

APPENDIX 8.2A

List of Special Status Species

Special-Status Species Lists Evaluated for Humboldt Bay Repowering Project

Special-Status Plants

The Humboldt Bay region is rich in California native plants due to a diversity of unique habitats within a narrow geographic area. Habitats that range from many salt, brackish, and freshwater marshes and wetlands, to dunes, forests, and riparian habitats are found within a one-mile radius of Buhne Point. Loss or alteration of these habitats has contributed to the endangerment of several native plant species. Table 8.2A-1 lists the special-status plant species known to occur in the Buhne Point vicinity, along with their status by regulating agencies, and describes the habitats where they are found. None of the plants on Table 8.2A-1 are known to occur in disturbed ruderal grassland, lawns, seasonal wetland habitats, landscaping, or other areas of commercial land use that are found within the Humboldt Bay Repowering Project (HBRP) area. However, all but one of these species occurs in habitats similar to those that are found on the PG&E property adjacent to HBRP work areas. These species grow on coastal dunes or in coastal strand vegetation, salt marshes, fresh or brackish water marshes, or moist forest communities. Though disturbed, these habitats represent a range of plant communities that could be appropriate for special status plants. The lists are compiled from the California Natural Diversity Database (CDFG, 2006), California Native Plant Society (2001), and U.S. Fish and Wildlife Service lists.

TABLE 8.2A-1

Special-status plants known or potentially occurring in the Humboldt Bay Area (Compiled from CNDDDB, CNPS, FWS)

<i>Scientific name</i> Common Name	Status* Fed/CA/CNPS	General Habitat Description	Flowering Time	Potential Occurrence In The HBRP Project Area or Adjacent Habitats
<i>Abronia umbellata ssp. breviflora</i> Pink sand-verbena	-/-1B	Coastal dunes, coastal strand	June- October	No potential habitat in the HBRP work areas. Potential habitat is present on PG&E property along King Salmon spit. No plants found near the work areas in April or July, 2006.
<i>Carex arcta</i> Northern clustered sedge	-/-2	Bogs and fens, north coast coniferous forest	June -August	Not present, no potential habitat found in the HBRP work areas or adjacent PG&E property.

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Special-status plants known or potentially occurring in the Humboldt Bay Area (Compiled from CNDDDB, CNPS, FWS)

Scientific name Common Name	Status* Fed/CA/CNPS	General Habitat Description	Flowering Time	Potential Occurrence In The HBRP Project Area or Adjacent Habitats
<i>Carex leptalea</i> Flaccid sedge	-/-2	Bogs and fens, meadows, marshes and swamps	May- July	No potential habitat in the HBRP project area. Potential habitat may be present in fresh or brackish marshes on adjacent PG&E property. No plants found near the work areas in April or July, 2006.
<i>Carex lyngbyei</i> Lyngbye's sedge	-/-2	Marshes and swamps, brackish or fresh	May-August	No potential habitat in the HBRP work areas. Potential habitat may be present in fresh or brackish marshes on adjacent PG&E property. No plants found near the work areas in April or July 2006.
<i>Castilleja affinis</i> ssp. <i>litoralis</i> Oregon coast Indian paintbrush	-/-2	Coastal bluff scrub, Coastal dunes and scrub	June	No potential habitat in the HBRP work areas. Potential habitat is present on PG&E property but outside any of the impact areas. No plants found near the work areas in April or July, 2006.
<i>Castilleja ambigua</i> ssp. <i>humboltiensis</i> Humboldt Bay owl's clover	-/-1B	Coastal salt marsh Known populations	April - August	One population found during April surveys adjacent to HBRP project area. No potential habitat in the HBRP work areas. Potential habitat is present in two small tidal salt marshes.
<i>Cordylanthus maritimus</i> ssp. <i>palustris</i> Point Reyes bird's beak	-/-1B	Coastal salt marsh	June- October	Known population present on PG&E property adjacent to work areas. No potential habitat in the HBRP work areas. No additional populations found in April or July 2006.
<i>Erysimum menziesii</i> ssp. <i>eurekaense</i> Humboldt Bay wallflower	E/E/1B	Coastal dunes	March - April	No potential habitat in the HBRP work areas. Potential habitat is present on PG&E property along King Salmon spit. No plants found near the work areas in April or July, 2006.

