

4. BIOLOGICAL RESOURCES

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

Existing Conditions

Vegetation Communities. Vegetation communities known to occur along the project corridor are described below by project segment. Three stretches contain sensitive plant species: Burlingame Lagoon, the West of Bayshore parcel, and San Bruno Mountain.

San Mateo Substation to Tower 1/8. Beginning at San Mateo Substation, the power line crosses an open, recreation-oriented area and continues over an area of light industrial development. The

recreation-oriented area consists of a golf course, with manicured lawns and ornamental trees, and roadside areas landscaped with ornamental vegetation near the Coyote Point Recreation Area. The industrial areas lack natural plant communities.

Burlingame Lagoon and San Francisco Bay (Towers 1/8 to 2/18). North of Tower 1/8, the route passes through the Burlingame Lagoon, which is adjacent to US 101. The Burlingame Lagoon is located northeast of Coyote Point Recreation Area in Burlingame. In the lagoon, the towers are constructed on concrete pilings. The project would involve work on eight towers located in the navigable waters of the Burlingame Lagoon. The Burlingame Lagoon is dominated by tidal action and has vegetation along the perimeter, indicative of salt marsh communities. Both the lagoon and the freshwater marshes receive urban runoff from surrounding industrial, residential, and recreational uses. Towers 1/11, 1/12, 1/13, 1/14, 2/15, 2/16, 2/17, and 2/18 are all located in Burlingame Lagoon.

The Burlingame Lagoon is tidal and bordered by a strip of salt marsh that is very narrow in the southern portion and wider in the northern portion. This habitat is best described as a remnant of the once widespread coastal brackish marsh that surrounded much of San Francisco Bay. The steep banks of the Burlingame Lagoon make for abrupt transitions between cord grass, salt marsh, and uplands. This salt marsh is characterized by pickleweed (*Salicornia virginica*), gumplant (*Grindelia* spp.), sand-spurrey (*Spergularia* sp.), and saltgrass (*Distichlis spicata*). At its lower end, it quickly transitions to native California cord grass (*Spartina foliosa*). At its upper end, it abruptly transitions into nonnative grassland and developed areas.

Towers 2/18 to 4/33. The power line between north of the Burlingame Lagoon and San Mateo Avenue crosses urbanized areas, including residential, commercial, and industrial zones. No native plant communities occur at the tower sites in this area.

West of Bayshore Parcel (Towers 4/33 to 6/49). Between Millbrae and San Bruno Avenues, the power line passes through a strip of undeveloped land west of San Francisco International Airport known as the airport's West of Bayshore parcel. The West of Bayshore parcel is approximately 160 acres. This undeveloped and relatively open parcel of land is isolated from other open spaces by urban development to the west, north, and south, and from the San Francisco Bay by the San Francisco International Airport (SFO) and the Bayshore Freeway (U.S. Highway 101). The topography of the West of Bayshore parcel is flat with a slight gradient east towards the San Francisco Bay.

Over the years, the parcel has been significantly altered and disturbed by past land use practices. Prior to 1939, the parcel was contiguous and a part of the San Francisco Bay estuarine wetlands with tidal sloughs and marshlands. Around 1939, the Bayshore Highway was built through what is now SFO and east of the existing Bayshore Freeway. At about the same time, drainage canals were constructed through the West of Bayshore parcel to facilitate site drainage and some portions of the parcel were disked to support agricultural practices on the property. This activity continued for the next seven to eight years. Around 1948, the Bayshore Freeway was built and now defines the eastern border of the parcel. Between 1949 and 1969 the West of Bayshore parcel was used for cattle grazing and some dry farming. Although remnant tidal sloughs were still in existence in small areas of the parcel, two large canals dominated the site drainage; Cupid Row or Silver Springs Canal at the north end and the San

Felipe-Lomita Canal at the south end. Between 1969 and 1972 the area west of the PG&E power lines in the central portion of the parcel was filled and engineered for a planned development and roadway system. The fill area did not extend under the PG&E power lines except in small linear stretches creating large isolated basins that received stormwater runoff from the Bayshore Freeway. Over the next 30 years small areas of the parcel were disturbed by various activities associated with dredging of the canals, expansion of the freeway overpasses into and out of SFO, and most recently by the extension of the San Francisco Bay Area Rapid Transit District (BART) rail system into SFO. These and other land activities have effectively cut the native wetlands off from the hydrologic regime of the San Francisco Bay resulting in a conversion from tidal estuarine wetlands with tidal sloughs and marshlands to a freshwater regime, fed by urban stormwater runoff. Much of the upland habitats on the parcel are a result of the past land fill and grading activities for existing adjacent urban developments or planned developments.

Three vegetation communities occur on the West of Bayshore parcel: emergent freshwater marsh (wetlands), nonnative annual grassland, and ruderal upland vegetation. The PG&E electrical towers on the West of Bayshore parcel are primarily located within upland habitats; however, three of the towers are located in seasonal wetlands.

The drier, more upland areas on the site are dominated by nonnative grassland, characterized by introduced annual grasses. Common grass species in the West of Bayshore parcel are wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), orchard grass (*Dactylis glomerata*), Italian ryegrass (*Lolium multiflorum*), timothy (*Phleum pratense*), and velvet grass (*Holcus lanatus*). Grasslands near the power line also support coyote bush (*Baccharis pilularis*), escaped landscaping plants such as ornamental amaryllis (*Crinum sphyrid*), Mission cactus (*Opuntia ficus-indica*), and blackberry (*Rubus discolor*).

Ruderal vegetation grows in areas subject to recent or continuing disturbance. Ruderal areas are characterized by plants such as bristly ox-tongue (*Picris echioides*), fennel (*Foeniculum vulgare*), wild radish (*Raphanus sativus*), yellow star-thistle (*Centaurea solstitialis*), common sow thistle (*Sonchus oleraceus*), and pampas grass (*Cortaderia selloana*).

Numerous low-lying areas on this parcel are best described as emergent freshwater marsh. These areas pond with water during the rainy season and support obligate and facultative "wetland indicator" plant species. The dominant species include cattail (*Typha latifolia*), rush (*Juncus balticus*), swamp smartweed (*Polygonum hydropiperoides*), sour dock (*Rumex crispus*), and rabbit foot grass (*Polypogon monspeliensis*). The canals on the parcel support perennial wetlands dominated with dense stands of cattails.

Towers 6/49 to 8/68. The power line north of San Bruno Avenue to the base of San Bruno Mountain spans urbanized areas, including residential, commercial, and industrial zones. Tower 7/57 occurs in a patch of coastal salt marsh on the banks of San Bruno Canal, a tributary to Colma Creek. Species here are pickleweed (*Salicornia virginica*), gumplant (*Grindelia* spp.), and a variety of weeds. It transitions abruptly into a parking lot.

San Bruno Mountain (Tower 8/68 to Martin Substation). The portion of the route on San Bruno Mountain includes small remnant patches of valley needlegrass (*Nassella pulchra*) grassland and scattered shrubs historically associated with coastal scrub. These native patches of remnant habitat are found mostly along the access road on the north-facing slope of the southeast ridge. Non-native annual grasses and forbs, and ruderal weedy species heavily dominate the rest of the project area, including the area known as PG&E Hill, south of Randolph Avenue.

The dominant herbaceous species encountered around the tower sites and in the project right-of-way include slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), Italian ryegrass (*Lolium multiflorum*), six-weeks fescue (*Vulpia bromoides*), and soft chess (*Bromus hordeaceus*). Numerous nonnative broad-leaved herbs are also present. These include wild radish, (*Rapnanus rapnanistrom*) Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), short-pod mustard (*Hirschfeldia incana*), fennel (*Foeniculum Vulgare*), and poison hemlock (*Conium maculatum*). The north slope of the southeast ridge above Brisbane is heavily colonized in scattered areas with pincushion flower (*Scabiosa atropurpurea*). This aggressive nonnative "weed" appears to favor the more disturbed sites.

Many scattered nonnative trees and shrubs are present on the lower slopes of San Bruno Mountain near Brisbane's buildings and roads and Guadalupe Canyon Parkway. These include eucalyptus (*Eucalyptus* sp.), French broom (*Genista* sp.), European broom (*Genista* sp.), and cypress (*Cupressus* sp.).

A few small patches of coastal scrub occur along the access road on the upper north-facing slope of the southeast ridge. At these locations, coyote bush, coast monkey flower (*Mimulus aurantiacus*), and poison oak (*Toxicodendron diversilobum*) are the dominant shrubs.

Wildlife. Wildlife species and habitats known to occur along the project corridor are described below by project segment. As described above for the vegetation communities, there are three stretches that contain sensitive wildlife species.

