7.2 BIOLOGICAL RESOURCES

7.2 BIOLOGICAL RESOURCES

Biological resources potentially affected by the proposed San Gabriel Generating Station (SGGS) project, including wetlands, vegetation, and wildlife, are described in Section 7.2.1. Sections 7.2.2 through 7.2.4 describe the expected project-related impacts to biological resources and measures proposed to mitigate or compensate for those impacts. Laws, ordinances, regulations, and standards (LORS) for protection of biological resources are provided in Section 7.2.5. The other sections describe agency contacts made during preparation of this section and permits associated with biological resources that will be obtained prior to project construction. Through agency consultations, project modifications, and appropriate mitigation measures, the SGGS will conform to all applicable LORS for protection of biological resources.

The biological resources evaluation for the proposed project includes the 17-acre SGGS site which includes 16.2 acres on the existing 60-acre Etiwanda Generating Station (EGS) property and 0.8 acre on land currently owned by Inland Empire Utility Agency, a 530-foot connection to an existing natural gas pipeline of which approximately 200 feet is offsite, construction of an approximately 3,120-foot-long temporary access road, temporary construction laydown areas, an offsite construction laydown area, new access bridge over the Chadwick Channel, and connections to the existing infrastructure of the EGS. These features are shown on Figure 7.2-1, which shows the biological resources study area.

The impact assessment for biological resources included informal consultation with resource management agencies, literature review, and field surveys. Biological resource field surveys were conducted on the dates shown in Table 7.2-1. Formal consultation with the resource management agencies is being initiated concurrent with more detailed delineation and survey efforts.

Table 7.2-1
Biological Resources Field Surveys

Resource	Field Surveys Completed	Conducted by URS Biologists(s)
General biology	Habitat assessment, small mammal evaluation, general reconnaissance conducted of SGGS site on April 28, 2005.	Lincoln Hulse, David Kisner
General biology	Habitat assessment, small mammal evaluation, general reconnaissance conducted of proposed offsite construction laydown area and temporary access road on February 16, 2007.	Lincoln Hulse, Wayne Vogler
Potential jurisdictional wetlands	Additional site review conducted on February 27, 2007.	Wayne Vogler
Onsite laydown area assessment	Habitat assessment, general reconnaissance conducted on February 27, 2007.	Wayne Vogler
General biology	General reconnaissance conducted of laydown/contractor parking area on April 3, 2007.	David Kisner, Wayne Vogler

A list of plant and animal species observed during these field surveys is provided in Tables 7.2-2 and 7.2-3.

Table 7.2-2
Plant Species Observed in the Study Area

Scientific Name	Common Name	Native/ Exotic	Wetland	Non-Native Grassland	Riversidean Sage Scrub	Disturbed
Atriplex semibaccata	Australian saltbush	E		X		X
Avena barbata	wild oat	E		X		
Brassica nigra	black mustard	E		X		X
Bromus diandrus	ripgut brome	E		X		X
Bromus madritensis ssp. *rubens*	ripgut brome	E		X		X
Centaurea melitensis	tocalote	E		X		X
Croton californicus	California croton	N		X	X	X
Datura wrightii	Jimson weed	E		X		X
Encelia californica	California brittlebrush	N		X		X
Eriogonum fasciculatum var. *foliosum*	California buckwheat	N		X	X	
Erodium cicutarium	red-stemmed filaree	E		X		X
Hirshfeldia incana	short-podded mustard	E	X	X	X	X
Lepidospartum squamatum	scalebroom	N		X	X	
Marrubium vulgare	horehound	E		X		X
Salix exigua	narrowleaf willow	N	X			X
Salsola tragus	Russian thistle	E		X		X
Sambucus mexicana	blue elderberry	N		X	X	
Vulpia myuros	fescue	E		X		
Heterotheca grandiflora	telegraph weed	N		X	X	X

Table 7.2-3
Wildlife Species Observed in the Study Area

Scientific Name	Common Name	Status[1]
Birds		
Zenaida macroura	mourning dove	
Athene cunicularia	burrowing owl[2]	CSC (nesting)/FSC (nesting)
Calypte anna	Anna's hummingbird	
Sayornis saya	Say's phoebe	
Tyrannus vociferans	Cassin's kingbird	
Tyrannus verticalis	western kingbird	
Lanius ludovicianus	loggerhead shrike	CSC (nesting)/FSC (breeding)
Sturnus vulgaris	European starling	
Polioptila caerulea	blue-grey gnatcatcher	
Hirundo rustica	barn swallow	
Carpodacus mexicanus	house finch	
Zonotrichia leucophrys	white-crowned sparrow	
Pipilo crissalis	California towhee	
Icterus bullockii	Bullock's oriole	
Vermivora celata	orange-rumped warbler	
Dendroica coronata	yellow-rumped warbler	
Agelaius phoeniceus	red-winged black bird	
Sturnella neglecta	western meadowlark	
Reptiles		
Sceloporus occidentalis	fence lizard	
Cnemidophorous tigris	California whiptail	
Mammals		
Canis latrans	Coyote[2]	
Heteromyidae	pocket mice, and kangaroo rats[2]	
Lepus californicus	black-tailed jack rabbit	CSC/IUCN – Lowest Category
Sylvilagus bachmani	brush rabbit	

[1] CSC = California species of concern; FSC = federal species of concern; IUCN = International Union for Conservation for Nature and Natural Resources
[2] Presence of these species confirmed based on recent evidence (scat, white wash, burrows, etc.)

7.2.1 Affected Environment

The proposed SGGS would be located in the southwestern portion of the City of Rancho Cucamonga, San Bernardino County. The surrounding area is developed by heavy industry interspersed by vacant lots of former vineyards. The site is approximately 2.8 miles north of Interstate 10 (I-10) and 1 mile east of Interstate 15 (I-15). This general region of San Bernardino County is experiencing an increase of residential, retail, and light commercial development.

The east-west trending San Gabriel Mountains lie approximately 6 miles north of the proposed project site (DeLorme, 1986). Several forest and wilderness areas divide the mountain range. The Angeles National Forest lies over 9 miles to the northwest. The Cucamonga Experimental Forest is 9 miles northwest. Between the Angeles and San Bernardino National Forests is the Cucamonga Wilderness, which is 6 miles northwest of the site. The San Bernardino National Forest is 6 miles north of the site.

Etiwanda Wash runs north-south about 600 feet east of the SGGS. The Etiwanda Wash is an unlined dry wash originating from the base of the San Gabriel Mountains. The wash combines with Day Creek and terminates to the south in a water retention basin. Near the study area, the wash is shallow and well defined only at road crossings or other interactions with infrastructure. An electrical transmission line runs alongside the wash along Etiwanda Avenue between Arrow Highway and 4th Street.

Day Creek runs north-south approximately 300 feet west of the offsite construction laydown area and 2,250 feet west of the SGGS. Day Creek is a concrete-lined channel that collects several drainages at the base of the San Gabriel Mountains and transfers surface water runoff to a water retention basin at its southern terminus. The concrete channel is approximately 8 feet deep and 60 feet wide in proximity to the offsite construction laydown area; a 6-foot-tall chain-link fence runs along the top of the channel.

Lytle Creek originates in the Cajon Pass valley and flows northwest-southeast approximately 6 miles north of the proposed project site. This creek has a native soil bottom with stabilized banks in the vicinity of the site. Intermittent flows can occur late into the year.

Non-native grasslands typically occur in upland areas with deep soils of relatively flat terrain or gradual slopes below 3,000 feet in elevation. It is represented by a dense to sparse cover of annual grasses and is often associated with numerous species of both native and non-native forbs. The floristic diversity is affected by land use activity, such as grazing, fire, or other mechanical disturbances. This community is often associated with sage scrub communities, representing the understory in areas of open shrub canopy. Within the offsite construction laydown area, this community was dominated by non-native grasses, such as wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), and fescue (*Vulpia myuros*). Other non-native species observed includes tocalote, short-podded mustard (*Hirshfeldia incana*), horehound (*Marrubium vulgare*), Russian thistle (*Salsola tragus*), and red-stemmed filaree (*Erodium cicutarium*).

Disturbed areas are generally devoid of vegetation due to recent mechanical clearing activities or off-highway vehicle activities. The small amount of vegetation that has begun to reclaim the soil is dominated by non-native, weedy species that are adapted to frequent disturbance. Many of the characteristic species of this disturbed habitat are also indicator species of non-native grasslands, but disturbed areas tend to be more dominated by forbs than grasses. Such areas found within the offsite construction laydown area were off-highway vehicles (OHV) trails, cleared land, and dirt access roads. Disturbance-tolerant vegetation identified on the sites included Russian thistle, horehound, Australian saltbush, and Jimson weed (*Datura wrightii*).

In addition, common wildlife species observed during the survey included, Say's phoebe (*Sayornis saya*), western meadowlark (*Sturnella neglecta*), Anna's hummingbird (*Calypte anna*), house finch (*Carpodacus mexicanus*), and white-crowned sparrow (*Zonotrichia leucophrys*). Some marginal habitat was observed

that may support special-status species including Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) and San Bernardino kangaroo rat (*Dipodomys merriami parvus*).

7.2.1.1 Locations within San Gabriel Generating Station

The SGGS has been operating as an electric generating station since 1952. The facility is currently composed of four conventional gas-fired electric steam generating units (Units 1 through 4) and one set of peaking gas-fired simple cycle combustion turbine generation units (Unit 5). Units 1, 2, and 5 were retired in December 2003. The proposed project will be constructed in the area previously occupied by the Units 1 and 2 former cooling towers. The existing Units 1 and 2 cooling towers will be demolished prior to the start of construction of the proposed project. The Applicant plans to demolish the cooling towers in 2008 due to the maintenance costs and potential safety concerns with these unused structures.

