior: ____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (F)	A discussion of compliance and monitoring programs proposed to ensure the effectiveness of mitigation measures incorporated into the project.	5.6.3 5.6.4		
Appendix B (g) (13) (G)	A discussion of native fish and wildlife species of commercial and/or recreational value that could be impacted by the project.	5.6.2.1		
Appendix B (g) (13) (H)	For purposes of this section, sensitive biological resources are one of the following:			
Appendix B (g) (13) (H) (i)	Species listed under state or federal Endangered Species Acts;	Table 5.6-1 5.6.1.5		
Appendix B (g) (13) (H) (ii)	Resources defined in sections 1702 (q) and (v) of Title 20 of the California Code of Regulations; and			
Appendix B (g) (13) (H) (iii)	Species or habitats identified by legislative acts as requiring protection.	Table 5.6-1 5.6.1.5 5.6.2.1		
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Table 5.6-3		
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.6-3		

Adequacy Issue: Adequate ____ Inadequate ____

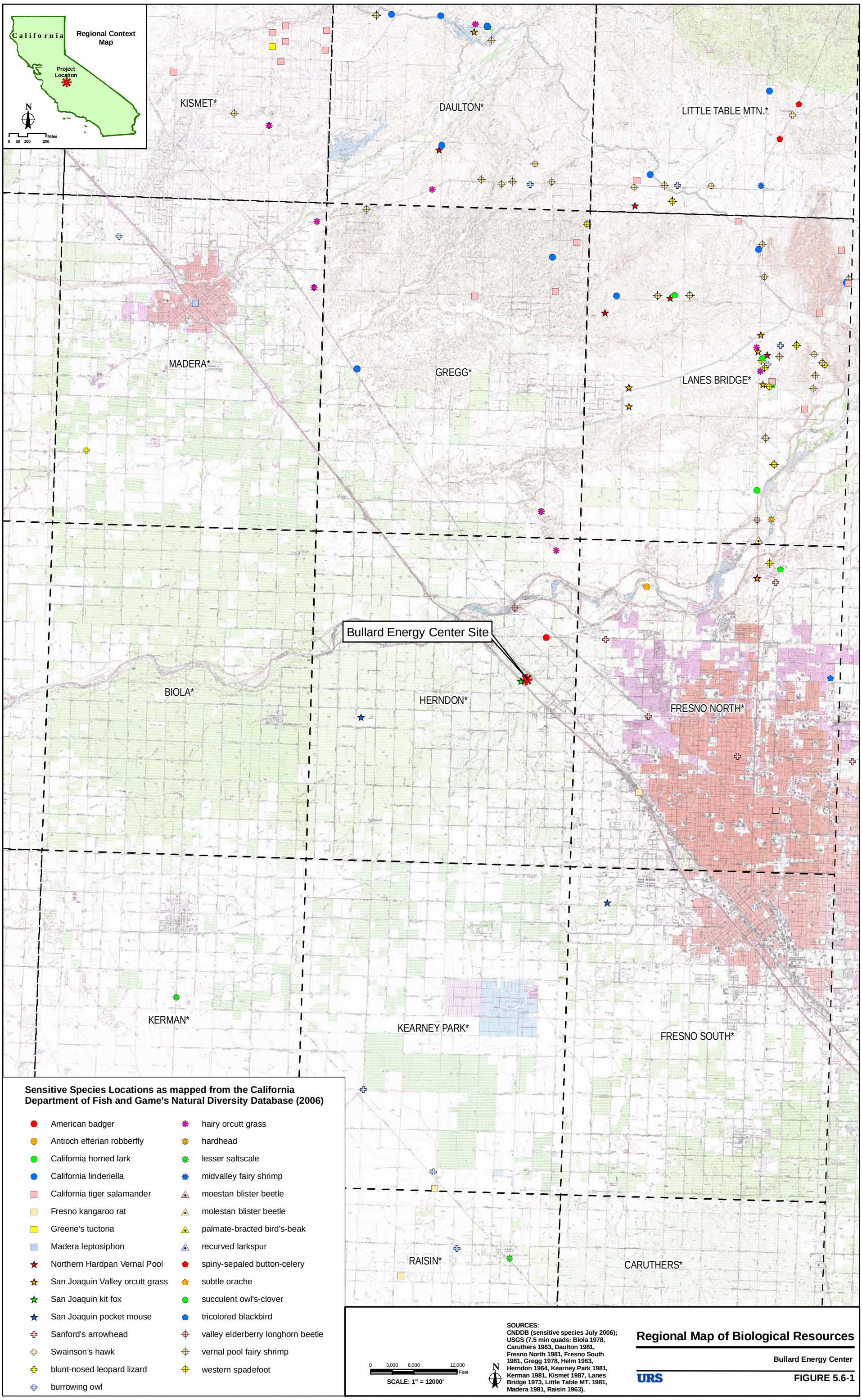
DATA ADEQUACY WORKSHEET

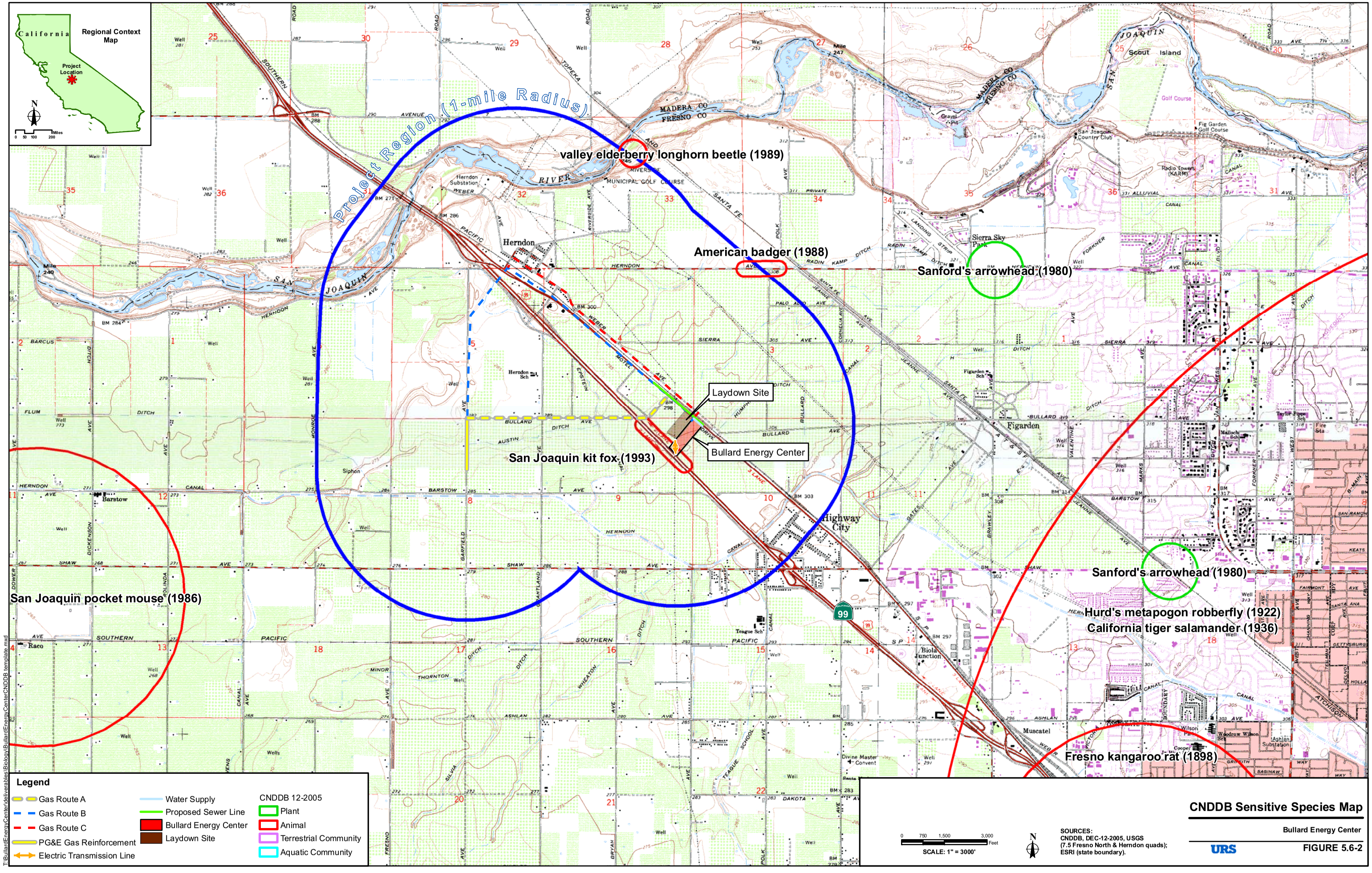
Revision No. ____ Date ____

Technical Area: **Biological Resources** Project: ____ Technical Staff: ____

Project Manager: ____ Docket: ____ Technical Senior: ____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	5.6.5.2 5.6.5.3		