San Mateo Substation to Tower 1/8. Common wildlife associated with the Poplar Creek Golf Course and surrounding urbanized areas along this portion of the route are characteristic of highly disturbed, urbanized lands. Wildlife in these areas may include birds, such as the northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), house finch (*Carpodacus mexicanus*), and mourning dove (*Zenaida macroura*) as well as mammals, such as the opossum (*Didelphis virginiana*), domestic cat (*Felis catus*), and others.

Burlingame Lagoon and San Francisco Bay (Towers 1/8 to 2/18). Saltwater lagoons and associated salt marshes attract a variety of shorebirds, including wading birds such as great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and snowy egret (*Egretta thula*), and several species of common seagulls. Several fish species are typically found in lagoons. The shorelines of lagoons and salt marshes also support some small rodent species.

Towers 2/18 to 4/33. Wildlife species common along this portion of the route are similar to those previously described for the San Mateo Substation to Tower 1/8 portion.

West of Bayshore Parcel (Towers 4/33 to 6/49). Characteristic wildlife species in the West of Bayshore parcel include feral (domestic) cats, rodents, amphibians, and reptiles. Scrub jays (*Aphelocoma coerulescens*), American crows, northern mockingbirds, and common raptors such as red-tailed hawk (*Buteo Jamaicensis*) and American kestrel hawks (*Falco sparverius*) can be found in this area.

Towers 6/49 to 8/68. Wildlife species common along this portion of the route are similar to those previously described for the San Mateo Substation to Tower 1/8 portion.

San Bruno Mountain (Tower 8/68 to Martin Substation). The nonnative grasslands community found on San Bruno Mountain provides shelter and food for a variety of lizard and snake species, the scrub jay, northern mockingbird, hawks, coyotes (*Canis latrans*), feral cats, and various other small mammals. San Bruno Mountain also supports foraging habitat for several species of common raptors such as American kestrel, red-tailed hawk, barn owl (*Tyto alba*), and great horned owl (*Bubo virginianus*).

Sensitive Species. Sensitive plant and wildlife species are not expected to occur within the highly urbanized or industrial areas along the project route (San Mateo Substation to Tower 1/8, Towers 2/18 to 4/33, and Towers 6/49 to 8/68). Tables B.4-1 and B.4-2 list sensitive plant and animal species investigated within the three undeveloped areas along the route. Table B.4-3 lists special status habitats known to occur along the route. These locations are presented on Figure B.4-1.

Burlingame Lagoon/San Francisco Bay (Towers 1/8 to 2/18) and Navigable Slough (Tower 7/55 to 7/56). No rare or sensitive plants have been identified that could occur in existing habitats on this property. However, the salt marshes at Burlingame Lagoon and Towers 7/55 to 7/56 could provide marginal habitat for two sensitive wildlife species, California clapper rail (*Rallus longirostris obsoletus*) and the salt marsh harvest mouse (*Reithrodontomys raviventris*), although these species are not known to exist in Burlingame Lagoon. Neither species was documented as part of the #3 project. Other special status or sensitive species that occupy marsh type habitats around San Francisco Bay include the California black rail (*Laterallus jamaicensis*), Western snowy plover (*Charadrius alexandrinus*), and California least tern (*Sterna antillarum*).

- *California Clapper Rail.* The California clapper rail was listed as endangered by the USFWS in 1970 and by the CDFG in 1971. The nearest known clapper rail populations are located at Belmont Slough, approximately six miles south of Burlingame Lagoon, and along Colma Creek between Utah Avenue and Navigable Slough near the center of the project corridor (Harvey, 1980 and EIP, 2002). There were two historical observations of the clapper rail in 1975 (CNDDDB, 2003), one near San Bruno Point (approximately four and a half miles north) and the other near the intersection of Mahler Road and Bayshore Highway at Shoreline Park (approximately one mile north). However, the clapper rail has not been documented in these areas since that time. In 1997, several sites were surveyed near SFO, including Shoreline Park, but no rails were observed

Table B.4-1
Special Status Plant Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾				Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾				
San Francisco Gumplant <i>Grindelia hirsutula</i> var. <i>maritime</i>	Special of Concern	None	None	1B	Found in coastal scrub, coastal bluff scrub, valley and foothill grasslands, sandy or serpentine slopes or sea bluffs	No	NA	None. Plant occurs on sea bluffs or serpentine slopes, the project site does not support this type of habitat. Closest occurrence (CNDDDB) to the project site is near San Francisco Cliffs and San Miguel Hills.
Diablo Helianthelia <i>Helianthelia castanea</i>	Special of Concern	None	None	1B	Broadleaved upland forest, cismontane woodland. Usually in chaparral/oak woodland interface in rocky, azonal soils often in partial shade	Yes	NA	Moderate. Plant is known to occur on San Bruno Mountain.
Beach Layia <i>Layia carnosa</i>	Endangered	Endangered	None	1B	Coastal Dunes, on sparsely vegetated semi-stabilized dunes	No	NA	None. The project site does not support the specific habitat requirements for this plant species
San Francisco Lessingia <i>Lessingia germanorum</i>	Endangered	Endangered	None	1B	Coastal scrub, remnant dunes, open sandy soils relatively free from competing plants.	Yes	NA	Moderate. Plant is known to occur on San Bruno Mountain.
White-Rayed Pentachaeta <i>Pentachaeta bellidiflora</i>	Endangered	Endangered	None	1B	Open dry rocky slopes and grassy areas often on soils derived from serpentine bedrock.	Yes	NA	Low. Edges of San Bruno Mountain represent potential habitat

Table B.4-1 (Continued)
Special Status Plant Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾				Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾				
Bent Flowered Fiddleneck <i>Amsinckia lunaris</i>	Species of Concern	None	None	1B	Cismontane woodlands, valley and foothill grassland, 50-500 meters above sea level.	Yes	Yes	High. Plants is recorded as occurring on San Bruno mountain on “North Tank Hill” at the south and southeast facing slopes, among rocky outcrops.
San Fransico Campion <i>Silene verecunda</i> ssp. <i>Verecunda</i>	Species of Concern	None	None	1B	Often on mudstone or shale, coastal scrub, valley and foothill grassland, coastal bluff scrub.	Yes	NA	Moderate. 1983 recorded occurrence on San Bruno Mountain
Presidio Manzanita <i>Arctostaphylos hookeri</i> ssp. <i>Ravenii</i>	Endangered	Endangered	None	1B	Coastal prairie, coastal scrub, open rocky serpentine slopes, 20-215 meters above sea level.	No	NA	None. Recorded in 1923, only one plant remains, formally endemic to S.F. area, area where once occurred is now developed.
Franciscan Manzanita <i>Arctostaphylos hookeri</i> ssp. <i>Franciscana</i>	Species of Concern	None	None	1B	Chaparral, formally endemic to San Francisco, now only exists in cultivation	No	No	None. Plant only exists in cultivation now
San Bruno Mountain Manzanita <i>Arctostaphylos imbricata</i>	Species of Concern	Endangered	None	1B	Coastal scrub, sandstone outcrops in chaparral	Yes	Yes	High. Two colonies located on San Bruno Mountain.
Montara Manzanita <i>Arctostaphylos montaraensis</i>	Species of Concern	None	None	1B	Coastal Scrub, chaparral, endemic to San Mateo County, slopes and ridges	Yes	No	High. Recorded occurrences on San Bruno Mountain about 250 feet below summit

Table B.4-1 (Continued)
Special Status Plant Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾				Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾				
Alkali Milk-Vetch <i>Astragalus tener</i> var. <i>tener</i>	Species of Concern	None	None	1B	Alkali Playa, valley and foothill grassland, alkali flats and flooded lands, vernal pools, low ground.	No	No	None. Recorded occurrences in 1868, project site does not support alkali flats/playas or vernal pools, it is extremely unlikely that this plant occurs in the project area.
San Francisco Bay Spineflower <i>Chorizanthe cuspidata</i> var <i>cuspidata</i>	Species of Concern	None	None	1B	Found on sandy slopes and terraces of coastal scrub, dune, and prairie habitats	No	NA	None. Project site does not support the specific habitat requirements for this species.
Robust Spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	Endangered	None	None	1B	Sandy terraces, bluffs, and loose sand of coastal dunes, coastal scrub and foothill woodlands	No	NA	None. Project site does not support the specific habitat requirements for this species. Last recorded occurrence was 1913.
Rose Linathus <i>Linathus rosaceus</i>	Species of Concern	None	None	1B	Coastal bluff scrub, 0-100 meters above sea level	No	No	None. Project site does not support the specific habitat requirements for this species. Last recorded occurrence was 1885.
Kellogg's Horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	Species of Concern	None	None	1B	Closed cone coniferous forests, coastal scrub, old dunes, coastal sandhills, 10-220 meters above seas level.	No	NA	Low. Recorded occurrences mapped at the northeast end of San Bruno Mountain.
San Francisco Owl's Clover <i>Triphysaria floribunda</i>	Species of Concern	None	None	1B	Coastal prairie, valley and foothill grassland, on serpentine and non-serpentine substrate	Yes		Moderate. Recorded occurrences mapped at eastern end of San Bruno Mountain.