The proposed (combined cycle) plant will use approximately 17 acres, most of which is within the footprint of the area previously occupied by the Units 1 and 2 former cooling towers. The remainder of the EGS facility, including Units 3 and 4, will remain unchanged. The location of the proposed generating station, associated linear facilities, and offsite worker parking and equipment staging areas are shown in Figure 7.2-2.

The EGS is developed with access roads, tanks, cooling towers, cooling fluid channels, piping, transmission lines, warehousing, maintenance and operation areas, administrative offices, retention basins, a drainage channel, and gravel pads.

Nine construction equipment staging and laydown areas have been identified within the EGS property (Figure 7.2-2). Most areas are vacant pads with gravel/road base surfacing and lacking vegetation. Patches of filaree, an invasive exotic plant, were observed along the pad edges. No burrow systems were observed within any of the pads. A portion of laydown Area 9 is a former retention basin constructed within the native soils and a geo-membrane liner. Water depth at the time of the survey was approximately 12 to 18 inches—generally the basin is dry (Darnell, 2007). A small patch of dead cattails (*Typha latifolia*) was found at the northeast corner of the basin bottom. The basin and cattails patch do not appear to provide habitat except as possible bird and bat foraging for flying insects.

Chadwick Channel is a dirt drainage ditch transecting the EGS from the north (near Units 3 and 4 cooling towers) to the south property line before continuing onto the SCE property. The channel terminates at a retention/energy dissipation basin north of 6th Avenue before entering the regional municipality storm collection system. Through the EGS, the channel is unvegetated and approximately 6 feet deep and 60 feet wide at the channel bottom. Small crushed rock (less than 3 inch diameter) is spread along the bank slopes.

The new bridge across Chadwick Channel will be constructed where the main entrance road meets the channel and will be the main access way into the proposed new power plant. The bridge will be 30 feet wide by 100 feet long and constructed of reinforced concrete. Pylon support structures will be driven into the bank of the channel with riprap erosion protection placed along the channel slopes near the support pillars. The channel area of the bridge construction is native soils with some small rock covering and no vegetation.

The natural gas pipeline extension will occur within existing asphalt-paved roadways within EGS and the abutting Etiwanda Avenue. New infrastructure, pipes, interconnections, and transmission line to SCE's switchyard are within roads or previously developed areas.

7.2.1.2 Offsite Construction Laydown Area

The offsite construction laydown area is vacant land with off-highway vehicle (OHV) trails and patches of exotic and native vegetation. The vegetation is dominated by weed species such as mustards (*Brassica nigra* and *Hirschfeldia incana*), annual grasses (*Bromus diandrus* and *B. madritensis* ssp. *rubens*) with isolated patches of native shrubs such as California buckwheat (*Eriogonum fasiculatum* var. *rubens*). A small "wash" or drainage feature crosses from the northeast to the southern portion of this area; vegetation associated with the drainage includes narrowleaf willow (*Salix exigua*). This feature may be a jurisdictional waters of the United States. A formal delineation effort to establish the regulatory limits and map the waters boundary will be performed.

An area of potential Delhi sands, fine sands, and low dune hummocks was observed in the northwestern region of the proposed parking area (see Figure 7.2-3). The vegetative cover ranged 5 to 40 percent total absolute cover. California buckwheat, deerweed (*Lotus scoparius*), and telegraph weed (*Heterotheca grandiflora*) represented less than 1 percent cover throughout the area. Most of the sands are dominated by field mustard with areas of lower ground cover due to OHV usage and disturbance.

7.2.1.3 SCE Property

The proposed temporary access road would be located at the western edge of SCE property adjacent to the proposed project site, along the north-south Burlington Northern Santa Fe (BNSF) railroad spur. Exotic mustards and filaree dominate this area. The location of the proposed temporary access road is mowed with some tillage to maintain low vegetative cover.

7.2.1.4 Wetlands

Wetland determinations were not conducted. In the absence of human disturbance or unusual circumstances, an area must possess indicators (characteristics) of three parameters to be considered a jurisdictional wetland. This method is referred to as the three-parameter approach. The three parameters are (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology.

Seasonal Drainages/Non-Wetland Waters of the United States

A small drainage feature crosses diagonally across the proposed offsite construction laydown area from the northeastern corner to the south. The feature ranges from 6 to 10 feet across to 20 to 23 feet in the southern areas. A patch of narrowleaf willows is adjacent to the drainage feature near where it enters the property. Several more willows were observed within the channel where it widens in the southern portions of the property.

Chadwick Channel transects the EGS from the north to the south. This unvegetated channel is constructed of native soils with small crushed rock and gravel along the banks as shoring. The channel bottom is approximately 60 feet wide and approximately 6 feet deep. Surface water flows are intermittent and usually follow a rain event or release of water from upstream sources. The native soil channel bottom is relatively flat. An existing "Arizona" crossing is located near laydown Areas 5 and 6. The crossing is an asphalt-paved road that traverses down shallow bank slopes and across the channel bottom. Rock riprap lines the channel banks downstream of the crossing. Pedestrian and light vehicle bridges span the channel, as do pipe runs.

7.2.1.5 Special-Status Species

The designation of special-status species includes all federal- and state-listed species and species proposed for listing under the federal and California Endangered Species Acts (ESA), federal species of concern, state species of special concern, and plant species designated as rare, threatened, or endangered

(List 1B or List 2) by the California Native Plant Society (CNPS). Special-status species with the potential to occur in the project vicinity were identified from the following sources:

- U.S. Fish and Wildlife Service (USFWS) species lists provided for each 7.5 minute U.S. Geological Survey (USGS) quadrangle in the study area (called the Guasti quadrangle);
- A search of all species occurrences in the California Natural Diversity Database (CNDDB) within a 5-mile radius of the proposed plant site (CDFG, 2007; Figures 7.2-4 and 7.2-5);
- The CNPS electronic inventory (CNPS, 2007)

Table 7.2-4 lists all the species with state or federal listing status that have some potential to occur in the project vicinity. Table 7.2-5 lists all other special-status species with potential to occur in the project vicinity. These tables summarize the preferred habitats for species with potential to occur in the vicinity of the study area. Species with no suitable habitat in the vicinity of the proposed project site are not discussed further in this document.

Threatened or Endangered Plant Species

Based on a review of the CNDDB and CNPS RareFind databases, no federally or state designated plant species are found within the Guasti quadrangle.

Other Special-Status Plant Species

San Bernardino Aster

San Bernardino aster (*Symhyotrichum defoliatum*) is a rhizomatous herb that is listed by the CNPS as a California endemic that is fairly endangered within the state (CNPS List 1B.2) (CNPS, 2007). The San Bernardino aster is not designated as threatened or endangered by federal or state resource agencies. A member of the *Asteraceae* family, it is found in cismontane woodlands, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grasslands. Its elevation range is large, from 7 to 6,692 feet. It blooms from July through November. The CNPS Inventory of Rare and Endangered Plants lists it as being found within the Guasti quadrangle. No San Bernardino asters were observed during site reconnaissance surveys. Species-specific surveys have not been conducted.

Prostrate Navarretia

Prostrate navarretia (*Navarretia prostrata*) is an annual herb listed by the CNPS as a California endemic that is seriously endangered within the state (CNPS List 1B.1) (CNPS, 2007). The prostrate navarretia is not designated as threatened or endangered by federal or state resource agencies. A member of the *Polemoniaceae* family, it is found in coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pools. Its elevation range is from 49 to 2,296 feet. It blooms from April through July. The CNPS Inventory of Rare and Endangered Plants lists the prostrate navarretia as being found within the Guasti quadrangle. No prostrate navarretia were observed during site reconnaissance surveys. Species-specific surveys have not been conducted.

California Sawgrass

California sawgrass (*Cladium californicum*) is a rhizomatous herb listed by the CNPS as being fairly endangered in California but more common elsewhere (CNPS List 2.2) (CNPS, 2007). California

Table 7.2-4
Threatened and Endangered Species That May Occur Within a 5-Mile (Minimum) Radius of the Project Area

Scientific Name Common Name	Federal Status[a]	State Status[b]	Preferred Habitat	Likelihood That Species May Occur in Project Area
Insects				
Rhaphiomidas terminatus abdominalis Delhi Sands flower-loving fly	E		Requires fine, sandy soils with sparse vegetation; associated with deerweed, California buckwheat, and telegraph weed. Found only in Delhi Sands formation in southwestern San Bernardino and northwestern Riverside Counties.	Moderate potential in sandy dune hummocks found in the northwest portion of the laydown/contractor parking area.
Mammals				
Dipodomys merriami parvus San Bernardino kangaroo rat	E		Prefers sandy, loam habitats typical of alluvial fans and floodplains. Associated with alluvial sage scrub and chapparal habitats.	Low potential to occur in northeastern portion of the laydown/contractor parking area.
Dipomys stephensi Stephen's kangaroo rat	E	T		Not likely to occur; no suitable habitat
Birds				
Empidonax trailii extimus (nesting) southwestern willow flycatcher	E		Nest locations found in riparian vegetation with complex structure and large patch size	Not likely to occur; no suitable habitat
Polioptila californica californica coastal California gnatcatcher	T		Requires at least 2 acres of contiguous California coastal sage scrub habitat to breed.	Not likely to occur; no suitable habitat
Vireo bellii pusillus (nesting) least Bell's vireo	E	E	Nest locations found in willow riparian scrub in conjunction with other established riparian areas	Low potential to occur in willow riparian areas

Source: Based on lists generated by the USFWS, CNDDB, CNPS Database, and species known to occur in San Bernardino and Riverside Counties.