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	5.6.5.4		
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	5.6.5.5		


California
Regional Context Map
Project Location
N
0 50 100 200 Miles
KISMET*
DAULTON*
LITTLE TABLE MTN.*
MADERA*
GREGG*
LANES BRIDGE*
Bullard Energy Center Site
BIOLA*
HERNDON*
FRESNO NORTH*
KERMAN*
KEARNEY PARK*
FRESNO SOUTH*
RAISIN*
CARUTHERS*
Sensitive Species Locations as mapped from the California Department of Fish and Game's Natural Diversity Database (2006)
American badger
Antioch efferian robberfly
California horned lark
California lindiella
California tiger salamander
Fresno kangaroo rat
Greene's tuctoria
Madera leptosiphon
Northern Hardpan Vernal Pool
San Joaquin Valley orcutt grass
San Joaquin kit fox
San Joaquin pocket mouse
Sanford's arrowhead
Swainson's hawk
blunt-nosed leopard lizard
burrowing owl
hairy orcutt grass
hardhead
lesser saltscale
midvalley fairy shrimp
moestan blister beetle
molestan blister beetle
palmate-bracted bird's-beak
recurved larkspur
spiny-sepaled button-celery
subtle orache
succulent owl's-clover
tricolored blackbird
valley elderberry longhorn beetle
vernal pool fairy shrimp
western spadefoot
0 3,000 6,000 12,000 Feet
SCALE: 1" = 12000'
N
SOURCES:
CNDDB (sensitive species July 2006);