TABLE 8.2A-1

Special-status plants known or potentially occurring in the Humboldt Bay Area (Compiled from CNDDDB, CNPS, FWS)

Scientific name Common Name	Status* Fed/CA/CNPS	General Habitat Description	Flowering Time	Potential Occurrence In The HBRP Project Area or Adjacent Habitats
<i>Gilia millefoliata</i> Dark-eyed gilia	-/-1B	Coastal dunes	April - July	No potential habitat in the HBRP work areas. Potential habitat is present on PG&E property along King Salmon spit. No plants found near the work areas in April or July, 2006.
<i>Hesperevax sparsiflora</i> <i>var. brevifolia</i> Short-leaved evax	-/-/2	Coastal bluff scrub, coastal dunes	March - April	No potential habitat in the HBRP work areas. Potential habitat is present on PG&E property along King Salmon spit. No plants found near the work areas in April 2006.
<i>Lathyrus japonicus</i> Sand pea	-/-/2	Coastal dunes	March – April	No potential habitat in the HBRP work areas. Potential habitat is present on PG&E property along King Salmon spit. No plants found near the work areas in April 2006.
<i>Lathyrus palustris</i> Marsh pea	-/-/2	Bogs and fens, lower montane coniferous forest, marshes and swamps, North coast coniferous forest, coastal prairie, coastal scrub	March - August	No potential habitat in the HBRP work areas. Potential habitat may be present on PG&E property within the fresh or brackish water marshes. No plants found in July 2006.
<i>Layia carnosa</i> Beach layia	E/E/1B	Coastal dunes	March-July	No potential habitat in the HBRP work areas. Potential habitat is present on PG&E property along King Salmon spit.
<i>Lilium occidentale</i> Western lily	E/E/1B	Coastal scrub, freshwater marsh, bogs and fens, Coastal bluff scrub, coastal prairie, North coast coniferous forest	June - July	No potential habitat in the HBRP work areas. Potential habitat may be present on PG&E property within the fresh or brackish water marshes or riparian habitat. No plants found in July 2006.

TABLE 8.2A-1

Special-status plants known or potentially occurring in the Humboldt Bay Area (Compiled from CNDDDB, CNPS, FWS)

Scientific name Common Name	Status* Fed/CA/CNPS	General Habitat Description	Flowering Time	Potential Occurrence In The HBRP Project Area or Adjacent Habitats
<i>Sidalcea oregana</i> ssp. <i>eximia</i> Coast checkerbloom	-/-1B	Meadows and seeps, North coast coniferous forest, lower montane coniferous forest.	June- August	No potential habitat in the HBRP work areas. Potential habitat may be present in the mesic riparian forest on the PG&E property. No plants found in July 2006.
<i>Spergularia canadensis</i> var. <i>occidentalis</i> Western sand-spurry	-/-2	Coastal salt marsh	June - August	No potential habitat in the HBRP work areas. Potential habitat is present in the two small tidal salt marshes on the PG&E property. No plants found in July 2006.

Notes:

* Status.

Federal Status

FE = Federally listed as endangered

FT = Federally listed as threatened

CA State Status

CE = State listed as endangered

CT = State listed as threatened

CNPS Status

1A = Plants presumed extinct in California

1B = Plants rare, threatened, or endangered in California, but more common elsewhere

2 = Plants rare, threatened, or endangered in California, but more common elsewhere

3 = Plants about which we need more information – a review list

4 = Plants of limited distribution – a watch list

Special Status Plants of Coastal Dunes or Coastal Strand Communities

Seven of the 16 plant species listed on Table 8.2A-1 are found on dunes in the Humboldt Bay area. These include pink sand verbena (*Abronia umbellata* ssp. *breviflora*), Oregon coast Indian paintbrush (*Castilleja affinis* ssp. *litoralis*), Humboldt Bay wallflower (*Erysimum menziesii* ssp. *eurekaense*), dark-eyed gilia (*Gilia millefoliata*), short-leaved evax (*Hesperis matronalis* var. *brevifolia*), sand pea (*Lathyrus japonicus*), and Beach layia (*Layia carnosus*).

There are no sand dune habitats immediately adjacent to the HBRP work areas, but PG&E property extends along King Salmon spit and a small patch of dune is found in the very north end of the PG&E property near where the Northwestern Pacific railroad track meets the shore of Humboldt Bay (Figure 8.2-2a). Detailed floristic surveys of the King Salmon spit were not conducted as part of this project as no project activities will occur in dune habitat.