Notes:
[a] Federal and California Endangered Species Act
E-Endangered
T-Threatened
C-Candidate for listing status
P-Proposed for listing status
D-Delisted
[b] Status
SC-United States Fish and Wildlife Service Species of Special Concern
SSC-California Department of Fish and Game Species of Special Concern
P, FP (Protected and Fully Protected)-Species which cannot be taken or possessed without a permit from the Fish and Game Commission
and/or Department of Fish and Game
HP-High Priority species are designated by the Western Bat Working Group as a species imperiled, or at high risk of imperilment

Table 7.2-5
Special-Status Species That May Occur Within a 5-Mile (Minimum) Radius of the Project Area

Scientific Name Common Name	Status[1]	CNPS[2]	Preferred Habitat	Likelihood That Species May Occur in Project Area
Plants				
Calochortus plummerae Plummer's mariposa lily		1B	Found in dry, rocky chaparral and yellow pine forests.	Not likely to occur; no suitable habitat present and heavy disturbance of areas.
Horkelia cuneata ssp *puberula* mesa horkelia		1B	Found in dry, sandy, coastal chaparral.	Not likely to occur; no suitable habitat present and heavy disturbance of areas.
Navarretia prostrata prostrate navarretia		1B	Found in alkaline floodplains and vernal pools.	Not likely to occur; no suitable habitat present and heavy disturbance of areas.
Symphyotrichum defoliatum San Bernardino aster		1B	Found in coastal scrub, mountain woodlands and coniferous forests, marshes and bogs, and valley and foothill grasslands.	Not likely to occur; no suitable habitat present and heavy disturbance of areas.
Birds				
Agelaius tricolor tricolored blackbird	CSC		Nest sites found in dense stands of cattails, bulrushes, willows, mustard, and nettles. Open water within 500 meters requirement for colony settlement.	Not likely to occur; no suitable habitat present and heavy disturbance of areas.
Athene cunicularia burrowing owl	FSC, CSC		Open areas with mammal burrows.	Moderate potential to occur in laydown areas
Mammals				
Chaetodipus fallax fallax northwestern San Diego pocket mouse	CSC		Found in coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. Generally exhibits a strong microhabitat affinity to moderately gravelly and rocky substrates.	Not likely to occur; no suitable habitat present and heavy disturbance of areas. SGGS is beyond the edge of the known habitat range.
Eumops perotis western mastiff bat	CSC		Generally found in broad open areas.	Moderate potential for roost sites to occur on structures within EGS.
Lepus californicus bennettii San Diego black-tailed jackrabbit	CSC		Primarily found in arid regions supporting short grass habitats. Found in coastal regions of Southern California.	Not likely to occur; outside of known species range.
Neotoma lepida intermiedia San Diego desert woodrat	CSC		Found in desert shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth	Not likely to occur; no suitable habitat present and heavy disturbance of areas.
Perognathus longimembris brevinasus Los Angeles pocket mouse	CSC		Found in lower elevation grasslands and coastal sage scrub	Moderate potential to occur in off-site laydown area.

Table 7.2-5
Special-Status Species That May Occur Within a 5-Mile (Minimum) Radius of the Project Area

Scientific Name Common Name	Status[1]	CNPS[2]	Preferred Habitat	Likelihood That Species May Occur in Project Area
Reptiles				
Phrynosoma coronatum coast (San Diego) horned lizard	CSC		Common in lowlands along sandy washes	Low potential to occur in off-site laydown area.
Anniella pulchra pulchra silvery legless lizard	CSC		Requires loose, moist soils, typically under overhanging shrub branches	Moderate potential to occur in off-site laydown area.

Source: Based on lists generated by the USFWS, CNDDB, CNPS Database, and species known to occur in San Bernardino and Riverside Counties.

Notes:
[1] Status
SC-United States Fish and Wildlife Service Species of Special Concern
SSC-California Department of Fish and Game Species of Special Concern
P, FP (Protected and Fully Protected)-Species which cannot be taken or possessed without a permit from the Fish and Game Commission
and/or Department of Fish and Game
HP-High Priority species are designated by the Western Bat Working Group as a species imperiled, or at high risk of imperilment
[2] California Native Plant Society (CNPS)
1A-Plant species that are presumed extinct in California
1B-Plant species that are rare, threatened, or endangered in California and elsewhere
2-Plant species that are rare, threatened, or endangered in California and elsewhere
3-Plant species about which we need more information (a review list)
4-Plant species of limited distribution (a watch list)

sawgrass is not designated as threatened or endangered by federal or state resource agencies. A member of the *Cyperaceae* family, it is found in meadows and seeps, and marshes and swamps. Its elevation range is from 197 to 1,969 feet. It blooms from June through September. The CNPS Inventory of Rare and Endangered Plants lists it as being found within the Guasti quadrangle. No California sawgrass were observed during site reconnaissance surveys. No individuals are expected to be affected by site activities due to the lack of suitable habitat for California sawgrass.

Riversidean Alluvial Sage Scrub Vegetation Series

Riversidean alluvial fan scrub vegetation communities occur on alluvial outwash fans along the base of the San Gabriel, San Bernardino, and San Jacinto mountains. Alluvial scrub communities are generally associated with infrequently scoured areas on floodplains and outwash fans in the Transverse and Peninsular ranges. It is considered to be a rare or threatened plant community that is highly fragmented due to urbanization and the extensive alteration of natural stream hydrology in Southern California (Smith, 1980). These plant communities are composed of a variety of evergreen woody and drought-deciduous shrubs, with a significant component of larger, evergreen shrubs typically found in chaparral (Kirkpatrick and Hutchinson, 1977; Smith, 1980) adapted to survival in the presence of intense periodic flooding. Scalebroom (*Lepidospartum squamatum*) is considered to be an indicator species of alluvial scrubs, and is usually described as a dominant or subdominant shrub in alluvial community descriptions, including the Scalebroom Series of Sawyer and Keeler-Wolf (1995) and the Lepidospartum-Eriodictyon-Yucca association described by Kirkpatrick and Hutchinson (1977). Scalebroom was observed on the proposed offsite construction laydown area site during the survey.

Threatened and Endangered Wildlife Species

Habitat in the study area and vicinity was evaluated on February 16, 2007, for its potential to support special-status wildlife species. Threatened and endangered wildlife species with potential to occur in the study area are discussed below.

Delhi Sands Flower-Loving Fly

The proposed project site is approximately 0.25 mile north of mapped Delhi Sands soils; potential home of the Delhi Sands flower-loving fly. The Delhi Sands flower-loving fly (DSF fly) is federally protected as endangered (58 Federal Register 49881). Found only in Delhi series sands, this species only occurs at remnants of the Colton dunes in San Bernardino and Riverside Counties, California. The remaining available habitat for the DSF fly is threatened by urban development, agricultural conversion, invasion of exotic species, trash dumping, and cow manure (USFWS, 1997).

The DSF fly is a large insect (approximately 1 inch in length) with a long tubular proboscis it uses for extracting nectar from flowers. This insect is a strong, fast flier and is capable of stationary, hovering flight. The only other subspecies of the *Rhaphiomidas terminatus*, the El Segundo flower-loving fly (*R. terminatus terminatus*) is believed to be extinct (USFWS, 1997), making the DSF fly the last remaining of its species.

The most characteristic feature of the DSF fly habitat is the fine sandy soils with sparse native vegetation. Vegetation identified as indicators of the fly's presence are California buckwheat, California croton, and telegraph weed, with vegetative cover typically ranging between 10 to 20 percent and definitely under 50 percent cover. Adults do not appear to use areas of dense vegetation of either buckwheat or annual grasses over 50 percent vegetative cover. Their flight season extends from early August to early September; adults are most active during the warmest parts of the day, typically between 10:00 a.m. and 2:00 p.m. DSF flies typically do not fly during windy or breezy conditions or in overcast or rainy conditions.

Four seasons of detailed surveys for the presence of DSF flies were conducted at the SCE property between the EGS and the offsite construction laydown area. As of September 2006, there was no indication of the presence of DSF fly at the property despite some promising habitat features (BioResource Consultants, 2006).

The closest mapped population of DSF is over 4 miles away to the southeast of the project site. The site was mapped in 2000. Based on the species-specific surveys and known extant populations, it is doubtful that the property supports a population of DSF fly.

Coastal California Gnatcatcher

The threatened coastal California gnatcatcher (*Polioptila californica*) may occur on coastal or alluvial fan sage scrub habitat in the area. The suitable habitat (sage scrub vegetation) found at the proposed project site is not large enough (less than 2 acres in size) to support a breeding or foraging population. Coastal California gnatcatcher is not expected to occur at the site except as a passing migrant.

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is federally and state protected as endangered. This subspecies is now a rare, local summer resident below about 2,000 feet elevation in willows and other low, dense valley foothill riparian habitat and lower portions of canyons. The presence of least Bell's vireo is low due to the lack of suitable habitat within the project area.

Southwestern Willow Flycatcher

The federally endangered Southwestern willow flycatcher (*Empidonax traillii extimus*) may occur on riparian habitat in the area. The riparian vegetation within the proposed laydown area could support a migrant flycatcher but is not of large enough size nor quality to support a breeding pair. Migrant flycatchers could forage within the willow thickets but the habitat is very low quality for this species.

San Bernardino Kangaroo Rat

The proposed project site is adjacent to, or partially within, proposed critical habitat (Unit 4) for the endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*), which is federally protected as endangered and is a California species of concern. The San Bernardino kangaroo rat is typically found in Riversidean alluvial fan sage scrub with sandy loam soils. The soil texture is a primary factor of the species' occurrence, as the sandy loam allows for the digging of simple, shallow burrows (McKernan, 1997). Vegetation in these areas is typically alluvial sage scrub or chaparral. The historical range of the San Bernardino kangaroo rat extends from the San Bernardino Valley in San Bernardino County to Menifee Valley in Riverside County (USFWS, 1998; Thelander, 2006). This rat species is primarily nocturnal, with the highest level of activity in the 3 to 4 hours of activity after dusk.

Some alluvial fan sage scrub and sandy soils were observed on the offsite construction laydown area, along with heteromyidae (pocket mice, kangaroo mice, and kangaroo rats) sign (scats, burrows). Therefore, there is a moderate potential for San Bernardino kangaroo rat to occur within the proposed offsite construction laydown area, and small mammal trapping is recommended. The alluvial fan sage scrub appears to be located in an area designated as being excluded from the area of disturbance.

