

TABLE 4.7-1
SPECIAL STATUS SPECIES POTENTIALLY IN THE PROJECT VICINITY
(A list of status codes is provided at the end of this table)

Species	Status USFWS or NMFS/ CDFG/ CNPS	General Habitat	Potential for Occurrence in the Project Vicinity	Associated PG&E Power Plant
<u>Species that are Listed or Proposed for Listing</u>				
Plants				
<i>Erysimum capitatum</i> ssp. <i>angustatum</i> Contra Costa wallflower	FE/CE/1B	Inland dunes along the San Joaquin River	Present. Populations exist adjacent to PG&E transmission tower.	Contra Costa, Pittsburg
<i>Lilaepsis masonii</i> Mason's lilaepsis	FSC/CR/1B	Riparian scrub, freshwater and brackish marsh, within the tidal zone in muddy or silty soil, dunes	Present. Occurs at picnic area of Contra Costa plant.	Contra Costa, Pittsburg
<i>Cordylanthus mollis</i> ssp. <i>mollis</i> Soft bird's beak	FE/CR/1B	Coastal saltmarsh. Associated with saltgrass, pickleweed, and Mason's lilaepsis	Moderate. Plant occurs in tidal saltmarsh approximately one mile west on PG&E property.	Pittsburg, Contra Costa
<i>Oenothera deltooides</i> ssp. <i>howellii</i> Antioch dunes evening primrose	FE/CE/1B	Interior dunes associated with remnant river bluffs and sand dunes east of Antioch	Present	Contra Costa, Pittsburg
<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i> Suisun thistle	FE/--/1B	Saltmarsh. Most often seen near small watercourses within saltmarsh, growing with bulrush, blackberry, and saltgrass.	Moderate to High.	Contra Costa, Pittsburg
<i>Aster lentus</i> Suisun marsh aster	FE/--/1B	Marshes and swamps, brackish and freshwater. Most often seen along sloughs with bulrush, blackberry, and cattail.	Present. Approximately 10 plants observed in 1990 on the Pittsburg Marina breakwater near New York Point.	Contra Costa, Pittsburg
<i>Dichanthelium lanuginosum</i> var. <i>thermale</i> Geysers panicum	FSC/CE/1B	Near hot springs and hydrothermally altered soils	Present. Largest colonies are in Geyser Canyon, near Units 5 and 6, and the Little Geysers, near Unit 18. Smaller populations occur between these two areas within the Big Sulphur Creek drainage.	Geysers
<i>Pentachaeta bellidiflora</i> White-rayed pentachaeta	FE/CE/1B	Valley-foothill grassland on open, dry, rocky slopes and grassy areas. Often found on serpentinite substrate.	Moderate	Potrero,
Birds				
<i>Empidonax Traillii</i> (<i>nesting</i>) Willow flycatcher	--/CE/--	Broad, open river valleys, large mountain meadows, with dense willow thickets necessary for nesting	High	Geysers
<i>Falco peregrinus anatum</i> American peregrine falcon	FE/CE/--	Open grasslands, cliffs	High	Geysers
<i>Strix occidentalis caurina</i> Northern spotted owl	FT/--/--	Dense, old growth, multi-layered mixed conifer, redwood and Douglas-fir habitats with permanent water and snags	Moderate	Geysers
<i>Laterallus jamaicensis coturniculus</i> California black rail	FSC/CT/--	Saline, brackish, and fresh emergent wetland in coastal and estuarine habitats supporting pickleweed, bulrush, and saltgrass	Moderate. Occurs less than 2 miles west at Avon-Port Chicago marsh.	Pittsburg