Table B.4-1 (Continued)
Special Status Plant Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾				Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾				
Fragrant Fritillary <i>Fitillaria liliacea</i>	Species of Concern	None	None	1B	Valley and foothill grasslands, coastal prairie, typically over serpentine soils although the soil type varies.	No	NA	None. The project site does not support the specific habitat requirements for this species. Last recorded occurrence is 1896.
Fountain Thistle <i>Cirsium fontinale</i> var. <i>fontinale</i>	Endangered	Endangered	None	1B	Drainages through serpentine soils in woodland, chaparral, and grassland habitats	No	NA	None. The project site does not support the specific habitat requirements for this species. Last recorded occurrence is 1996
San Mateo Wolly Sunflower <i>Eriophyllum latilobum</i>	Endangered	Endangered	None	1B	Often found on roadcuts through woodlands both on and off serpentine soils in San Mateo County.	No	NA	None. Endangered.
Crystal Springs Lessingia <i>Lessingia arachnoidea</i>	Species of Concern	None	None	1B	Grassy slopes on serpentine soils through coastal sage scrub, valley and foothill grasslands and woodlands.	No	NA	None. Grassy slopes on serpentine soils through coastal sage scrub, valley and foothill grasslands and woodlands.
Saline Clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	Species of Concern	None	None	1B	Marshes, swamps, valley/foothill grasslands, and vernal pools	Yes	NA	None. Only recorded occurrence from this area is 1886 and is only known from a herbarium collection, presumed extant.

Table B.4-1 (Continued)
Special Status Plant Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾				Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾				
San Mateo Thorn-Mint <i>Acanthomintha duttonii</i>	Endangered	Endangered	None	1B	Chaparral, valley and foothill grasslands, coastal scrub, extant populations only known from very uncommon serpentinite vertisol clays; in relatively open areas.	No	NA	None. The project site does not support the specific habitat requirements for this species. Species occurs in serpentine barrens and in serpentine grasslands.
Marin Western Flax <i>Hesperolinon congestum</i>	Threatened	Threatened	None	1B	Found on serpentine barrens, grasslands, and chaparral.	No	NA	None. The project site does not support the specific habitat requirements for this species. Species occurs in serpentine barrens and in serpentine grasslands.
Point Reyes Bird's-beak <i>Cordylanthus maritimus</i> <i>ssp. palustris</i>	Species of Concern	None	None	1B	Coastal salt marsh, usually with spartina, salicornia, and distichlis	Yes	NA	None. Plant considered extinct
Franciscan Onion <i>Allium peninsulare</i> var <i>franciscanum</i>	None	None	None	1B	Clay and serpentine soils on dry hillsides in woodlands and valley and foothill grasslands.	No	No	None. The project site does not support the specific habitat requirements for this species.
Hillsborough Chocolate Lilly <i>Fritillaria biflora</i> var <i>ineziana</i>	Species of Concern	None	None	1B	Through valley and foothill grasslands and woodlands, likely restricted to serpentine soils	No	NA	None. The project site does not support the specific habitat requirements for this species, most recently known from serpentine grasslands.

Table B.4-1 (Continued)
Special Status Plant Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾				Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾				
Coast Yellow Linanthus <i>Linanthus croceus</i>	None	None	None	1B	Coastal bluff scrub, coastal prairie	No	NA	None. The project site does not support the specific habitat requirements for this species.
Hickman's Cinquefoil <i>Potentilla hickmanii</i>	Endangered	Endangered	None	1B	Coastal bluff scrub, closed cone coniferous forest, freshwater marshes, seep, and small streams in open or forested areas along coast	No	NA	None. The project site does not support the specific habitat requirements for this species
Western Leatherwood <i>Dirca occidentalis</i>	None	None	None	1B	Broadleaved upland forest, closed cone coniferous forest, chaparral, riparian scrub, and riparian woodland	No	NA	None. The project site does not support the specific habitat requirements for this species.

Source: California Natural Diversity Base, 2001; Jennings, M.R. & Hayes, M.P., 1994; Williams, D.F., 1986.

Notes:

- 1 Endangered and threatened are a species status under the California or Federal Endangered Species Act, Federal species of concern do not receive any statutory protection under the Federal ESA.
- 2 California Department of Fish and Game. Species designated as Species of Concern by CDFG are to be mitigated under CEQA. A protected designation indicates that these species are fully protected under the Fish and Game Code and cannot be taken or possessed without a permit from the Fish and Game Commission or CDFG.
- 3 California Native Plant Society. Species on List 1B are rare or endangered in California and elsewhere in their range.

Table B.4-2
Special Status Wildlife Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾			Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾				
Invertebrates							
Bumblebee Scarab Beetle <i>Lichanthe ursine</i>	Species of Concern	None	None	Coastal sand dunes, crest of sand dunes	No	No	None. The project site does not support the specific habitat requirement for this species.
Tomales Isopod <i>Caecidotea tomalensis</i>	None	None	Species of Interest	Freshwater lakes and streams with still or near still water.	No	No	Low. Perennial freshwater aquatic habitats do exist on the West of Bayshore property, but specific habitat requirements of this species are poorly understood.
San Bruno Elfin Butterfly <i>Incisalia mossii bayensis</i>	Endangered	None	None	Coastal mountainous areas with grassy slopes, steep north facing slopes,	Yes	Yes	High. Recorded occurrences on San Bruno Mountain
Mission Blue Butterfly <i>Icaricia icarioides missionensis</i>	Endangered	None	None	Inhabits grasslands of the SF peninsula	Yes	Yes	High. Recorded occurrences on San Bruno Mountain
Myrtles Silverspot <i>Speyeria zrene myrtleae</i>	Endangered	None	None	Foggy areas of Point Reyes	No	No	None. The project site does not support the specific habitat requirements for this species.
Monarch Butterfly <i>Danaus plexippus</i>	None	None	None	Winter roosts in wind-protected tree groves along the coast with nearby nectar and water sources	No	No	None. The project site does not support the specific habitat requirements for this species.
Callippe Silverspot Butterfly <i>Speyeria callippe callippe</i>	Endangered	None	None	Northern coastal scrub of the San Francisco Peninsula	No	No	High. Recorded occurrences on San Bruno Mountain

**Table B.4-2 (Continued)
Special Status Wildlife Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project**

Species Name	Status ⁽¹⁾			Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾				
Edgewood Blind Harvestman <i>Calicina (Sitalcina) minor</i>	Special Concern	None	None	Open grasslands in areas of serpentine bedrock where permanent springs create moist habitat underneath rocks.	No	No	None. The project site does not support the specific habitat requirement for this species.
Bay Checkerspot Butterfly <i>Euphydryas editha bayensis</i>	Threatened	None	None	Restricted to native grasslands on outcrops of serpentine soil the vicinity of San Francisco Bay.	No	No	None. The project site does not support the specific habitat requirement for this species.
Fish							
Steelhead-Central California Coast ESU <i>Oncorhynchus mykiss</i>	Threatened	None	None	Coastal streams with stable water supply, clean gravels, and good quality riparian habitat.	No	No	None. The project site does not support the specific habitat requirement for this species.
Tidewater Goby <i>Eucyclogobius newberryi</i>	Endangered	None	Special Concern	Brackish water habitats along coast, fairly still but not stagnant water and high oxygen levels	Yes	No	None. Extirpated from San Francisco Bay area.
Amphibians and Reptiles							
Western Pond Turtle <i>Clemmys marmorata</i>	Special Concern	None	Special Concern - Protected	Ponds, lakes, slow moving streams areas with multiple aerial and aquatic basking sites are preferred (Jennings and Hayes 1994).	No	No	Low. Limited suitable habitat on the West of Bayshore Parcel, however this species has never been sighted within the perennial freshwater aquatic habitats on the property