A small mammal trapping effort on the SCE parcel to the south and west of SGGS did not detect San Bernardino kangaroo rat (O'Farrell, 2001). The nearest mapped CNDDB population is over 4 miles away to the north of the project site, and there is a only a small amount (0.15 acre) of low-quality habitat available for this species near the proposed laydown area. All 0.15 acre would be outside of the laydown area. San Bernardino kangaroo rat are not expected to be found at the SGGS project site.

Stephens' Kangaroo Rat

The Stephens' kangaroo rat (*Dipodomys stephensi*) is federally protected as endangered and state protected as threatened. Species-specific surveys have been conducted at abutting parcels to the proposed project site and associated construction areas. No Stephen's kangaroo rats have been mapped within 5 miles of the project site. A small mammal trapping effort on the SCE parcel to the south and west of the EGS did not detect Stephens' kangaroo rat (O'Farrell, 2001).

Other Special-Status Wildlife Species

Special-status wildlife species that are not threatened or endangered, but with potential to occur in the study area, are described below.

Coast (San Diego) Horned Lizard

The coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillei*) is a California candidate species. Occurrences have been recorded approximately 0.5-mile from the proposed project site. The San Diego horned lizard is a federal and California species of concern, and is a California protected species under the Fish and Game code. Common in lowlands along sandy washes where scattered low shrubs provide cover. Other habitat requirements include open areas for basking and patches of fine loose soil. Diet consists primarily of ants and other insect prey. Moderately suitable habitat occurs on the

proposed offsite construction laydown area, the temporary access road, and in the area of the transmission towers.

Burrowing Owl

Burrowing owl (*Athene cunicularia*), which is a federal and California species of concern, may occur on open, dry grassland and desert habitats, and in grass and forb habitats in the study area. Burrowing owls are communal species; typically if one nest burrow is found, more can be found in the surrounding area. Potential habitat occurs in the proposed offsite construction laydown area, temporary access road, and transmission tower locations. Beyond migratory passage, burrowing owl habitat was absent at the proposed project site. Reportedly a burrowing owl burrow was identified on the SCE parcel between the SGGS site and the proposed offsite construction laydown area. A large burrow was observed along the drainage wash channel in the central portion of the proposed offsite construction laydown area. Owl whitewash and bones of small mammals were observed outside of the burrow. Due to recent storm activity, it was difficult to ascertain if the burrow was active this season or past seasons.

Loggerhead Shrike

Breeding populations of loggerhead shrike (*Lanius ludovicianus*) are a federal and California species of concern. This species is found year-round within California in lowlands and foothills throughout, especially in open habitats with scattered shrubs, trees, utility lines, or other perches (Zeiner et al., 1990). Loggerhead shrikes rarely occur in heavily urbanized areas, but are often found in open agricultural areas. Loggerhead shrike may forage in the grasslands of the proposed offsite construction laydown area, temporary access road, and transmission line tower locations. Wintering populations of loggerhead shrikes in California are augmented by the breeding populations of the central U.S. and Canada, which are migratory. Loggerhead shrikes seen in the project vicinity are likely to be wintering individuals that will breed in more suitable areas.

Yellow Warbler

The yellow warbler (*Dendroica petechia*) is a California species of concern. This species is a locally common in Southern California in the breeding season, and is also rare but regular in winter in the south. The yellow warbler breeds in riparian woodlands from coastal and desert lowlands, up to an elevation of 8,000 feet in the Sierra Nevada Mountains. Due to the lack of habitat within the proposed project areas of disturbance, this species is not anticipated to occur at the proposed project site.

Los Angeles Pocket Mouse

Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is a federal and California species of concern. The Los Angeles pocket mouse inhabits lower elevation grasslands and coastal sage scrub vegetation. Its range is within the Los Angeles Basin from Burbank and San Fernando to San Bernardino, and probably as far south as the Hollywood Hills, as well as from the vicinity of Riverside, Hemet, and Aguanga. While the exact habitat requirements are not known for this species, it is believed they inhabit open ground with soils composed of fine sands.

A small mammal trapping effort on the SCE parcel to the south and west of SGGS did result in the trap and release of some Los Angeles pocket mouse (O'Farrell, 2001). One individual was trapped in the middle portion of the SCE parcel, while 16 individuals were trapped in the natural channel of Etiwanda Wash across Etiwanda Avenue immediately east of the EGS. The trapped individuals demonstrated active breeding due to juveniles and pregnant/lactating females.

There is a moderate potential for this species to occur within the proposed offsite construction laydown area.

Bats

The following special-status bats are known to occur in California:

- Pacific western big-eared bat (*Corynorhinus townsendii townsendii*), a federal and California species of concern
- Yuma myotis bat (*Myotis yumanensis*), a federal and California species of concern
- Long-legged myotis bat (*Myotis volans*), a federal species of concern and California proposed species
- Fringed myotis (*Myotis thysanodes*), a federal species of concern and California proposed species
- Long-eared myotis (*Myotis evotis*), a federal species of concern
- Small-footed myotis (*Myotis ciliolabrum*), a federal species of concern
- Hoary bat (*Lasiurus cinereus*), a federal species of concern
- Pallid bat (*Antrozous pallidus*), a California species of concern

These bat species are generally widespread throughout many regions of California. Bats are commonly found in association with open forests and woodlands, where there is often a water source over which to feed. Suitable roosting and nesting areas include caves, mines, tree snags, buildings, and other human-made structures. In California, these species generally mate during the late fall and give birth to their young between early May and the end of July (Jameson and Peeter, 1988). Loss of riparian foraging areas and roosting habitat presents the biggest threat to declining bat populations in the state.

Some of these bat species likely forage over the proposed project area, particularly over wet areas such as canals, vernal pools, and seasonal drainages, but also over grasslands. The study area lacks natural bat roost habitat such as snags, cliffs, or caves.

7.2.2 Environmental Consequences

The analysis of potential project-related impacts to biological resources is based on project activities described in the second paragraph of Section 7.2, as described in more detail in Chapter 2, Facility Description and Location. The proposed project would have significant impact on vegetation and wildlife if it would:

- Cause a fish or wildlife population to drop below self-sustaining levels (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))
- Increase the rate of use of any natural resources (CEQA Guidelines, Appendix I (II.9))
- Deteriorate existing fish or wildlife habitat (CEQA Guidelines, Appendix I (II.5.d))

These criteria have been used to evaluate the proposed project's impact on vegetation and wildlife. Impacts to biological resources are discussed below. Impacts primarily related to construction of the proposed project, or specific to one plant or animals species, are described first under specific resource headings. Impacts primarily related to operation of the proposed power plant, or that would affect a wider group of resources, are described in Section 7.2.2.3.

7.2.2.1 Wetlands and Non-Wetland Waters of the United States

The dry wash/drainage through the proposed offsite construction laydown area is a potentially jurisdictional waters of the United States. The water course is a dry wash conveying water only during events resulting in large amount of surface water runoff. Listed or sensitive species are not directly associated with the conveyance of water through the wash (i.e., potentially occurring special-status species are not fish or amphibians reliant on the watercourses presence). This area could be graded or used as a temporary laydown and staging area for equipment and construction supplies and contractor parking, resulting in fill to a waters of the United States. The loss of waters would not be permanent; the existing water flow regime could be restored following use of the laydown area. Temporary disturbance to this feature would be avoidable if the disturbance area avoids the wash. Placement of fill in waters of the United States is regulated by the United States Army Corps of Engineers (USACE). Temporary placement of the fill would not be a significant impact.

The construction of the access bridge over Chadwick Channel would result in fill of waters of the United States, due to support structures and riprap placed around the bridge abutments. The watercourse is a dry drainage that conveys water only during events that result in large amounts of surface water runoff. Listed or sensitive species are not directly associated with the conveyance of water through the wash (i.e., potentially occurring special-status species are not fish or amphibians reliant on the watercourses presence). The loss of waters would not be permanent but an alteration to the existing bare bank habitat. Disturbance to waters is avoidable if a clear-span bridge design without riprap bank protection is employed.

7.2.2.2 Special-Status Species

Threatened and Endangered Plant Species

No federally or state listed threatened or endangered plant species were identified as potentially occurring at the proposed project site, nor were any threatened or endangered plant species observed during surveys conducted to date.

Other Plant Species

Based on the results of plant surveys conducted in the study area to date, a literature review of observances of these species and impact assessment documents for adjacent projects, prostrate navarretia may be the only special-status plant species that may be present in the study area (proposed offsite construction laydown area). If present, this species may not be detectable until as late as July. Impacts to prostrate navarretia, if present, would be removal due to grading and/or grubbing activities in the laydown area.

Threatened and Endangered Wildlife Species

Delhi Sands Flower-Loving Fly

Approximately 1.5 acres of small dune hummocks of fine grained sands are found on the parcel proposed to include the offsite construction laydown area. Approximately 1.11 acres of these sandy soils would be affected by the proposed offsite construction laydown area. Removal of the Delhi sands dune hummocks would result in a direct loss of DSF fly habitat. The grubbing and removal of native vegetation, particularly California buckwheat, California croton, and telegraph weed, in areas near the Delhi sands would result in an indirect impact to foraging habitat of the DSF fly. Loss of Delhi sands habitat is one factor contributing to the decline of this species. Therefore, this would be a significant impact to the DSF fly.

Due to the high cover of the dune hummocks by invasive, exotic vegetation, the high level of disturbance to the unvegetated areas by OHVs, and the lack of observations of the species at an abutting parcel, it is unlikely that DSF flies are found at the proposed project site.

In order to assess the potential impacts to the DSF fly, a DFL expert will assess the habitat suitability and map the sandy soils. If the habitat is suitable for DSF fly, impacts are expected to be temporary (less than 24-months).

Coastal California Gnatcatcher

Habitat critical or important to this species lifecycle is lacking at the proposed project site. Therefore, impacts to this species are not anticipated.