USGS (7.5 min quads: Biola 1978, Caruthers 1963, Daulton 1981, Fresno North 1981, Fresno South 1981, Gregg 1978, Helm 1963, Herndon 1964, Kearney Park 1981, Kerman 1981, Kismet 1987, Lanes Bridge 1973, Little Table MT. 1981, Madera 1981, Raisin 1963).
Regional Map of Biological Resources
Bullard Energy Center
URS
FIGURE 5.6-1
G:\gis\projects\157\2890690\5\mxd\bullard_biology_regional_map_of_biological_resources.mxd


California
Regional Context Map
Project Location
N
0 50 100 200 Miles
Project Region (1-mile Radius)
valley elderberry longhorn beetle (1989)
American badger (1988)
Sanford's arrowhead (1980)
Laydown Site
Bullard Energy Center
San Joaquin kit fox (1993)
San Joaquin pocket mouse (1986)
Sanford's arrowhead (1980)
Hurd's metapogon robberfly (1922)
California tiger salamander (1936)
Fresno kangaroo rat (1898)
Herndon
Figarden
Highway City
Biola Junction
Muscatel
Scout Island
Legend
Gas Route A
Gas Route B
Gas Route C
PG&E Gas Reinforcement
Electric Transmission Line
Water Supply
Proposed Sewer Line
Bullard Energy Center
Laydown Site
CNDDB 12-2005
Plant
Animal
Terrestrial Community
Aquatic Community
0 750 1,500 3,000 Feet
SCALE: 1" = 3000'
N
SOURCES:
CNDDB, DEC-12-2005, USGS
(7.5 Fresno North & Herndon quads);
ESRI (state boundary).
CNDDB Sensitive Species Map
Bullard Energy Center
URS
FIGURE 5.6-2
T:\BullardEnergyCenter\deliverables\Biology\BullardEnergyCenterCNDDB_template.mxd