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<u>Species that are Listed or Proposed for Listing (cont.)</u>				
Birds (cont.)				
<i>Rallus longirostris obsoletus</i> California clapper rail	FE/CE/--	Saltmarsh supporting pickleweed, bulrush, and coyote brush	Moderate to High	Pittsburg
<i>Sterna antillarum browni</i> California least tern	FE/CE/--	Feeds in estuaries, nests in adjacent barren or sparsely vegetated sites, usually a sandy or gravelly substrate	Present	Pittsburg
<i>Lanius ludovicianus</i> Loggerhead shrike	FE/CSC/--	Prefers open-canopied valley foothill hardwood, valley foothill riparian. Occurs rarely in urbanized areas, but often found in open cropland	High	Geysers, Pittsburg, Contra Costa
<i>Ardea herodias</i> (rookeries) Great blue heron	--/CR/--	Shallow estuaries and fresh and saline emergent wetlands. Nests colonially in secluded groves of tall trees near feeding areas	Moderate	Pittsburg
Fish				
<i>Oncorhynchus tshawytscha</i> Winter-run Chinook salmon	FE/SE/--	Cool, perennial, streams and estuaries of the Pacific Coast	Present (Pittsburg, Contra Costa). Low (Potrero).	Potrero, Pittsburg, Contra Costa
<i>Oncorhynchus tshawytscha</i> Spring-run Chinook salmon	FPE/SCE/--	Cool, perennial streams and estuaries of the Pacific Coast	Present (Pittsburg, Contra Costa). Low (Potrero).	Potrero, Pittsburg, Contra Costa
<i>Oncorhynchus tshawytscha</i> Central Valley fall-run/late fall-run Chinook salmon	FPT/--/--	Cool, perennial streams and estuaries of the Pacific Coast	Present (Pittsburg, Contra Costa). Low (Potrero).	Potrero, Pittsburg, Contra Costa
<i>Oncorhynchus kisutch</i> <i>Central California Coho salmon</i>	FT/SE*/-- (*south of SF Bay)	Cool, perennial streams and estuaries of Central California	Low. May be extinct from SF Bay (San Francisco Estuary Project, 1997).	Potrero, Pittsburg, Contra Costa
<i>Onchorhynchus mykiss</i> Central California Coast steelhead	FT/--/--	Cool, perennial, coastal streams and estuaries of Central California	Present (Geysers). Low (Potrero).	Potrero, Geysers
<i>Onchorhynchus mykiss</i> Central Valley steelhead	FT/--/--	Cool, perennial streams and estuaries of the Central Valley region of California	Present	Pittsburg, Contra Costa
<i>Hypomesus transpacificus</i> <i>Delta smelt</i>	FT/ST/--	Brackish and freshwater of large channels in the Sacramento-San Joaquin Delta region	Present	Pittsburg, Contra Costa
<i>Pogonichthys macrolepidotus</i> <i>Sacramento splittail</i>	FPT/CSC/--	Backwaters and pools of rivers, lakes in SF Bay-Delta and lower Sacramento River; tolerant of brackish waters	Present	Pittsburg, Contra Costa
Mammals				
<i>Reithrodontomys raviventris</i> Saltmarsh harvest mouse	FE/CE/--	Found only in saline emergent wetlands of San Francisco Bay and its tributaries. Primary habitat is pickleweed.	Moderate. Records exist for saltmarsh approximately 3 miles west.	Pittsburgh

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<u>Species that are Listed or Proposed for Listing (cont.)</u>				
Mammals (cont.)				
<i>Taxidea taxus</i> American badger	--/CR/--	Open stages of most shrub, forest, and herbaceous habitats with friable soil	Moderate	Geysers
<u>Species of Special Concern</u>				
Plants				
<i>Grindelia hirsutula maritima</i> San Francisco gumplant	FSC/--/1B	Coastal scrub, coastal bluff scrub, valley-foothill grassland on sandy or serpentine slopes and sea bluffs	Moderate	Potrero,
<i>Blepharizonia plumosa</i> ssp. <i>plumosa</i> Big tarplant	--/--/1B	Valley-foothill grassland, usually seen on dry hills and plains	Low. Site does not provide suitable habitat.	Pittsburg, Contra Costa, Potrero
<i>Limosella subulata</i> Delta mudwort	--/--/2	Riparian scrub, freshwater, and brackish marsh, usually on mud banks. Often seen with Mason's lilaepsis.	Moderate. Several plants observed on the west end of Brown's Island, across New York Slough.	Pittsburg, Contra Costa
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	FSC/--/1B	Freshwater and brackish marshes. Associated with bulrush, cattail, coyotebrush.	High. Hundreds of plants observed at several locations on southwest side of Brown's Island, northeast of Pittsburg plant and on Chipps Island directly north and on Pittsburg Marina breakwater at New York Point.	Pittsburg
<i>Atriplex depressa</i> Brittlescale	--/--/1B	Alkali playas, valley-foothill grassland, vernal pools, especially adjacent to freshwater and saltmarsh	Low	Pittsburg, Contra Costa
<i>Atriplex joaquiniana</i> San Joaquin saltbush	FSC/--/1B	Alkali meadow, valley-foothill grassland. Most often seen in seasonal alkali wetlands or alkali sink scrub.	Low	Contra Costa, Pittsburg
<i>Atriplex cordulata</i> Heartscale	FSC/--/1B	Valley-foothill grassland and meadows, most often in alkaline flats with sandy soils	Low	Contra Costa, Pittsburg
<i>Grindelia hirsutula maritima</i> San Francisco gumplant	FSC/--/1B	Coastal scrub, coastal bluff scrub, valley-foothill grassland on sandy or serpentine slopes and sea bluffs	Moderate	Potrero,
<i>Eriogonum nervulosum</i> Snow Mountain buckwheat	FSC/--/1B	Openings in serpentine chaparral	Present. Four known localities along the Mayacmas ridgeline southeast of Unit 13 and generally south of Unit 16, Lake County.	Geysers