Least Bell's Vireo

Habitat critical or important to this species lifecycle is lacking at the proposed project site. Therefore impacts to this species are not anticipated.

San Bernardino Kangaroo Rat

San Bernardino kangaroo rat are not expected to be present at or near the proposed project site. The proposed project is not expected to affect this species. The scrub habitat within the proposed offsite construction laydown area will be avoided. To ensure that there will be no impact to this species, protocol trapping will be undertaken by an authorized URS biologist in April 2007. Results of the trapping will be documented and included in future documentation of the project site.

Stephens' Kangaroo Rat

As Stephen's kangaroo rat is not expected to occur at the proposed project site, impacts to this species are not anticipated.

Other Special-Status Wildlife Species

San Diego Horned Lizard

Impacts to this species can be mitigated by the implementation of BIO-9 mitigation measures described in Section 7.2.4.

Burrowing Owl

Direct impacts to burrowing owls could occur during preparation and use of the construction laydown areas. Anecdotal information from SGGS staff indicated an alleged burrowing owl nest on the property adjacent to the proposed offsite construction laydown area. Construction of the proposed project could affect burrowing owl habitat. Use of the proposed offsite construction laydown area and temporary access road areas would result in a temporal disturbance (approximately 17 acres) to foraging and nesting habitat, if this species is present. Destruction or degradation of burrows, or destruction or degradation of foraging habitat within 350 feet of occupied burrows are considered impacts to this species (CDFG, 1995).

Indirect impacts to nesting and foraging burrowing owls would extend 250 feet into suitable habitat from the limits of construction during the breeding season (February 1 through August 15) and 160 feet during the wintering season as outlined in CDFG (1995) guidelines. Noise and visual disturbance from construction of the proposed power plant may displace burrowing owls nesting within these distances from the site. Operation of the power plant would not affect burrowing owl breeding and foraging significantly more than the current operation of the SGGS.

Other Bird Species of Concern

The remaining special-status bird species (loggerhead shrike, yellow warbler) may be less-than-significantly affected by the loss of fragmented coastal scrub and ruderal habitat that would temporarily be affected by the construction of the proposed project. Long-term impacts would not be more than the current operation of the EGS.

Los Angeles Pocket Mouse

If any Los Angeles pocket mice are determined to be present, or there is “take” of individuals during the trapping survey, impacts to this species would occur through the removal of their burrows, or significant alteration to the sage scrub habitat.

Bats

Project activities as described in Chapter 2, Facility Description and Location, will not have an impact to bat roosts or foraging habitat. The removal of the retention basin in onsite laydown Area 9 would have little impact to bat foraging because this area contains water for short periods of time and does not develop extensive flying insect populations.

7.2.2.3 Other/Operational Effects of the Proposed Project on Biological Resources

Operation of the proposed power plant, as well as some plant features not yet addressed, would have some additional effects on biological resources. These impacts are described below.

Noise

The proposed power plant would produce some noise during both construction and operation, as described in Section 7.5, Noise. The plant would be constructed within the existing SGGS, which is currently operational. Much of the land surrounding the plant is developed by heavy industrial uses. Noise may cause some slight disturbance of wildlife using adjacent areas. However, wildlife in the adjacent areas has likely become accustomed to habitual noise associated with plant operation. Impacts would be less than significant.

Electrocution Hazard

Additional transmission lines on the SGGS site would increase collision and electrocution hazard for raptors. Although the potential for electrocution exists 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 electrical conductors or a live conductor and a grounded surface), electrocution is unlikely to occur on these proposed transmission connector lines. The conductor distance between conductors or between conductors and the ground wire is such that it is unlikely a bird could complete a circuit and be electrocuted. The transmission lines to be constructed for the proposed project would have a minimum distance greater than the wingspan of any birds in the area. Electrocution is a hazard on small distribution lines where the lower voltages allow less separation between conductors. Therefore, no significant impacts are expected with regard to bird electrocutions at transmission line routes.

Collision Hazard

The proposed transmission line interconnection addressed previously with respect to electrocution hazard could also pose some collision hazard to avian species that may simply fly into the lines. Less than 0.5 mile of new transmission lines would be installed, and they would be installed within an area with numerous existing overhead lines. The new segment would be located in an area that does not bisect avian usage areas (nesting, forage, loafing). The significance of this impact has not yet been determined. The determination will be made following discussion with the USFWS.

The two 150.5-foot-high CTG/HRSG stacks would also increase collision potential for avian species. Some migrating bird species that fly at night are guided in part by constellations and can become confused by brightly lit tall structures. Fog or low cloud cover can further add to collision potential, although fog does not occur with much frequency in the study area. The stacks would not be adjacent to aquatic habitat that attract large numbers of migratory birds. Although the number of potential collisions cannot be quantified, collision would likely occur relatively infrequently. This impact would be less than significant.

Air Pollutant Emissions

Air quality in the region is generally impacted by regional development and changes to air quality due to the proposed project are not expected to significantly impact biological resources. The air quality modeling analyses presented in Chapter 7.1, Air Quality show that the Project, with the planned emission control systems, will neither cause an exceedance of the California and National Ambient Air Quality Standards (CAAQS and NAAQS), nor contribute significantly to an existing exceedance. Additional modeling results demonstrate that the Project will not cause an incremental impact above the significant impact thresholds under the federal Prevention of Significant Deterioration (PSD) program. In addition, no significant impacts to visibility, terrestrial or aquatic resources in Class I areas is predicted.

7.2.3 Cumulative Impacts

Past and current development in the project vicinity has resulted in cumulatively significant impacts on biological resources, including special-status species and their habitats. Relevant future projects identified in Section 7.4.3 could, unless fully mitigated, further contribute to cumulative impacts. The proposed project would impact wetlands, and would potentially impact Delhi sands flower-loving fly, burrowing owls, San Bernardino kangaroo rat, and Los Angeles pocket mouse and their habitats. Because mitigation measures identified in Section 7.2.4 would fully mitigate for these impacts, the proposed project's contribution to this impact would not be cumulatively considerable. The proposed project's cumulative impact would therefore be less than significant.

7.2.4 Mitigation Measures

This section discusses mitigation measures proposed by the Applicant that will be implemented to reduce project-related impacts to biological resources to less-than-significant levels.

7.2.4.1 Wetlands

BIO-1 Chadwick Channel New Bridge Construction. Work conducted within the Chadwick Channel will be conducted while no waters are flowing in the channel. The work area will be separated from the main portion of the channel by temporary cofferdam and visquine to keep any construction materials or debris from migrating down channel. Work will comply with permit conditions issued by a regulatory agency (USACE or CDFG).

BIO-2 Offsite Construction Laydown Area Grading. Grading of the drainage wash will be conducted while no waters are flowing in the channel. Best management practices for stormwater pollution prevention will be employed at the downstream edge of the grading disturbance area. Work will comply with permit conditions issued by a regulatory agency (USACE or CDFG).

7.2.4.2 Special-Status Species

Special-Status Plant Species

Based on surveys conducted to date, no special-status plant species would be affected by the proposed project. The following measures would be implemented should any special-status plants be discovered at the proposed project site.

BIO-3 Rare Plant Avoidance. If special-status plant species are present that would be affected by work in the proposed laydown areas, temporary access road, or transmission line interconnection, impacts to the plants will be avoided. Avoidance measures could include relocating tower footings, relocating laydown areas to an alternate portion of the proposed parcels, or realignment of the temporary access road to avoid rare plant populations. It is anticipated that these measures would be sufficient to avoid impacts to any special-status plant species that may be present.

BIO-4 Riversidean Sage Scrub Avoidance. Don't cut down any scalebroom shrubs. Maintain a buffer around scalebroom shrubs of native vegetation.

Threatened and Endangered Wildlife Species

Delhi Sands Flower-Loving Fly

In order to assess the potential impacts to the DSF fly, a DFL expert, Dr. Dale Powell, will assess the habitat suitability and map the sandy soils in April 2007. If the habitat is suitable for DSF fly, then one of the two following mitigation measures will be employed to minimize the impacts to the species to a less-than-significant level.

BIO-5 Delhi Sands Restoration. Remove the fine-grained sands found within the laydown area and stockpile in piles no more than 36 inches deep and will be protected from weedy, non-native species. Sands shall not be stockpiled for more than 24 months prior to replacement as small dune hummocks once the parking area has been returned to natural contours.

Develop a restoration plan for the Delhi sands and submit for approval to CEC and USFWS. Restore native plants, including California buckwheat, California croton, and telegraph weed from

local genetic sources in an open mosaic of 10 to 20 percent vegetative cover. Maintain the area free of exotic species and ensure establishment of native species within a period of 3 years. Fence area to exclude trespassers and OHVs from the area through restoration period. If restoration of the sandy soils is found to be unfeasible or problematic, DSF fly habitat will be purchased from an authorized mitigation bank in the region.

BIO-6 Limitation of Work Areas. Delhi sands will be removed prior to grading operations, stockpiled, and saved, and then replaced as the top layer after the crushed rock surfacing is removed and grading is returned to natural contours. The stockpile is not to be more than 3 feet in height. The disturbed areas will be revegetated and restored to conditions favorable for the DSF fly.

San Bernardino Kangaroo Rat

Although no surveys have been conducted that identify the presence of the San Bernardino kangaroo rat, implementation of "reasonable and prudent measures" described by USFWS (1998) are necessary and appropriate to minimize the potential for incidental take of this species during preparation and use of the proposed offsite construction laydown area and the temporary access road.

BIO-7 Construction Requirements in San Bernardino Kangaroo Rat Habitat. The following measures are proposed to minimize the potential for take of San Bernardino kangaroo rat during construction associated with the preparation and use of the proposed offsite construction laydown area to less-than-significant levels:

- Areas to be graded must first be cleared by an approved biologist.
- The ends of small-diameter pipes (less than 4 inches inner diameter) must be covered to prevent use by small mammals.