Table B.4-2 (Continued)
Special Status Wildlife Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾			Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾				
California Red-legged Frog <i>Rana aurora draytonii</i>	Threatened	None	Special Concern – Protected	Pools in slow-moving streams and ponds with well-developed emergent freshwater marsh vegetation (Jennings and Hayes 1994).	Yes	Yes	High. Recorded occurrences within the West of Bayshore Parcel
San Francisco Garter Snake <i>Thamnophis sirtalis tetrataenia</i>	Endangered	Endangered	Fully Protected	Found in a vicinity of freshwater marshes, ponds and slow moving streams in San Mateo County. Upland habitat that provides suitable hibernation and estivation burrows.	Yes	Yes	High. Recorded occurrences within the West of Bayshore Parcel
Birds							
Western Snowy Plover (nesting) <i>Charadrius alexandrinus nivosus</i>	Threatened	None	Special Concern	Nests on sandy beaches of the ocean, bays, salt ponds, and larger lakes.	No	No	None. The project site does not support the specific habitat requirement for this species
Double-crested Cormorant <i>Phalacrocorax auritus</i>	None	None	Special Concern - Nesting Sites	Nests in trees along lake margins and on coastal cliffs.	No	No	None. The project site does not support the specific habitat requirement for this species
California Black Rail <i>Laterallus jamicensis coturniculus</i>	Special Concern	Threatened	None	Saltwater and brackish marshes often crossed by tidal sloughs in the San Francisco Bay. Closely associated with pickleweed	Yes	No	Moderate. The minimal brackish marsh present represents potential habitat.
Saltmarsh Common Yellowthroat	Special Concern	None	Species of Concern	Fresh and saltwater marshes, thick continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	No	No	Low. The West of Bayshore Parcel represents limited suitable habit for this species

Table B.4-2 (Continued)
Special Status Wildlife Species Known to Occur in the Region of the San Mateo-Martin #4 60kV Conversion Project

Species Name	Status ⁽¹⁾			Habitat	Habitat Present	Observed	Potential Project Effect
	Federal	State	CDFG ⁽²⁾				
California Clapper Rail <i>Rallus longirostris obsoletus</i>	Endangered	Endangered	Fully Protected	Saltwater and brackish marshes often crossed by tidal sloughs in the San Francisco Bay. Closely associated with pickleweed.	Yes	No	Moderate. The minimal brackish marsh present at the Burlington Lagoon Parcel represents potential habitat.
Bank Swallow <i>Riparia riparia</i>	Special Concern	Threatened	None	Nests in steep river banks	No	No	None. The project site does not support the specific habitat requirement for this species
Mammals							
Salt-marsh Harvest Mouse <i>Reithrodontomys raviventris</i>	Endangered	Endangered	Fully Protected	Found only in emergent salt marsh habitats of San Francisco Bay where pickleweed is the primary vegetation.	Yes	No	Low. The marsh areas in the Burlingame segment represent marginal habitat for this species; however, current distribution maps do not show it occurring in the area of the project site.

Notes:

- 1 Endangered and threatened are a species status under the California or Federal Endangered Species Act, Federal species of concern and candidate species do not receive any statutory protection under the Federal ESA.
- 2 California Department of Fish and Game. Species designated as Species of Concern by CDFG are to be mitigated under CEQA. A protected designation indicates that these species are fully protected under the Fish and Game Code and cannot be taken or possessed without a permit from the Fish and Game Commission or CDFG.

Element Rankings, California Department of Fish and Game, 1993:

- S2.1 6 to 2 element occurrences (EOs) or 1,000 to 3,000 individuals or 2000 10,000 acres, Very Threatened in California
 S3.1 21 to 100 EOs or 3,000 to 10,000 individuals or 10,000 to 50,000 acres, Very Threatened in California
 S3.2 21 to 100 EOs or 3,000 to 10,000 individuals or 10,000 to 50,000 acres, Threatened in California

Table B.4-3
Sensitive Plant/Natural Communities Known to Occur in the Region of the
San Mateo-Martin #4 Conversion Project

Species Name	Status		Habitat Present	Observed	Potential Project Effect
	Federal ¹	State ^{1,2}			
Coastal Brackish Marsh	None	S2.1	Yes	Yes	Low. Remnants found along project alignment
Northern Coastal Salt Marsh	None	S3.2	No	No	None
Valley Needlegrass Grassland	None	S3.1	Yes	Yes	Moderate. Recorded occurrences on San Bruno Mountain
Northern Maritime Chapparal	None	S1.2	No	No	None
Serpentine Bunchgrass	None	S2.2	No	No	None

Notes:

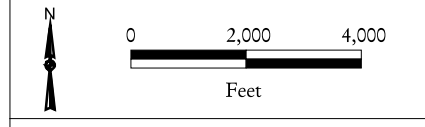
- 1 Endangered and threatened are a species status under the California or Federal Endangered Species Act.
- 2 California Department of Fish and Game.

Element Rankings, California Department of Fish and Game, 1993:

- S2.1 6 to 2 EOs or 1,000 to 3,000 individuals or 2000 10,000 acres, Very Threatened in California
 S2.2 6 to 2 EOs or 1,000 to 3,000 individuals or 2000 10,000 acres, Threatened in California
 S3.1 21 to 100 EOs or 3,000 to 10,000 individuals or 10,000 to 50,000 acres, Very Threatened in California
 S3.2 21 to 100 EOs or 3,000 to 10,000 individuals or 10,000 to 50,000 acres, Threatened in California

(Evens, 1999). The clapper rail observations along Colma Creek were downstream of the PG&E right-of-way, and the stretch of Colma Creek that is spanned by the power lines does not contain suitable habitat for clapper rails. However, the project alignment also crosses Navigable Slough less than 2000 linear feet from the recorded clapper rail breeding sites. An EIP biologist visited the power line crossing at Navigable Slough on June 17, 2003 and determined that the habitat within and immediately adjacent to the Slough, containing spartina (*Spartina alterniflora*) and pickleweed (*Salicornia virginica*), was suitable for clapper rails. However, clapper rails were not observed within the powerline crossing site.

- *Salt Marsh Harvest Mouse.* The salt marsh harvest mouse, listed as endangered by the USFWS in 1970 and by the CDFG in 1971, is not known to exist in the project area. The salt marsh harvest mouse inhabits dense stands of pickleweed in areas of high salinity. Salt marsh harvest mice are known to exist in Belmont Slough and on Bair and Greco islands (Shellhammer, 1999b). No records exist for the mouse north of this area or in north San Mateo County (CNDDDB, 2002). The narrow, tidal Burlingame Lagoon is bordered by a strip of salt marsh vegetation at the north end of the lagoon (near Towers 2/16 and 2/17). This area supports marginal to poor salt marsh harvest mouse habitat because it is subject to tidal influence (inundation) and there is a lack of dense stands of pickleweed or other sufficient vegetative cover.



Source: USGS 1:24K Transmission Lines DLGs (1998); San Francisco South, Montara Mountain, San Mateo; TIGER Line Files (2000) Roads and Water; and EIP Associates, Digitized Tower Locations; HCP Boundary; Sensitive Area Locations; Clapper Rail Habitat; Wetlands; and GIS Program, July 3, 2003.

- Environmentally Sensitive Areas *
 - Wetlands*
 - Clapper Rail Sightings *
 - - - San Bruno Mountain HCP Boundary *
 - ▲ Substations
 - Transmission Towers
 - Transmission Line
 - Highways
 - Roads
- * Boundaries are approximate

**FIGURE B.4-1
ENVIRONMENTALLY SENSITIVE AREAS**

**PG&E San Mateo-Martin
#4 Conversion Project**
San Mateo County, California

- *West of Bayshore Parcel (Towers 4/33 to 6/49).* No rare or sensitive plants have been identified that could occur in existing habitats on this property. However, the West of Bayshore parcel is one of the last refuges on the San Francisco Peninsula for two listed wildlife species: the California red-legged frog (*Rana aurora draytonii*) and the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*). Extensive surveys and trapping for the California red-legged frog and San Francisco garter snake have been conducted at the parcel in conjunction with recent projects: canal-dredging activities, construction of a new electrical substation in support of the SFO expansion, and the construction of the BART-San Francisco Airport Extension. In each case, individuals of the two sensitive species were found and captured. Based upon these results, both species occur on the West of Bayshore property and could be affected by project-related construction activities. The following is a brief description of each species and their presence on the West of Bayshore property.
- *San Francisco Garter Snake.* The San Francisco garter snake was listed in 1971 as endangered by the CDFG, which provided fully protected status. The USFWS listed the San Francisco garter snake as endangered in 1967. San Francisco garter snakes were historically found in scattered wetlands in the San Francisco Peninsula from the San Francisco county line to the Santa Cruz Mountains. Reasons for their decline include loss of habitat, collection by reptile breeders, and the decline of essential prey species (California red-legged frog). Current known populations all lie within San Mateo County and northern Santa Cruz County.