Known distributions and the potential for their occurrence within the work areas or adjacent habitats for these species are provided in Table 8.2A-1, above.

Pink sand verbena (*Abronia umbellata* ssp. *breviflora*) is considered rare and endangered in California and elsewhere by CNPS (2001). Plants were planted at Buhne Point along with other dune species as part of the Buhne Point Shoreline Erosion Demonstration Project in 1985. Fewer than 50 plants were observed as established from broadcast seed in 1987 (CDFG, 2006; Pickart 1988). The population is located approximately ½ mile south of the project site. Other populations in the Humboldt Bay area are found on North and South Spit across Humboldt Bay from the project site. No attempt to relocate and document the current status of the King Salmon population was made as part of this project. Sand habitat surveyed on the PG&E property yielded the common yellow sand verbena (*Abronia latifolia*). Pink sand verbena flowers from June - October. It was not found in any of the work areas or adjacent habitats in the HBRP project area and is not expected to occur there.

Oregon coast Indian paintbrush (*Castilleja affinis* ssp. *litoralis*) is considered rare and endangered in California but more common elsewhere (CNPS, 2001). It is found along dunes and in coastal scrub vegetation from Mendocino County in California to Oregon. Collections of the plant during 1912 and 1918 on the brushy, exposed, north slope of Humboldt Hill have not been relocated (CDFG, 2006). Much of this area has been developed as residential property. The historic collection site is approximately 2 miles southeast of the project area. Any potential habitat along the brushy slopes of Buhne Point are outside of the HBRP work areas. Oregon coast Indian paintbrush was collected in June, but plants should have been evident during the July field surveys. It is unlikely that this species occurs on the PG&E property.

Humboldt Bay wallflower (*Erysimum menziesii* ssp. *eurekaense*) is listed as endangered by the USFWS and CDFG. It is considered rare and endangered in California and elsewhere by CNPS (2001). Populations of Humboldt Bay wallflower are found on the Samoa peninsula approximately 2 miles northwest from Buhne Point across Humboldt Bay. Plants are found in Coastal dune habitats and are threatened by foot traffic, exotic plants, and off-road vehicles. Habitat for Humboldt Bay wallflower is not present in the work areas. Limited sand dune habitat is found on the PG&E property outside of the King Salmon resort area. Surveys of the PG&E property in April occurred during the flowering period of Humboldt Bay wallflower. No plants were found and none are expected to occur there.

Dark-eyed gilia (*Gilia millefoliata*) is considered rare and endangered in California and elsewhere by CNPS (2001). **Short-leaved evax** (*Hesperis matronalis* var. *breviflora*) is considered rare and endangered in California but more common elsewhere (CNPS 2001). Both plants are dune species found in association with other local endemics on a dune complex at the mouth of the Elk River and south of the Bucksport area. Dark-eyed gilia is an annual herb that is found from Sonoma County to Oregon, where it is also considered endangered. A population of 10 individuals was recorded in 1988 at the Bucksport dune complex. Short-leaved evax is attributed to this site from 1912 historic collections, but no recent observations of the plant have been made. **Sand pea** (*Lathyrus japonicus*), considered rare and endangered in California but more common elsewhere (CNPS, 2001), is another dune species that is known from a historic collection at the mouth of the Elk River and is attributed to the same dune complex where efforts to relocate it have not been successful. The Elk River/Bucksport dune complex is approximately 2 miles north-northeast of the

PG&E site. No similarly extensive dune habitat is found on the PG&E property. No dune habitat is found near any of the HBRP work areas. All three plants flower in April when field surveys were conducted on the PG&E site. No plants were found and none are expected to occur within the HBRP site.

Beach layia (*Layia carnosa*) is listed as rare by USFWS and CDFG and is considered rare and endangered in California and elsewhere by CNPS (2001). Beach layia is known from populations 2 miles west across Humboldt Bay on south spit and on the Samoa peninsula, and from the dune complex at the mouth of the Elk River near Bucksport (CNDDDB). Plants flower from March-July. No similarly extensive dune habitat is found on the PG&E property. No dune habitat is found near any of the HBRP work areas. No populations of Beach layia were found on the PG&E property or are expected to be found there.