BIO-8 Road-Kill Avoidance. Speed limits on nonpublic access and construction roads are 25 miles per hour or less. Speed limits will be posted at the entrance to the access road from public roadways and intermittently along the access routes. A worker awareness program would be used to inform all workers of the need to watch for and avoid wildlife that may be present along roadways.

BIO-9 Vegetated Overburden Removal. Prior to any ground-disturbing activity, a qualified biologist will clear the work area of all mammal, reptile, avian, and amphibian wildlife species. A biologist will be present during grading operations of the top 12 inches of soil to capture and relocate any wildlife uncovered during the grading operations. An orientation of the potential species encountered will be given to all grading personnel. Construction workers will work with biologists to avoid unnecessary harm, injury, or mortality to wildlife. An approved, designated biologist would oversee and implement the following measures.

- No tree or shrub removal will occur during the breeding bird season without biological monitor clearance (February 1 to August 31).
- Any existing raptor nests near the project area should be removed during the non-breeding season to minimize potential for nesting in the same location the following year.
- Preconstruction survey shall be conducted for any nesting raptor species.

- In order to minimize trapping of common wildlife, 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 onsite 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 study area.

Burrowing Owl

Although surveys have been conducted of the proposed offsite construction laydown area and the temporary access road that identify possible burrows and pellets, no breeding burrowing owls have been detected on-site. Additionally, this species could be found within the area and use the site for foraging.

BIO-10 Burrowing Owl Impact Minimization and Mitigation. The following measures are proposed to minimize the potential for take of burrowing owl nests during construction associated with the preparation and use of the proposed offsite construction laydown area to less-than-significant levels:

- Pre-construction surveys will be conducted throughout the project site and laydown areas for burrowing owls, possible burrows, and sign of owls (i.e., pellets, feathers, white wash, etc.).

- Occupied burrows will not be disturbed during the breeding season (February 1 through August 31) unless an approved biologist verifies through non-invasive methods that ether 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrow are foraging independently and are capable of independent survival.

- Occupied burrows will be protected with a 300 foot buffer, if possible.

- When the destruction of an occupied burrow is unavoidable the owl(s) will be passively relocated in accordance with the CDFG memo dated October 17, 1995. Relocation efforts will occur at least one week prior to ground disturbance of the area.

- Offsite mitigation will be pursued to enhance existing habitat in the region or fund research into the species to enhance survivorship of the species in the region.

7.2.5 Laws, Ordinances, Regulations, and Standards

The proposed project will be constructed and operated in accordance with all laws, ordinances, regulations, and standards (LORS) applicable to biological resources. Federal, state, and local LORS applicable to biological resources are summarized in Table 7.2-6 and are discussed below.

Table 7.2-6
Applicable Biological Resources Laws, Ordinances, Regulations, and Standards
(Page 1 of 3)

Laws Ordinances, Regulations, and Standards	Administering Agency	Applicability	AFC Section
Federal			
Endangered Species Act of 1973 and implementing regulations, Title 16 United States Code (USC) §1531 et seq. (16 USC 1531 et seq.), Title 50 Code of Federal Regulations (CFR) §17.1 et seq. (50 CFR17.1 et seq.)	U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS)	Designates and protects federally threatened and endangered plants and animals and their critical habitat.	7.2.1.5 and 7.2.2.2
Section 7 of Fish and Wildlife Coordinating Act, 16 USC 742 et seq., 16 USC 1531 et seq., and 50 CFR 17.	USFWS	Requires consultation if any project facilities could jeopardize the continued existence of an endangered species. Applicability depends on federal jurisdiction over some aspect of the project.	7.2.1.5 and 7.2.2.2
Section 10(1)(A) of the ESA	USFWS	Requires a permit to "take" threatened or endangered species during lawful project activities. If no federal nexus for project, a Habitat Conservation Plan (HCP) may be necessary.	7.2.1.5 and 7.2.2.2
Section 404 of the Clean Water Act of 1977 (33 USC 1251 et seq., 33 CFR §§320 and 323)	U.S. Army Corps of Engineers (USACE)	Gives the USACE authority to regulate discharges of dredge or fill material into waters of the United States, including wetlands.	7.2.1.4 and 7.2.2.1
Section 401 of the Clean Water Act of 1977	Central Valley Regional Water Control Board (CVRWQCB)	Requires the applicant to conduct water quality impact analysis for the project when using 404 permits and for discharges to waterways.	7.2.1.4 and 7.2.2.1
Migratory Bird Treaty Act 16 USC §§703-711	USFWS and California Department of Fish and Game (CDFG)	Prohibits the non-permitted take of migratory birds.	7.2.5.1
State			
California Endangered Species Act of 1984, Fish and Game Code, §2050 through §2098.	CDFG	Protects California's endangered and threatened species.	7.2.1.5 and 7.2.2.2

Table 7.2-6
Applicable Biological Resources Laws, Ordinances, Regulations, and Standards
(Page 2 of 3)

Laws Ordinances, Regulations, and Standards	Administering Agency	Applicability	AFC Section
State (continued)			
Title 14, California Code of Regulations (CCR) §§670.2 and 670.5.	CDFG	Lists plants and animals of California declared to be threatened or endangered.	7.2.1.5 and 7.2.2.2
Fish and Game Code Fully Protected Species. §3511: Fully Protected birds §4700: Fully Protected mammals §5050: Fully Protected reptiles and amphibians §5515: Fully Protected fishes	CDFG	Prohibits the taking of listed plants and animals that are Fully Protected in California.	7.2.1.5 and 7.2.2.2
Fish and Game Code §1600, Streambed Alteration Agreement	CDFG	Reviews projects for impacts on waterways, including impacts to vegetation and wildlife from sediment, diversions, and other disturbances.	7.2.1.4 and 7.2.2.1
Native Plant Protection Act of 1977, Fish and Game Code, §1900 et seq.	CDFG	Designates state rare and endangered plants and provides specific protection measures for identified populations.	7.2.1.5 and 7.2.2.2
Title 20 CCR §§1702 (q) and (v); and	USFWS CDFG	Protects "areas of critical concern" and "species of special concern" identified by local, state or federal resource agencies within the project area, including the CNPS.	7.2.1.5 and 7.2.2.2
Title 14 CCR Section 15000 et seq.	USFWS CDFG	Describes the types and extent of information required to evaluate the effects of a proposed project on biological resources of a project site.	7.2
Local			
Rancho Cucamonga General Plan; Rancho Cucamonga Industrial Area Specific Plan (Development Code)	City of Rancho Cucamonga	Preserve lands having biological significance, encourage the use of native plant materials, and protect wildlife and natural vegetation from indiscriminate use of pesticides, and protect biological resources in development in approved areas.	7.2.1 and 7.2.2

Table 7.2-6 Applicable Biological Resources Laws, Ordinances, Regulations, and Standards (Page 3 of 3)			
Laws Ordinances, Regulations, and Standards	**Administering Agency**	**Applicability**	**AFC Section**
Local (continued)			
Rancho Cucamonga Development Code	City of Rancho Cucamonga	Provisions for protection of biological resources in development in approved areas.	7.2.1 and 7.2.2

7.2.5.1 Federal

Endangered Species Act of 1973 and implementing regulations, Title 16 United States Code (USC) §1531 et seq. (16 USC 1531 et seq.), Title 50 Code of Federal Regulations (CFR) §17.1 et seq. (50 CFR 17.1 et seq.)

The Endangered Species Act (ESA) includes provisions for the management and protection of federally listed threatened or endangered plants and animals and their designated critical habitats. Section 10(1)(A) of the ESA requires a permit to take threatened or endangered species during lawful project activities. If there is not a federal nexus for the project, a Habitat Conservation Plan (HCP) may be necessary. The administering agency of the above authority is the USFWS for terrestrial, avian, and most aquatic species, and the National Marine Fisheries Service (NMFS) for anadromous species.

Section 7 of Fish and Wildlife Coordinating Act, 16 USC 742 et seq., 16 USC 1531 et seq., and 50 CFR 17.

This Act requires consultation if any project facilities could jeopardize the continued existence of an endangered species. Applicability depends on federal jurisdiction over some aspect of the project.

The administering agency for this authority is the USFWS.

Section 404 of the Clean Water Act of 1977 (33 USC 1251 et seq., 33 CFR §§ 320 and 323)

This section of the Clean Water Act gives the USACE authority to regulate discharges of dredge or fill material into waters of the United States, including wetlands.

The administering agency of this authority is the USACE.

Section 401 of the Clean Water Act of 1977

This section of the Clean Water Act requires the Applicant to conduct water quality impact analysis for the project when using Section 404 permits and for discharges to waterways.

The administering agency of this authority is the USACE.

Migratory Bird Treaty Act 16 USC §§703-711

This Act includes provisions for protection of migratory birds, including the non-permitted take of migratory birds.

The administering agencies for this authority are the USFWS and CDFG.

7.2.5.2 State

California Endangered Species Act of 1984, Fish and Game Code, §2050 through §2098

This Act includes provisions for the protection and management of plant and animals species listed as endangered or threatened, or designated as candidates for such listing. The Act includes a consultation requirement "to ensure that any action authorized by a state lead agency is not likely to jeopardize the continued existence of the species" (§2090). Plants of California declared to be endangered, threatened, or rare are listed at 14 CCR §670.5. 14 CCR § 15000 *et seq*. describes the types and extent of information required to evaluate the effects of a proposed project on biological resources of a project site.

The administering agency for this authority is CDFG.

Fish and Game Code Fully Protected Species
§3511: Fully Protected Birds
§4700: Fully Protected Mammals
§5050: Fully Protected Reptiles and Amphibians
§5515: Fully Protected Fishes

This Code prohibits the taking of listed plants and animals that are Fully Protected Species in California.

The administering agency for this authority is CDFG.

Fish and Game Code §1600, Streambed Alteration Agreement

This Code reviews projects for impacts on waterways, including impacts to vegetation and wildlife from sediment, diversions, and other disturbances.