According to an extensive CDFG study on the San Francisco garter snake's ecology and life history within the West of Bayshore parcel, one of the largest populations of the species once occurred there (Wharton et al., 1987 and Wharton, 1989). By the early 1990s, however, the snake population appeared to have declined significantly (Larsen and McGinnis, 1994). Observations made between 1995 and 2003 during the above referenced construction projects indicate that its numbers may be recovering. However, the effects of the large-scale BART-San Francisco Airport Extension construction on the garter snake remain unclear.

San Francisco garter snakes emerge from hibernation in early March and forage on Pacific tree frogs and California red-legged frogs and their tadpoles in seasonal wetlands on the site. Young snakes are born sometime in May and June. As the wetlands dry, the snakes retreat to permanent water in the canals, where they forage for the remainder of the summer and fall. At this time, any upland activity centers on the canal banks, where they use rodent burrows or dense grass mats as retreats. The snakes enter winter hibernation in October, although they may become active briefly during warm periods. They are believed to use rodent burrows in upland areas near aquatic feeding sites for hibernation. In 2002 and 2003 biologists monitoring construction activities in the West of Bayshore parcel have noticed a spurt of snake activity in late winter during periods of warm, sunny weather starting in February. In summary, the listed San Francisco garter snake is present on the West of Bayshore parcel.

- *California Red-legged Frog.* The California red-legged frog was federally listed as threatened by USFWS in 1996. CDFG listed the California red-legged frog as a species of special concern in

1994. The California red-legged frog occurs in the Coast Ranges from Point Reyes National Seashore to Ventura County, with almost all of the Central Valley, Sierra Nevada foothill, and southern California populations now extirpated.

California red-legged frogs prefer deep, slow-moving freshwater streams and pools bordered by thick riparian vegetation. They are most often found in lowland or foothill areas near permanent water. Their eggs are attached to emergent vegetation. Although California red-legged frogs are generally found in or near the water, they may use nearby upland areas for estivation (hibernation, metabolic slowdown). During the fall and winter rains, they can disperse widely up drainages and over land, using any available natural or unnatural cover.

Large aggregations of California red-legged frog adults were known at only three sites in 1992, including the West of Bayshore parcel. The primary cause of the decline appears to be the species' interactions with the introduced bullfrog (*Rana catesbeiana*), and a wide range of development activities that have eliminated or degraded many of its historical freshwater habitats.

All studies on the airport property have reported the presence of California red-legged frog. In recent years, its numbers have rebounded,. Numerous adults and tadpoles were captured during dredging of the canals and during pre-construction trapping in BART's enclosures (Federal Transit Administration, 1999). This reversal of population numbers is unprecedented in an unmanaged site. However, the reversal may be partly due to low dissolved oxygen levels in the canals in late summer preventing the full development of bullfrogs (USFWS, 1998). Bullfrog tadpoles normally require two years to metamorphose into adult frogs and may not survive the low oxygen levels during the summer months. Because California red-legged frog tadpoles mature by late summer, fluctuations in dissolved oxygen levels would not necessarily affect them.

San Bruno Mountain (Tower 8/68 to Martin Substation). Eight sensitive plant species could potentially occur within the project area on San Bruno Mountain and the adjacent PG&E Hill (CNDDB). Several sensitive plant species have been recorded on San Bruno Mountain such as San Francisco lessingia, white-rayed pentachaeta, San Francisco champion, San Bruno Mountain Manzanita, San Francisco wallflower, and Kellog's horkelia. Table B.4-1 contains a complete list of special status plant species that are known to occur or have been reported in the region. One plant, the San Francisco wallflower, is known to occur in the immediate vicinity of the project and is listed on the California Native Plant Society List 4: Plants of Limited Distribution in California. No other sensitive status plants have been found within the project area.

Three special-status wildlife species are known to occur on San Bruno Mountain: Callippe silverspot butterfly (*Speyeria callippe callippe*), Mission blue butterfly (*Icaricia icarioides missionensis*), and San Bruno elfin butterfly (*Incisalia mossii bayensis*). Table B.4-4 lists larval and adult plants of importance to these species.

- *Callippe Silverspot Butterfly.* The Callippe silverspot butterfly, a federally endangered species, is endemic to the San Francisco Bay Area. Its former range has been reduced to San Bruno Mountain and possibly Sign Hill. Callippe silverspot butterfly larvae feed on johnny-jump-up (*Viola*

pedunculata), and adults collect nectar from California buckeye (*Aesculus californica*), brownie thistle (*Cirsium quercetorum*), Italian thistle, bull thistle (*Cirsium vulgare*), milk thistle, goldenaster (*Heterotheca sessiliflora*), and coyote-mint (*Monardella villosa*). Mating occurs on ridges and topographic summits. Eggs are laid downslope of summits and ridges on dried portions of the larval food plant.

- *Mission Blue Butterfly*. The Mission blue butterfly, a federally endangered species that was formerly relatively widespread on the San Francisco and Marin peninsulas, is now restricted to a few sites in these areas. On San Bruno Mountain, 2000 acres of critical habitat for the butterfly is being managed by the San Mateo County Department of Parks and Recreation. The habitat that the butterfly requires is known as coastal scrub, a restricted habitat type found in California. Larvae of the Mission blue emerge from a dormant state in early spring as their host plants, perennial lupines (*Lupinus albifrons*, *L. variicolor*, and *L. formosus*), begin their spring growth cycle. The larvae eventually enter the ground to pupate. Several weeks later, as the lupines begin to flower, the adult butterflies emerge to feed on nectar, mate, and lay eggs. The eggs hatch within a few days and the larvae eat for a few weeks, before entering dormancy until the following spring when they complete their development. Adults collect nectar from the flowering plants such as goldenaster, coast buckwheat, blue dicks (*Dichelostemma capitatum*), and Ithuriel's spear (*Triteleia lax*). Adult Mission blue butterflies mate, lay eggs, and die between late March and early July.
- *San Bruno Elfin Butterfly*. San Bruno elfin butterfly, a federally endangered species, is a small brownish butterfly found in San Mateo County on San Bruno Mountain, Montara Mountain, and Milagra Ridge. The butterflies occur above 400 feet above mean sea level on steep, rocky, north-facing slopes. Larvae feed on one species of stonecrop (*Sedum spathulifolium*), and adults collect nectar from bladder-parsnip (*Lomatium utriculatum*), yarrow (*Achillea millefolium*), buttercup (*Ranunculus californicus*), and beach strawberry (*Frageria chiloensis*).

Habitat Conservation Plan. Given the listed species known to occupy San Bruno Mountain and facing considerable development pressures, San Mateo County, nearby cities, and the Committee to Save San Bruno Mountain prepared a Habitat Conservation Plan (HCP) in consultation with the USFWS and CDFG, to ensure the survival of the listed plant and wildlife species and the preservation of their habitats. The San Bruno Mountain Area HCP was completed in 1982 and approved by the USFWS in 1983. It was the first HCP authorized under the Endangered Species Act Incidental Take Permit provisions. The plan resulted in limited development of endangered species habitat in exchange for implementation of a long-term program, funded by development, to protect and enhance the remaining portions of San Bruno Mountain as habitat. The HCP consists of two volumes. Volume One describes the Covered Species, Biological Issues, Conservation Principles, and Institutional Requirements of the Plan. Volume Two details the HCP Operating Programs for the 36 separate parcels that are included in the Plan Area. The San Mateo County Department of Parks and Recreation is the Plan Operator. No work may proceed within the HCP area on San Bruno Mountain without a Site Activity Permit from the HCP Plan Operator of the San Mateo County Parks and Planning Division.

Table B.4-4
Larval and Adult Plants Important to the San Bruno Elfin, Mission Blue, and Callippe Silverspot Butterflies in the San Bruno Mountain Area

Butterfly	Plant Name	Type
San Bruno elfin <i>Incisalia mossii bayensis</i>	Sedum spathulifolium (stonecrop)	Larval food plant
	Lomatium utriculatum (bladder-parsnip)	Adult nectar plant
	Achillea millefolium (yarrow)	Adult nectar plant
	Ranunculus californicus (buttercup)	Adult nectar plant
Mission blue <i>Icaricia icarioides missionensis</i>	Frageria chiloensis (beach strawberry)	Adult nectar plant
	Lupinus albifrons (silver bush lupine)	Larval food plant
	L. formosus (lupine)	Larval food plant
	L. variicolor (lupine)	Larval food plant
	Eriogonum latifolium (coast buckwheat)	Adult nectar plant
	Heterotheca sessiliflora (goldenaster)	Adult nectar plant
	Dichelostemma capitatum (blue dicks)	Adult nectar plant
Callippe silverspot <i>Speyeria callippe callippe</i>	Triteleia laxa (Ithuriel's spear)	Adult nectar plant
	Viola pedunculata (Johnny-jump-up)	Larval food plant
	Aesculus californica (California buckeye)	Adult nectar plant
	Carduus pycnocephalus (Italian thistle)	Adult nectar plant
	Cirsium quercetorum (brownie thistle)	Adult nectar plant
	C. vulgare (bull thistle)	Adult nectar plant
	Silybum marianum (milk thistle)	Adult nectar plant
	Heterotheca sessiliflora (goldenaster)	Adult nectar plant
Monardella villosa (coyote-mint)	Adult nectar plant	

Source: Arnold, 1988.