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<u>Species of Special Concern (cont.)</u>				
Plants (cont.)				
<i>Lupinus sericatus</i> Cobb Mountain lupine	--/--/1B	Openings in ponderosa pine, mixed chaparral, mixed conifer forest	Present. Occurs in and near Unit 18, on roadcuts along Socrates Mine Road, old clearings or burns. Has been used in revegetation by PG&E.	Geysers
<i>Streptanthus brachiatus</i> ssp. <i>brachiatus</i> Socrates Mine jewelflower	FC/--/1B	Serpentine chaparral	Present. Known from the Socrates Mine, about 0.5 mi. west of Unit 18, and several localities further northwest.	Geysers
<i>Streptanthus morrisonii</i> ssp. <i>kruckebergii</i>	FSC/--/1B	Serpentine chaparral	Present. Known from the extensive serpentinite outcrops along the Mayacmas ridgeline, between Unit 13 and Unit 16 and continuing to the southeast.	Geysers
Birds				
<i>Pandion haliaetus</i> Osprey	--/CSC/--	Mixed conifer through ponderosa pine habitats adjacent to estuaries, lakes, rivers, moderate to large streams. Nests in top-killed conifers, snags, human structures with a clear approach to water.	Present	Geysers
<i>Circus cyaneus</i> Northern harrier	--/CSC/--	Meadows, grasslands, open rangelands. Uses tall grasses, moist or dry shrubs and edges of wetland/field border for nesting, cover and feeding	High. Species observed during surveys for Contra Costa Multipurpose Pipeline (ESA, 1997).	Pittsburg, Contra Costa, Geysers
<i>Aquila chrysaetos</i> Golden eagle	--/CSC/--	Rolling foothills, mountain areas with open slopes and cliffs, and rock outcrops	Moderate	Geysers
<i>Elanus caeruleus</i> White-tailed kite	--/CR/--	Substantial groves of dense, broad-leaved deciduous trees used for nesting and roosting. Open grasslands, meadows, and marshes used for foraging.	High. Species observed during surveys for Contra Costa Multipurpose Pipeline (ESA, 1997).	Pittsburg, Contra Costa, Geysers
<i>Falco mexicanus</i> Prairie falcon	--/CSC/--	Open terrain in perennial grasslands, savannahs, rangelands with canyons, cliffs, rock outcrops.	Moderate	Geysers
<i>Accipter striatus</i> Sharp-shinned hawk	--/CSC/--	Black oak, riparian deciduous, and mixed conifer habitats with little ground cover near water	Moderate	Geysers
<i>Accipter cooperii</i> Cooper's hawk	--/CSC/--	Dense stands of live oak, riparian deciduous, or other forest habitats with snags near water	Moderate	Geysers

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<u>Species of Special Concern (cont.)</u>				
Birds (cont.)				
<i>Asio flammeus</i> Short-eared owl	--/CSC/--	Open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands	Moderate. No records at plant locations. Present on Grizzly Island.	Pittsburg
<i>Agelaius tricolor</i> Tricolored blackbird	FSC/CSC/--	Emergent wetland with tall, dense cattails or tules but also in thickets of willow, blackberry, wild rose, or tall herbs. Forages in grassland and cropland.	Moderate	Pittsburg
<i>Progne subis</i> (nesting) <i>Purple martin</i>	--/CSC/--	Old-growth, multi-layered, open forest and woodland with snags in breeding season. Forages over riparian areas, forest, and woodland.	Present	Geysers
<i>Dendroica petechia</i> <i>Yellow warbler</i>	--/CSC/--	Open to medium-density woodlands and forests with a heavy brush understory in breeding season. Uses riparian deciduous habitats in summer.	Present	Geysers
<i>Icteria virens</i> <i>Yellow-breasted chat</i>	--/CSC/--	Dense, brushy thickets and tangles near water, and thick understory in riparian woodland	Present	Geysers
<i>Geothlypis trichas sinuosa</i> <i>Saltmarsh common yellowthroat</i>	FSC/CSC/--	Freshwater and saltwater marshes. Requires tall grasses, tule patches, willows for nesting.	Moderate. Species is present at the naval weapons station to the west.	Pittsburg, Contra Costa
<i>Melospiza melodia maxillaris</i> Suisun song sparrow	FSC/--/--	Brackish water marshes surrounding Suisun Bay. Known to frequent scrub bordering sloughs.	Moderate. Species is present at the naval weapons station to the west.	Pittsburg, Contra Costa
<i>Phalacrocorax auritus</i> Double-crested cormorant	--/CSC/--	Fresh and salt water and estuaries. Uses offshore rocks, islands, wharves, jetties.	Moderate. Present.	Geysers
Fish				
<i>Spirinchus thaleichthys</i> <i>Longfin smelt</i>	--/CSC/--	Middle or bottom of water column in salt or brackish water portions of estuary. Emergent vegetation and sandy-gravel substrates in freshwater areas necessary for spawning	High	Pittsburg, Contra Costa
<i>Archiplites interruptus</i> Sacramento perch	FSC/CSC/--	Sloughs, slow-moving rivers and lakes of the Central Valley. Emergent vegetation necessary for nurseries.	High. Species occurs within a half mile.	Contra Costa, Pittsburg.