The administering agency for the above authority is CDFG.

Native Plant Protection Act of 1977, Fish and Game Code, §1900 *et seq.*

This act designates state rare and endangered plants and provides specific protection measures for identified populations.

The administering agency for the above authority is CDFG.

CDFG Policies and Guidelines, Wetlands Resources Policy

This policy provides for the protection, preservation, restoration, enhancement, and expansion of wetland habitats in California, including vernal pools.

The administering agencies for the above authority are CDFG, California Environmental Protection Agency, and the Santa Ana Regional Water Quality Control Board.

Title 20 CCR §§1702 (q) and (v)

The Title protects "areas of critical concern" and "species of special concern" identified by local, state, or federal resources agencies within the project area, including the California Native Plant Society.

Title 14 CCR Section 15000 *et seq.*

This title describes the types and extent of information required to evaluate the effects of a proposed project on biological resources of a project site.

The administering agencies for the above authority are the USFWS and CDFG.

7.2.5.3 Local

County of San Bernardino General Plan

The County Plan encourages preservation and management of biotic resources, including special-status species. It includes some planning constraints for sensitive habitat areas but does not supersede CDFG and USFWS requirements.

7.2.6 Involved Agencies and Agency Contacts

This section describes the discussions with agency personnel related to biological resources for the SGGS. Additional details on information required for each permit application and where the required information can be found in Section 7.2.7.

Eric Porter with the Carlsbad USFWS was contacted in March of 2007 regarding the Delhi Sands Flower Loving Fly. Numerous phone and e-mail discussions occurred regarding potential habitat and mitigation options between Mr. Porter and Mr. Kisner with URS Corporation.

Issue	Agency	Contact/Title	Telephone	E-mail
Delhi Sands Flower Loving Fly	U.S. Fish and Wildlife Service 6010 Hidden Valley Road, Carlsbad, CA 92011	Eric Porter, Regulatory Biologist	(760) 431-9440	Eric_Porter@fws.gov

7.2.7 Permits Required and Permit Schedule

This section describes the required permits related to biological resources for the SGGS. The following table summarizes these required permits.

Responsible Agency	Permit/Approval	Schedule
U.S. Army Corps of Engineers	Clean Water Act Permit: Nationwide Permit #14 (linear transportation crossing)	6 to 8 months
U.S. Fish and Wildlife Service	Section 7 consultation for listed species or section 10 consultation (if the USACE does not take jurisdiction over wetlands)	Additional survey work being conducted to identify the presence of species or habitat is present on-site.
California Department of Fish and Game	Streambed Alteration Agreement (1600) for Chadwick Channel and offsite construction laydown area drainage	6 to 8 months
Regional Water Quality Control Board	401 Water Quality Certification	1 month after USACE issues its authorization

7.2.8 References

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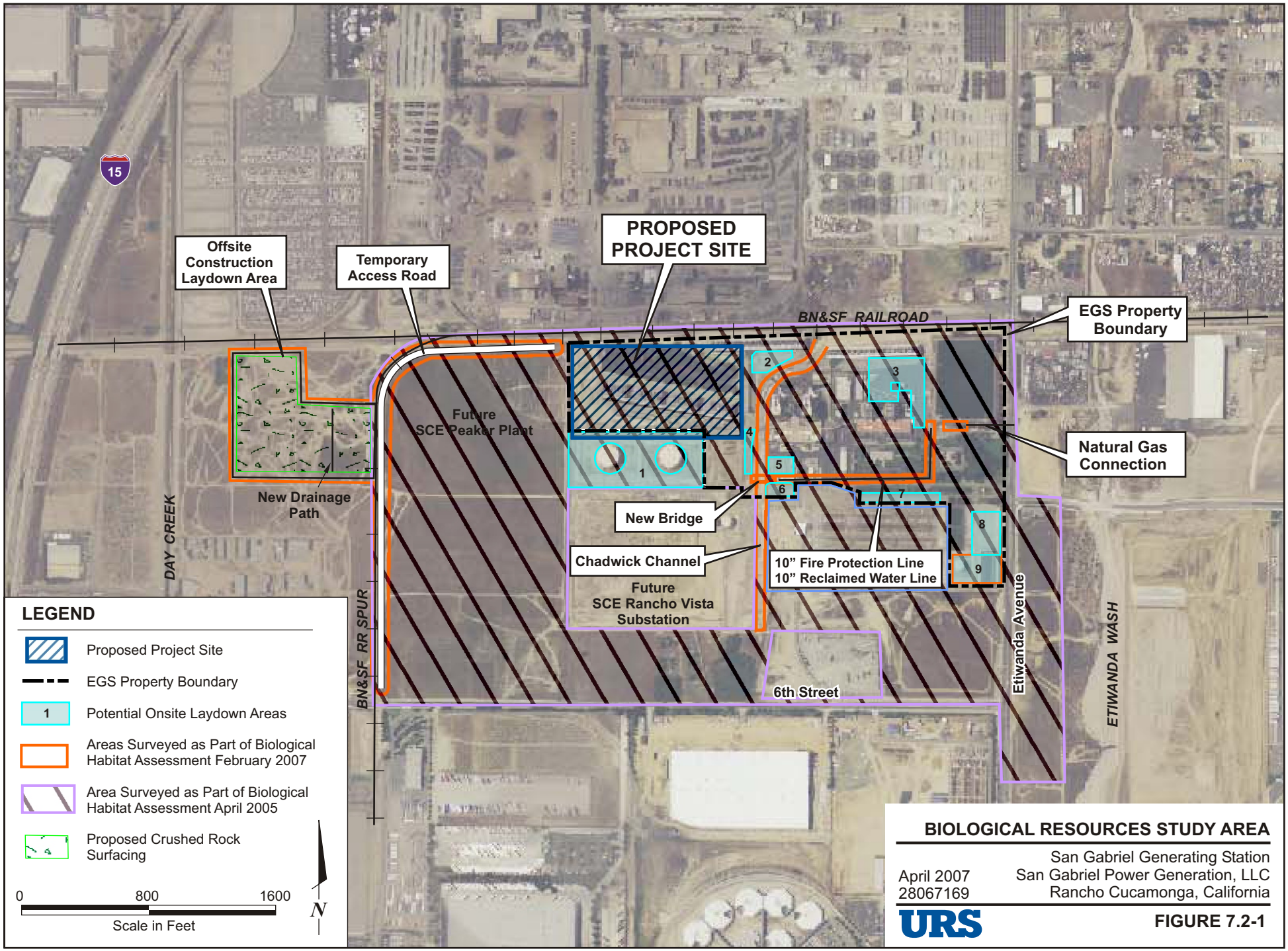

BIOLOGICAL RESOURCES STUDY AREA

April 2007
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San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

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FIGURE 7.2-1

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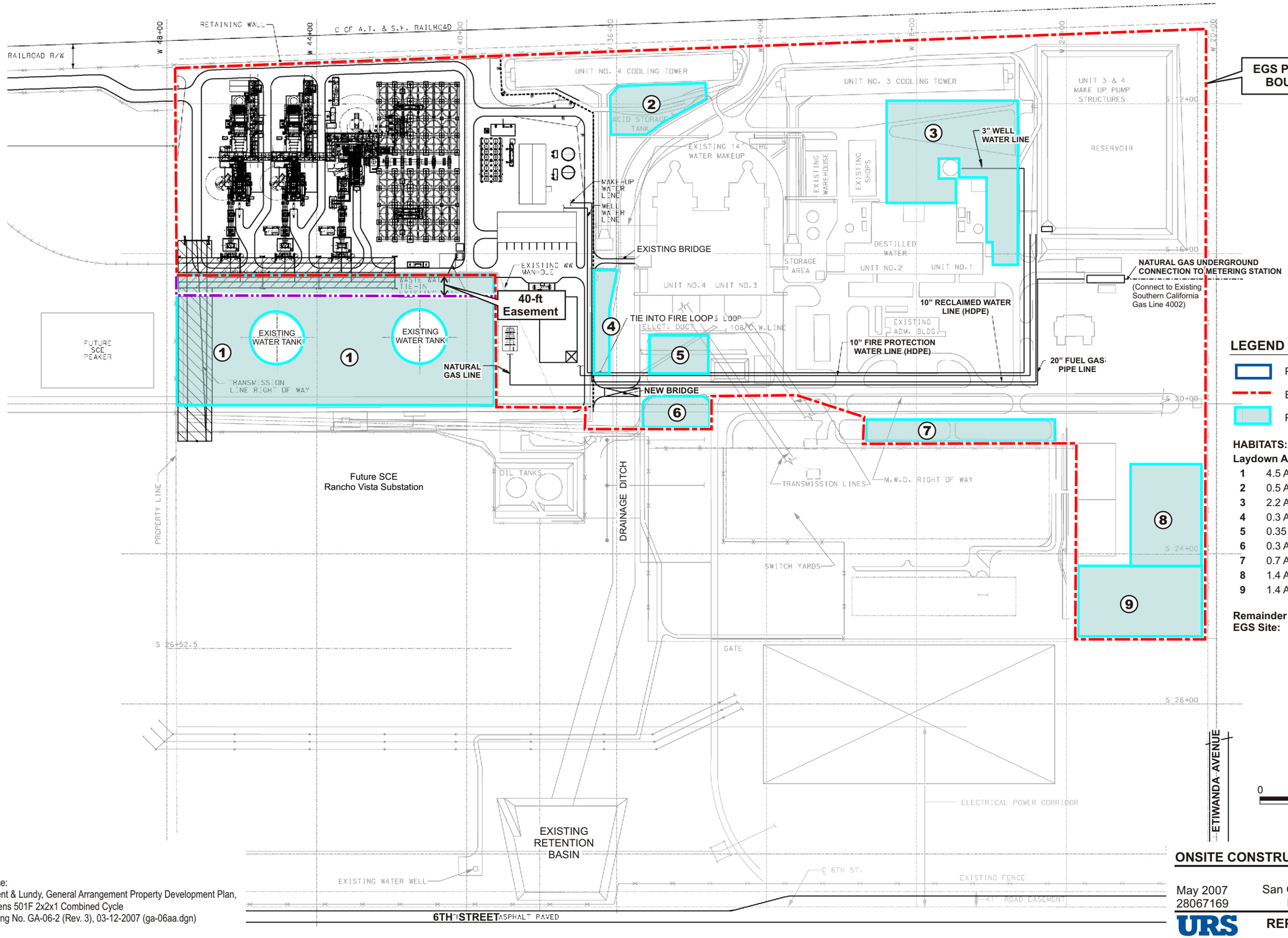