Significance Criteria

The significance criteria for this analysis is based on Appendix G of the CEQA Guidelines. Impacts to biotic resources from the proposed San Mateo-Martin #4 Conversion Project would be considered significant if the project would:

- result in the “take” of a fully protected species as listed by the State of California; a “take” above those allowed by the USFWS as “incidental takes” of species listed under the federal Endangered Species Act; or any adverse effect upon other listed or recognized sensitive species that could jeopardize the continued existence of the population of those species at the project site.
- alter the structure, function, or natural characteristics of a riparian or other natural community/habitat that is recognized as sensitive due to its limited extent or importance to native wildlife.

- alter the structure, function, or natural characteristics of wetland habitats in excess of a total of 0.5 acres in size.
- block wildlife movements or cause a substantial number of wildlife to alter their movement patterns to avoid a project feature.
- conflict with state, local or federal resource preservation plans, Habitat Conservation Plans or any other approved and adopted plans in support of resource conservation efforts.

Methodology

The San Mateo–Martin #4 60 kV Conversion Project would be located on the same towers as the PG&E San Mateo–Martin 115 kV Circuit #3 Reconductoring Project, which was reconducted in 2000. This analysis of the proposed project is based on the following information sources:

- Proponent’s Environmental Assessment, November 2002;
- California Native Plant Society Data Base;
- California Natural Diversity Data Base of U.S. Geological Survey Montara Mountain, Half Moon Bay, San Francisco South, Hunters Point, Woodside, Redwood Point, and San Mateo 7.5-inch series quadrangles;
- Field surveys in April, May, and June 2003 by Ric Villasenor, Marcus Bole, and Brent Spencer, consultant biologists for the CPUC;
- Biological Assessment prepared for the PG&E San Mateo–Martin 115 kV Circuit #3 Reconductoring Project, October 1999;
- CDFG Agreement for the PG&E San Mateo–Martin 115 kV Circuit #3 Reconductoring Project, January 2000; and
- USFWS Biological Opinion for the PG&E San Mateo–Martin 115 kV Circuit #3 Reconductoring Project, March 13, 2001.

Explanation of Biological Resources Checklist

a. Adverse Effect of Special

Status Species or Their Habitat

Less-Than-Significant with Mitigation Incorporated

Basic construction activities associated with the proposed project, such as truck traffic, equipment hauling, preparing the pull and tension sites, and preparation of the equipment laydown or staging areas, could affect special status species that are known to occur along the project alignment. Typically, two types of impacts or “takes” could adversely affect the above-mentioned sensitive species as a result of construction activities: direct harm to individual animals and plants from construction equipment and/or materials and indirect harm resulting from the disturbance of habitats. Direct harm could occur if trucks or equipment rolled over a listed species, such as the California clapper rail, San Francisco garter snake, California red-legged frog, or listed plant species on San Bruno Mountain. Similarly, auguring of holes for wood poles or for the ground rods could inadvertently strike a listed species. Indirect harm to habitats may occur from excessive erosion and sedimentation that could affect waterways, accidental fires or releases of hazardous materials, compression of soils or trampling

of vegetation by equipment and even construction crews accessing the work areas on foot, dust generation created by passing vehicles or downdrafts from helicopters used to access some towers, construction-related noise disturbing clapper rail nesting sites, or destruction of burrows when installing the wood poles for the temporary guard structures. Specific species that could be affected are identified below, by project corridor segment:

- in the West of Bayshore parcel, the San Francisco garter snake and California red-legged frog;
- in the Navigable Slough area, the clapper rail; and
- in the San Bruno Mountain area, the Mission blue butterfly, Callippe silverspot butterfly, San Bruno elfin butterfly, and several special status plant species.

PG&E will need to secure a number of permits from state and federal agencies in order to perform the reconductoring work. The avoidance and mitigation measures proposed by PG&E are based upon the conditions and requirements of the CDFG Agreement¹ and the USFWS Biological Opinion² for the San Mateo–Martin #3 115 kV Circuit Reconductoring Project that was completed in February 2000. For the #3 Reconductoring Project, the CDFG and USFWS found that implementation of the conditions from the CDFG Agreement and the USFWS Biological Opinion would allow PG&E to avoid mortality or injury to state fully protected species and ensure “no jeopardy” to federally protected species. The agencies reached that conclusion despite the project’s intrusive construction work within sensitive areas during the rainy season, when construction activities typically result in greater disturbances and impacts to habitats.

Construction work activities for the proposed #4 Reconductoring Project would consist of replacing existing conductors with new conductors on existing towers, replacing crossarms with new crossarms on some towers, replacing insulators, replacing existing cross members and braces of some towers as needed for structural reinforcement, and installing personal protection grounds. No new replacement structures are needed, no work to existing tower foundations would take place, and no new access roads would be constructed. Ground disturbance activities would be limited to pull and tension sites, where heavy equipment would be located and positioned and where wooden poles would be set for the temporary guard structures.

Given the lack of substantial new construction for the San Mateo–Martin #4 60 kV Conversion Project, potential impacts to sensitive species would be more limited than planned for and encountered by the San Mateo-Martin #3 Reconductoring Project. Nevertheless, PG&E has incorporated many of the same conditions from the #3 Reconductoring Project into plans for the proposed project (see Table B-5, APMs 11 through 61). Incorporation of these measures into the project as proposed by PG&E would substantially reduce the potential for direct and indirect harm to listed species and their habitats.

¹ *Agreement Relating to the San Francisco Garter Snake for PG&E San Mateo–Martin #3 115 kV Circuit Reconductoring Project West of Bayshore Parcel.*

² *Emergency Formal Consultation with the ACOE, which represents the USFWS’ Biological Opinion.*

Additional measures are still warranted and would be largely tailored based on any new conditions that the resource agencies choose to impose beyond those applied to the #3 project.

A notable change in the setting from the time that the authorizations and permits were issued for the San Mateo-Martin #3 Reconductoring Project is the identification of clapper rail in the project vicinity. As noted earlier, spartina is found along Navigable Slough near Towers 7/55 and 7/56, where a pull and tension site is proposed at the parking lot of a private business. While construction-related noise is likely to be masked by the neighboring highway traffic on US 101, there may be occasions when the puller, tensioner, truck and trailer, or boom truck would be heard above the ambient vehicular noise. The clapper rail is sensitive to changes in the noise environment and could be adversely affected by activities at the pull and tension site. If clapper rails were present, helicopters hovering at either of these two towers would generate noise and downdraft impacts that would adversely affect this avian species. Disturbance to the clapper rail would be a significant adverse effect.

At the time this document was being prepared, PG&E was in the process of securing permits or agreements from various state and federal resource agencies, including a Clean Water Act Section 404 #3 Nationwide Permit from the US Army Corps of Engineers, an Endangered Species Act Section 1802 Agreement from CDFG, an Endangered Species Act Section 7 Biological Opinion from the USFWS, and a Clean Water Act Section 401 Certification from the Regional Water Quality Control Board (RWQCB). Each of these agencies was contacted by the CPUC to verify the agency's intended action and status on this matter.³ The San Francisco District of the US Army Corps of Engineers (USACE) has requested formal consultation with the USFWS under Section 7 of the federal Endangered Species Act in compliance with General Condition (GC) Number 11 of their Nationwide Permits. The USFWS is now in the process of completing its consultation and will be issuing a Biological Opinion. Other pertinent conditions of the USACE nationwide permit include the requirement that PG&E secure Section 401 Certification from the RWQCB (GC No. 9) and employ measures to minimize soil disturbance in wetlands such as the use of mats for heavy equipment (GC No. 5). The CDFG is in the process of reviewing the project for a Section 1802 Agreement and expects to provide PG&E a draft of this agreement in the very near future.