TABLE 4.7-1 (Continued)
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<u>Species of Special Concern (cont.)</u>				
Fish (cont.)				
<i>Acipenser medirostris</i> <i>Green sturgeon</i>	FSC/CSC/--	Estuaries, lower reaches of rivers; salt or brackish water along northern Pacific Coast south to Central California.	Present	Pittsburg, Contra Costa
Reptiles and Amphibians				
<i>Clemmys marmorata</i> Western pond turtle	FSC/CSC/--	Perennial streams or ponds with emergent vegetation and adjacent, unshaded banks	Present at Geysers. Moderate elsewhere.	Geysers, Pittsburg
<i>Rana boylei</i> Foothill yellow-legged frog	FSC/CSC/--	Shallow water in small to moderate drainages with cobble substrate	Present	Geysers
<i>Ambystoma californiense</i> California tiger salamander	FSC/CSC/--	Ponds and slow-moving streams adjacent to grassland with fossorial mammals	Moderate	Pittsburg, Contra Costa
Mammals				
<i>Perognathus inornatus inornatus</i> San Joaquin pocket mouse	FSC/--/--	Grasslands and blue oak savannahs with friable soil	Low. No suitable habitat exists on site.	Pittsburg, Contra Costa
<i>Myotis yumanensis</i> <i>Yuma myotis</i>	FSC/--/--	Open forests and woodland. Buildings, mines, caves, or crevices. Also abandoned swallow nests and under bridges.	High	Geysers
<i>Myotis evotis</i> <i>Long-eared myotis</i>	FSC/--/--	Brush, woodland, and forest habitats, roosting in buildings, crevices, spaces under bark, and snags	High	Geysers
<i>Myotis thysanodes</i> <i>Fringed myotis</i>	FSC/--/--	Roosts in buildings, caves, mines, or crevices. Valley-foothill hardwood and hardwood-conifer, using open habitats and early successional stages.	High	Geysers
<i>Myotis volans</i> <i>Long-legged myotis</i>	FSC/--/--	Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves. Woodland and forest habitats.	High	Geysers
<i>Antrozous pallidus</i> <i>Pallid bat</i>	--/CSC/--	Grasslands, shrublands, woodlands, and forests, roosting in caves, crevices, mines, hollow trees, and buildings	High	Geysers
<i>Plecotus townsendii townsendii</i> Pacific western big-eared bat	FSC/CSC/--	Caves, mines, tunnels, or buildings in all mesic habitats	Moderate	Geysers
<i>Eumops perotis californicus</i> Greater western mastiff bat	FSC/CSC/--	Crevices in cliff faces, high buildings, trees, and tunnels	Moderate	Geysers

TABLE 4.7-1 (Continued)
SPECIAL STATUS SPECIES POTENTIALLY IN THE PROJECT VICINITY

STATUS CODES:

FEDERAL:

- FE = Listed as Endangered by the Federal Government
- FT = Listed as Threatened by the Federal Government
- FPE = Proposed for listing as Endangered by the Federal Government
- FPT = Proposed for listing as Endangered by the Federal Government
- FC = Candidate for Federal listing (taxa for which the U.S. Fish and Wildlife Service or National Marine Fisheries Service has sufficient biological information to support a proposal to list as Endangered or Threatened)
- FSS = Former Category 2 candidates for Federal listing, now unofficially referred to as federal sensitive species

STATE:

- CE = Listed as Endangered by the State of California
- CT = Listed as Threatened by the State of California
- CR = Listed as Rare by the State of California
- CSC = Species of special concern

California Native Plant Society (CNPS):

- List 1A = Plants presumed extinct in California
- List 1B = Plants are rare and endangered in California
- List 2 = Plants endangered in California, but more common elsewhere
- List 3 = Plants about which more information is needed
- List 4 = Plants of limited distribution (a watch list)

SOURCE: Environmental Science Associates Inc., 1998; CNDDDB, 1998, USFWS, 1997.

Not included are the following CNPS List 4 species (Plants of Limited Distribution) that are known to occur in the Geysers: *Antirrhinum virga*, *Asclepias solanoana*, *Calyptridium quadripetalum*, *Cordylanthus tenuis ssp. brunneus*, possibly *Pityopus californicus*.