LEGEND

- Proposed Project Site
- EGS Property Boundary
- Potential Onsite Laydown Area

HABITATS:

Laydown Areas:

1	4.5 AC	Disturbed (degraded asphalt)
2	0.5 AC	Disturbed (gravel)
3	2.2 AC	Disturbed (asphalt paved)
4	0.3 AC	Disturbed (gravel)
5	0.35 AC	Disturbed (gravel)
6	0.3 AC	Disturbed (bare dirt)
7	0.7 AC	Disturbed (gravel)
8	1.4 AC	Disturbed (gravel)
9	1.4 AC	Disturbed (tank battery/ retention basin)

Remainder of EGS Site: Disturbed (industrial facility)

Source:
Sargent & Lundy, General Arrangement Property Development Plan,
Siemens 501F 2x2x1 Combined Cycle
Drawing No. GA-06-2 (Rev. 3), 03-12-2007 (ga-06aa.dgn)

AFFECTED HABITAT – ONSITE CONSTRUCTION LAYDOWN AREAS

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Rancho Cucamonga, California

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REPLACEMENT FIGURE 7.2-2

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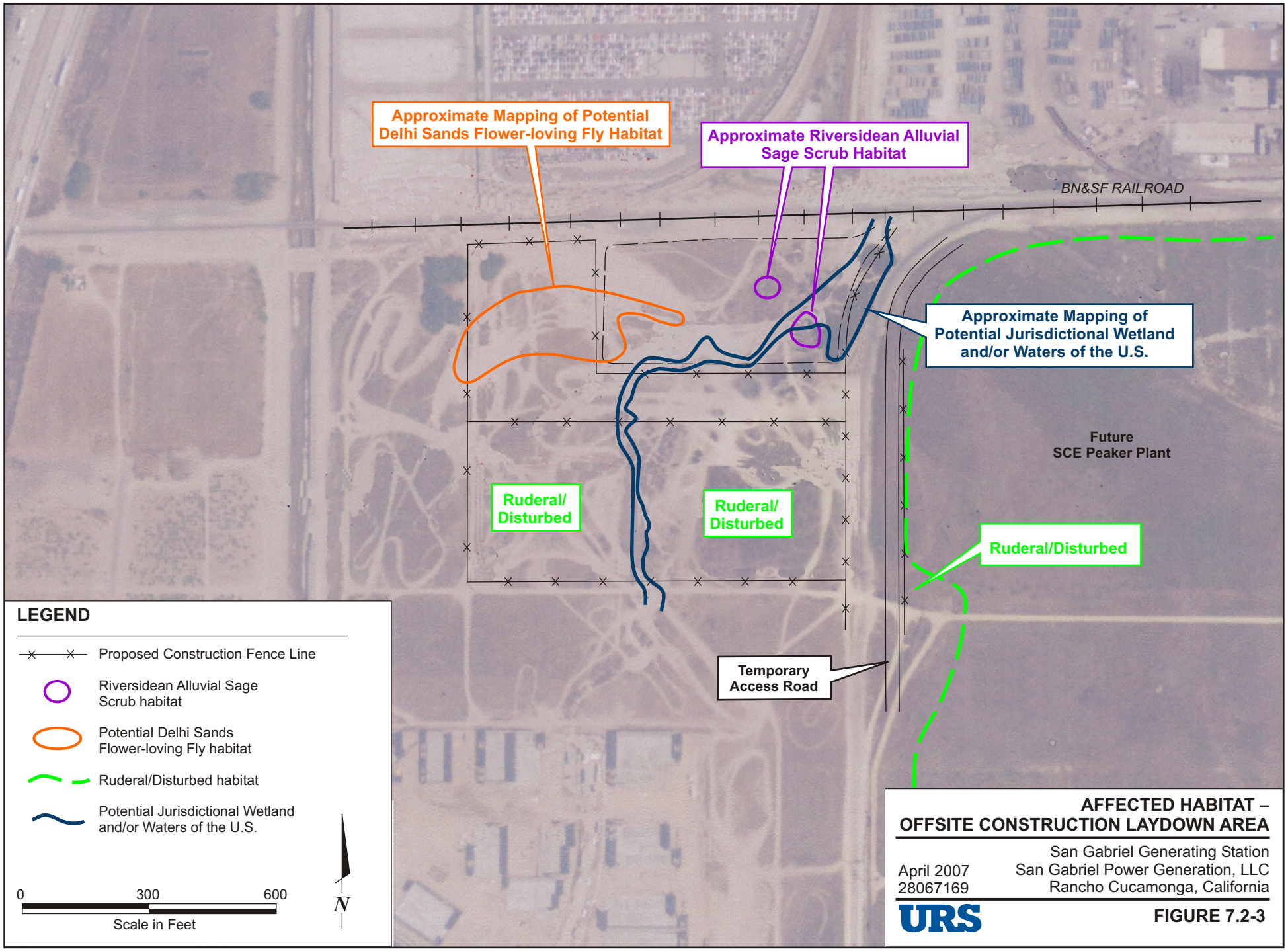

AFFECTED HABITAT – OFFSITE CONSTRUCTION LAYDOWN AREA

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FIGURE 7.2-3

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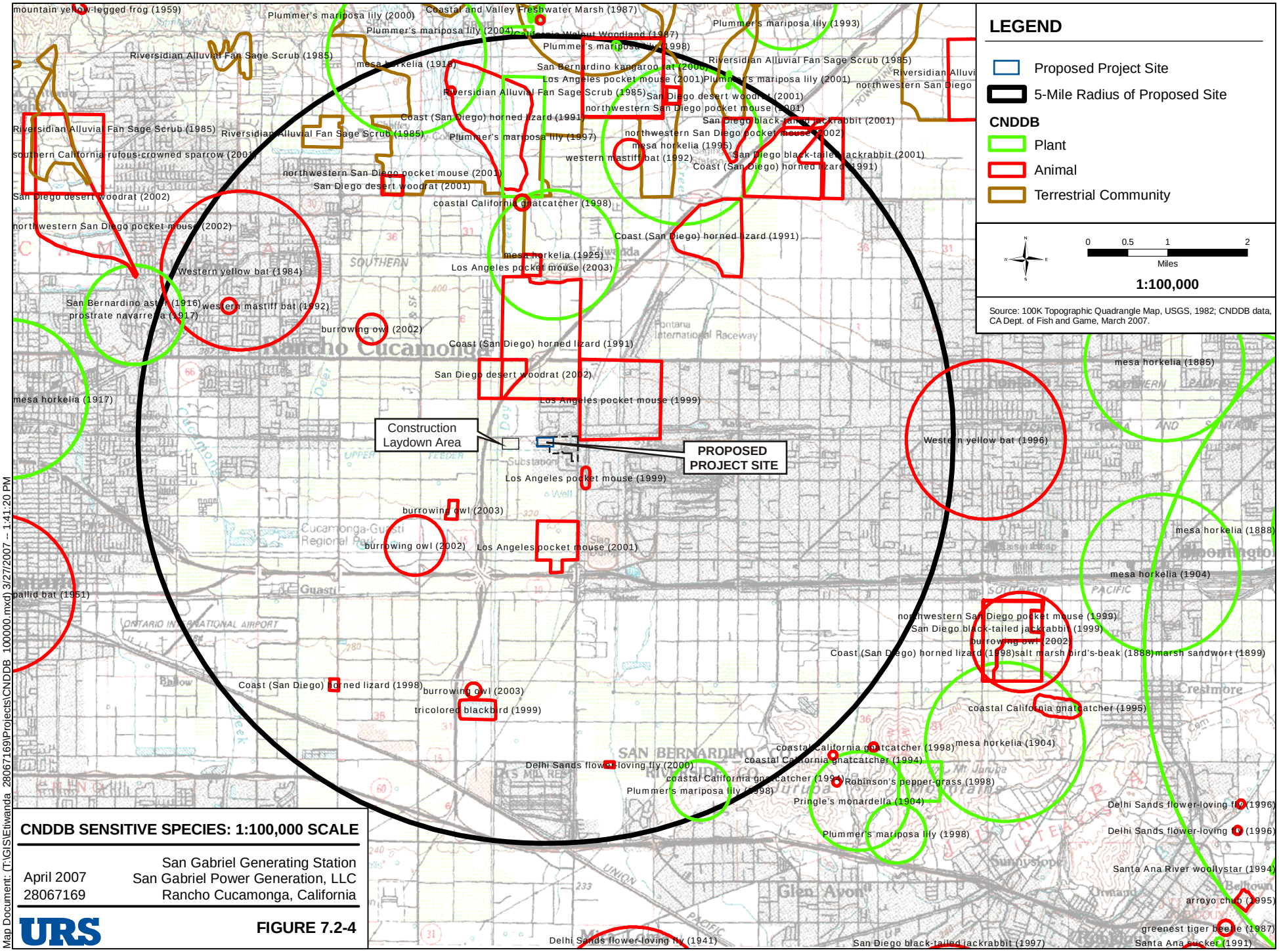

CNDDB SENSITIVE SPECIES: 1:100,000 SCALE

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FIGURE 7.2-4

4/09/07 vsa ..\Reliant Etiwanda\Graphics\7.02 Biology\7.2-4_CNDDB_100kscale.ai