In addition to APM-11 through APM-17, implementation of the following supplementary mitigation measures, applicable to all four environmentally sensitive areas, and any additional measures defined in the Section 1802 Agreement with the CDFG and in the Biological Opinion to be issued by the USFWS would minimize potential impacts to the sensitive species and their habitats to a less than significant level. The following measures also stipulate procedures to deal with possible variances from the agreed-upon mitigation measures, approved plans, described construction actions, and other conditions of approval. Variance is defined as a minor change that will not trigger other permit requirements, that does not increase the severity of any impact or create a non-impact, and that allows compliance with

³ Phone contacts with David Johnston, CDFG, May 8, 2003; Valerie Bloom, USFWS, May 9, 2003; Edward A. Wylie, US Army Corps of Engineers, June 6, 2003; Susan Gladstone, San Francisco Bay Regional Water Quality Control Board, June 6, 2003.

the intent of the mitigation measure. If ground disturbance for the whole project exceeds one acre, then the project would also be subject to issuance of a National Pollutant Discharge Elimination System (NPDES) Permit, which would require a Storm Water Pollution Prevention Plan (SWPPP).

MM BIO-1 PG&E shall retain qualified biologists and other qualified resource specialists, as necessary, to monitor project construction within the West of Bayshore parcel and the San Bruno Mountain segments. Monitors shall be hired and trained prior to construction and shall be responsible for pre-construction surveys, work area delineations (e.g., staking, flagging, etc.), onsite monitoring, documentation of violations and compliance, coordination with construction inspectors, and post-construction documentation. The PG&E on-site biological monitors shall prepare weekly reports and send them to the CPUC and the CPUC monitors. The PG&E on-site biological monitors shall prepare a post-construction compliance report for the West of Bayshore parcel within 60 days of end of construction and send it to the CPUC, CDFG, and USFWS.

PG&E's monitors shall be responsible for completing a CPUC Construction Staging Plan Form and obtaining clearance from the CPUC and, if necessary, the resource agencies for variances. All variances shall be documented and no variances shall be allowed with verbal approval only. Variances that are considered minor with little risk to sensitive resources by the PG&E on-site biological monitors and the CPUC biological monitors may be approved on the site but will be documented with a Construction Staging Plan Form. Variances that could affect sensitive resources but are required to ensure the health and safety of work crews shall also be documented in a Construction Staging Plan Form. (MM BIO-1 expands upon and supplements APM-20, -21, -31, -44, -45 and -61.)

MM BIO-2 PG&E shall conduct Worker Environmental Awareness Program (WEAP) training for construction crews (primarily crew and construction foremen) before construction activities begin within any of the sensitive habitat areas. The WEAP shall include a brief review of the special status species and other sensitive resources that could occur in the proposed project area (including their life history and habitat requirements and an identification of portions of the project corridor where they might be found) and their legal status and protection. The program shall also cover all mitigation measures, environmental permits and proposed project plans, such as BMPs, erosion control and sediment plan, reclamation plan, and any other required plans. The designated biological monitor shall be responsible for ensuring that construction personnel adhere to the guidelines and restrictions. WEAP training sessions shall be conducted as needed for new personnel brought onto the job during the construction period. A list of all personnel who have attended the WEAP training shall be kept by the biological monitor and shall be available for CPUC review in the field at all times, and a copy shall be submitted to the CPUC. During WEAP training, construction personnel shall be informed of the importance of avoiding ground-disturbing activities outside of the

designated work area. (MM BIO-2 expands upon and supplements APM-38 and APM-60.)

Implementation of the following mitigation measures in conjunction with APM-18 through APM-54 would reduce potential impacts to the San Francisco garter snake and California red-legged frog on the West of Bayshore property to a less-than-significant level.

MM BIO-3 All planned work activities and construction access routes at each construction site shall be defined and described in detail in a Construction Staging Plan Form that will be submitted to and approved by the CPUC and, if required, by the CDFG and USFWS. The form shall identify, at a minimum, the nature of the work to be performed, the number and type of equipment to be used, the methods of accessing the construction area, the duration of construction, the individual in charge of the construction work, and information on the location of sensitive biological resources within or along construction sites. The form or an equivalent version subject to CPUC approval shall be completed and submitted for agency approval if required (see Appendix H to the Initial Study for the form). (This measure supplements APM-35.)

MM BIO-4 APMs-29, -38, -39, -45, -47, -48, and -49 all refer to the “approved Mitigation and Monitoring Plan.” This mitigation measures amends the APMs to also include reference to compliance with the CDFG 1802 Agreement and conditions in the USFWS Biological Opinion. These two additional documents will define the protective measures for each sensitive species and will take precedence over the Mitigation and Monitoring Plan should there be any differences among the documents. PG&E shall ensure that its biological monitors have the defining documents to avoid any confusion or uncertainty in the field.

MM BIO-5 At the end of each workday, any open holes shall be fully covered, after they have been inspected by the on-site biologist, with steel plates or other effective coverings to prevent entrapment of wildlife species. If common wildlife species are found in a hole, the designated biological monitor shall immediately be informed and the animal(s) shall be removed. If the animal(s) is/are a sensitive species that requires special handling authorization (e.g., San Francisco garter snake), a qualified biologist (agency-permitted or approved to handle a specific species) shall remove the animal before resumption of work in that immediate area. PG&E shall specify this requirement in its agreements with all construction contractors. (MM BIO-5 expands upon and supplements APM-20, -33, -34, -39, and -43.)

MM BIO-6 PG&E shall acquire all permits and authorizations required by federal, State, regional, and local jurisdictions to construct near areas with sensitive biological resources. Throughout the life of the project, additional species could be listed or designated as special status, and PG&E shall comply with any new requirements of the USFWS or CDFG for such species. PG&E shall notify the CPUC of any amendments or additions to permits.

- MM BIO-7 If PG&E or any of its employees, contractors, or agents kills or injures an individual San Francisco garter snake or California red-legged frog or finds any such animal dead or injured, project activities shall be halted immediately on the West of Bayshore parcel, and the CDFG, USFWS, and CPUC shall be notified within 30 minutes of PG&E's lead biological monitor confirming the death or injury. PG&E will not allow work to resume until receiving authorization from USFWS and CDFG. (MM BIO-7 supersedes APM-52.)
- MM BIO-8 In the event that wet weather should occur during project construction to the point that site access and construction activities would result in tire ruts and disturbances to the ground surface or present risks of equipment getting stuck in mud, the following measures shall supplement APM-33.
- Any improvements to temporary access routes or work sites in order to provide a stable and firm base shall be accomplished through the use of removable and temporary structures such as timber mats, wood or steel grating or concrete blocks. Any such improvements shall not include the use of base rock or any other loose fill material unless there is a liner under it. Once work in the area is completed or use of the temporary access route is no longer necessary to support work activities, the temporary materials shall be immediately removed and the site restored to its condition prior to the initiation of work.
 - In heavily flooded areas or conditions, water from any dewatering work areas or excavation sites shall not be discharged to the surrounding uplands. Direct discharges to adjacent waterways shall not be allowed without a filter bag at the end of the discharge hose. If a waterway is not available, the discharge water shall be placed into a basin consisting of hay bales and filter fabric. Once sediments have dropped to the bottom of the basin, the water shall be collected and discharged to a waterway. The sediment shall be collected and disposed of off-site.
- MM BIO-9 Prior to driving the ground rods into the ground, a biological monitor shall inspect an area defined by a six-foot radius from the selected location for the hole and identify all rodent burrows. Each rodent burrow shall be hand dug and cleared of any San Francisco garter snakes by a monitoring biologist under the supervision of a permitted biologist. (MM BIO-9 supersedes APM-22.)
- MM BIO-10 A biological monitor shall be continually present during all vegetation clearing on access roads and work sites, and all cut vegetation shall be removed the same day it is cut. (MM BIO-10 expands upon and supplements APM-26.)
- MM BIO-11 A functional fire extinguisher shall be required in each PG&E and PG&E contractor vehicle that enters the West of Bayshore property. (MM BIO-11 expands upon and supplements APM-15.)

To date clapper rails have not been observed within the proposed pull and tension site in Navigable slough. Nevertheless, PG&E has agreed to implement the following mitigation measure that would reduce potential impacts to the endangered California clapper rail to less than significant.

MM BIO-12 Construction noise from the proposed pull or tension work site at Towers 7/55 and 7/56 could disrupt clapper rail nesting in Navigable Slough, although none have been observed at this location. Helicopter noise and downdraft would also affect any clapper rail present. To avoid any possible impact to clapper rail in the vicinity PG&E shall:

- Preclude use of helicopters for work on Towers 7/55 and 7/56.

AND EITHER

- Schedule the construction work at the pull and tension site and on Towers 7/55 and 7/56 between September 1 and January 15 to avoid the clapper rail breeding period. This option would avoid any noise impacts to clapper rail nests.

OR

- Conduct clapper rail surveys, using USFWS-approved protocols, prior to initiating the adjacent habitat in Navigable Slough, then work may proceed as planned. However, if clapper rails are found in Navigable Slough, then PG&E shall consult with the USFWS to determine if mitigation measures are required before the work may proceed. A possible mitigation measure would be to erect a sound barrier between the pull or tension site and Navigable Slough.

Implementation of the following mitigation measures, in conjunction with MM BIO-1 and BIO-2, above, APM-11 through APM-17, and APM-55 through APM-61 would reduce potential impacts to the sensitive butterfly species on San Bruno Mountain to a less-than-significant level.

MM BIO-13 PG&E shall flag or stake the access roads/routes and all work areas in the West of Bayshore and San Bruno Mountain areas to demarcate the minimum area necessary to safely conduct project construction and staging. PG&E and its contractors shall stay within the designated access and work areas. The flagged or staked work areas shall be documented in a Construction Staging Plan Form (see MM BIO-3) to be approved by the CPUC and, if required, the San Bruno Mountain HCP administrator for San Mateo County, the CDFG, and USFWS. The form shall identify, at a minimum, the nature of the work to be performed, the number and type of equipment to be used, the methods of accessing the construction area, the duration of construction, the individual in charge of the construction work, and information on the location of sensitive biological resources within or along construction sites. A form that shall be completed and submitted for agency approval is included in Appendix H. (This measure supplements APM-31, -37, -56, and -58.)

MM BIO-14 PG&E's Revegetation Plan (see Appendix F) shall be submitted for review and approval before any revegetation or site restoration efforts may be initiated.

**b. Adverse Effect on Riparian Habitats/
Other Sensitive Natural Communities** **Less Than Significant with Mitigation Incorporated**

There are records of sensitive natural communities in the CNDDDB for the project region, including riparian habitats, serpentine bunchgrass grasslands, northern maritime chaparral, valley needlegrass, and northern coastal salt marsh. However, the project corridor only supports remnants of the coastal brackish/salt marsh habitat in the Burlingame Lagoon area, riparian habitat in the West of Bayshore parcel, and valley needlegrass habitat on San Bruno Mountain.

Burlingame Lagoon. The tidal Burlingame Lagoon is bordered by a strip of salt marsh that is very narrow in the southern portion and wider in the northern portion. This habitat is best described as a remnant of the once widespread coastal brackish/salt marsh that surrounded much of the San Francisco Bay. During construction, PG&E would avoid disturbing large areas that support patches of coastal brackish /salt marsh by implementing MM BIO-1 and -2 above and APMs 11 through 17.

West of Bayshore Parcel. The riparian habitats on the site are limited to the immediate banks of the two major drainage canals on the property. Cupid's Row Canal (also known as Crystal Springs Creek) in the northern portion of the property and San Felipe-South Lomita Canal in the southern portion of the property. The power line right-of-way runs parallel to portions of these canals and crosses each canal at one location. The riparian communities within each of these canals are composed of cattails thickets and tules within the water channel and scattered thickets of willow trees on the banks of the canals. None of the tower locations or proposed work areas are located within the banks of these two canals. Consequently, the proposed project would not have any impact to the riparian habitats on the West of Bayshore parcel.

San Bruno Mountain. The San Bruno Mountain segment supports small remnant patches of valley needlegrass habitat. The areas are documented through the San Bruno HCP efforts and other PG&E vegetative studies such as the PG&E Jefferson-Martin Project. During construction, PG&E would avoid disturbing large areas that support patches of valley needlegrass habitat by implementing MM BIO-12 and -13 above, BIO-15 below, and APMs 55 through 61. With these provisions, the proposed project would not significantly affect needlegrass habitat on San Bruno Mountain.

MM BIO-15 PG&E shall consult with the HCP Habitat Manager to obtain mapped locations of needlegrass habitat on San Bruno Mountain. All work areas (such as staging areas and access roads) shall be flagged or staked and reviewed in the field by the HCP Habitat Manager. If needlegrass habitat is in proximity to an equipment staging area, the use of this area shall be approved by the Habitat Manager prior to any construction staging.

c. Adverse Effect On Wetlands **Less-Than-Significant Impact**

The majority of the project corridor is located within a highly urbanized landscape and as a result, local hydrology and drainage patterns have been significantly altered and modified. On the West of Bayshore segment, hydrophytic vegetation indicative of freshwater wetlands is scattered along the canal channels, as discussed above, and in topographic depressions that fill with water during portions of the fall and winter months.

The project could have a significant impact if it were to substantially affect federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, and substantial hydrological interruption. Six towers (4/36, 4/38, 4/40, 5/41, 5/44, and 5/46) are located in delineated seasonal wetlands. Of these six towers, work crews would need to make modifications to Towers 4/36, 4/40, and 5/41. Crews would access these towers in a manner that would minimize impacts to the wetland habitat on foot or helicopters as determined in the field in consultation with the PG&E monitors and approved by the CPUC monitors.

The work activities that are planned in wetlands would include the clearing of vegetation by hand, setting of temporary guard structures between towers 4/36 and 4/37, and removal of two wood poles. Six temporary wood poles for the guard structures would be placed in the wetland area between Towers 4/36 and 4/37. Each pole would have at least one guy anchor situated 5 to 15 feet from the pole and set 6- to 8-foot-deep. Near Tower 4/38, four temporary wood poles would be installed to support the guard structure while stringing new lines over the existing, energized 60 kV lines. It is estimated that five cubic yards of native material would be used to fill the pole holes after pole removal. These activities would be temporary and would affect less than 0.5 acre of jurisdictional wetlands. As a result, impacts to wetlands would be less than significant.

d. Substantial Interference With Wildlife Movements

No Impact

Because project construction would occur within an existing powerline right-of-way on existing towers and at existing substations, the project would not significantly interfere with native resident wildlife movement or with established wildlife movement corridors or nursery sites. The proposed reconductoring would result in minor modifications to existing substations. The majority of the work would occur within the existing boundaries of the substations. In and around substations, electrical and maintenance operations occur on a week-to-week basis. For this project, the work inside the substations or the immediate vicinity of a substation would not be considered significantly more adverse than what occurs on a day-to-day or week-to-week basis.

There should be no potential for avian mortality as a result of this work. Towers are highly visible and should not pose any danger to bird flight, especially since this corridor contains several parallel lines. On 115 kV lines, electrocution is not generally a problem because the clearances between conductors and towers are wider than the wingspans of birds that might roost on them. The line does not cross any major avian flyways, and there are no known problems with bird collisions on this line.

The proposed construction activities are in areas that are already subject to some level of disturbance from daily operations and thus construction would not alter wildlife movements or breeding and rearing areas on the project site including the Burlingame lagoon, West of Bayshore, and the San Bruno Mountain segments. The construction phase of the project is planned to occur during the time of year when movements of the San Francisco garter snake and California red-legged frog are typically at a minimum and outside of their breeding season. As a result, there would be no impact of substantial interference with wildlife movements.

e. Conflict With Resource Preservation Plans

No Impact

The proposed project would not conflict with any local policies, ordinances, or provisions of conservation plans. Activities that are proposed to take place on San Bruno Mountain would be subject to the *San Bruno Mountain Area Habitat Conservation Plan*. PG&E would adhere to all applicable policies and provisions of the *San Bruno Mountain Area Habitat Conservation Plan* during project construction and operation. The *San Bruno Mountain Area Habitat Conservation Plan* recognizes that reconductoring and rebuilding existing lines are expected activities. It also states that these activities will occur within the existing rights-of-way and require the use of existing roads. PG&E must notify the San Bruno Mountain Area Habitat Conservation Plan operator of its proposed activity (i.e., give the plan operator the Construction Staging Plan Forms for the areas where the activities would take place). The plan operator can then review the proposed project and suggest modifications if necessary. If PG&E were to disagree with the suggestions from the plan operator, PG&E must resolve the differences with the plan operator and come to an agreement before work can be initiated.

There are no other adopted or approved plans related to biological resources that apply to the project corridor.

**f. Conflict With Provisions of
Habitat Conservation Plans
or Natural Community
Conservation Planning**

Less-Than-Significant with Mitigation Incorporated

There is no adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan for the West of Bayshore or Burlingame Lagoon. As described above, PG&E will adhere to all applicable policies and provisions of the *San Bruno Mountain Area Habitat Conservation Plan* (SBMHCP) during project construction and operation and must obtain a permit before undertaking any work. Implementation of MM BIO-3 would ensure that the project does not conflict with the SBMHCP.