Special Status Plants of Salt Marshes

Three special status plants of the Humboldt Bay area are found in coastal salt marsh habitats. These include **Humboldt Bay owl's clover** (*Castilleja ambigua* ssp. *humboldtensis*), **Point Reyes bird's beak** (*Cordylanthus maritimus* ssp. *palustris*), and **Western sand-spurry** (*Spergularia canadensis* var. *occidentalis*). Humboldt Bay owl's clover and Point Reyes bird's beak are considered rare and endangered in California and elsewhere by CNPS (2001). Western sand-spurry is considered rare and endangered in California (where it is only found in Humboldt County) but the plant is more common in Oregon, Washington, and elsewhere (CNPS, 2001).

A population of **Humboldt Bay owl's clover** was recorded on PG&E property during April 2006 as part of the HBRP floristic surveys. It is found with a known population of Point Reyes bird's beak as discussed below. The nearest previously known population of Humboldt Bay owl's clover was found in 1986 in salt marsh at the mouth of the Elk River and Swain Slough in the vicinity of the U.S. Highway 101 bridge. This population was relocated in 2002 and found to be extant. Humboldt Bay owl's clover is an annual plant that has bright purplish-red flower parts when in bloom from April until August. When not in flower and having dried and set seed, plants are relatively hard to discern. The species is partially parasitic, attaching to the roots of salt grass or other high marsh plants to gain nutrients. Humboldt Bay owl's clover also is found in Marin and Mendocino counties.

The PG&E population of Humboldt Bay owl's clover is located in a small (75 feet by 75 feet) patch of salt marsh south of King Salmon Road and adjacent to King Salmon Slough (see Figures 8.2-2a and 8.2-3 in Section 8.2). The site is immediately east of a proposed HBRP remote parking area along King Salmon Road. The plants numbered less than 200 individuals in an area equal to 1,076 square feet. A CNDDDB California Native Species Field Survey form for this new population is provided in Appendix 8.2B. No other populations of Humboldt Bay owl's clover were found on the PG&E property or are expected to occur there.

The small patch of salt marsh along King Salmon Slough that supports Humboldt Bay owl's clover also supports a known population of **Point Reyes bird's beak** (*Cordylanthus maritimus* ssp. *palustris*) (see Figures 8.2-2a and 8.2-3). This population was found in 2002 during preliminary resource surveys for a PG&E parking lot expansion north of King Salmon Road (LSA, 2002). On discovery in 2002, the Point Reyes bird's beak population was

estimated to occur within a 1,250 square foot area (25 foot by 50 foot) and number 250 plants. The mapped area for the Point Reyes bird's beak recorded in July 2006 was and numbers of individuals were estimated at between 250 and 350 individuals. A CNDDDB California Native Species Field Survey form for this population is provided in Appendix 8.2B.

Point Reyes bird's beak is an annual herb that is partially parasitic on saltgrass or other high marsh species. Humboldt Bay populations of this special status plant are also found at the Elk River spit approximately 2 miles north of the project site. Its current range includes populations in Sonoma and Marin counties to coastal Oregon. Its former range included Alameda, Santa Clara, and San Mateo counties. Surveys for Point Reyes bird's beak in other salt marsh or diked salt marsh habitats on the PG&E property yielded no new populations. No other populations of the plant are expected to be found in the HBRP work area or adjacent habitats.

Western sand-spurry (*Spergularia canadensis* var. *occidentalis*) is considered rare and endangered in California but more common elsewhere (CNPS, 2001). It also is a salt marsh species with historical (1878) collections along South Spit in the Humboldt Bay area. No recent collections or populations of western sand-spurry have been recorded from the south Humboldt Bay vicinity. Western sand-spurry flowers in June through August and would have been identifiable during the July surveys of salt marsh habitats. No plants were found and none are expected to occur in the HBRP work area or adjacent habitats.

Plants of Fresh or Brackish Water Marshes

Five special status plant species in the south Humboldt Bay area are found in fresh or brackish water marshes. These include flaccid sedge (*Carex leptalea*), Lyngbye's sedge (*Carex lyngbyei*), Marsh pea (*Lathyrus palustris*), Western lily (*Lilium occidentale*), and Coast checkerbloom (*Sidalcea oregana* ssp. *eximia*).

Lyngbye's sedge (*Carex lyngbyei*) is considered rare and endangered in California but more common in Oregon and elsewhere (CNPS, 2001). A large population of Lyngbye's sedge is found near the U.S. Highway 101 bridge over the Elk River approximately 2 miles north of the PG&E project site. Plants are found adjacent to slow moving brackish water. The watershed of Buhne Slough is separated from the Elk River and the Lyngbye's sedge population by Spruce Point. No similar slough habitat is present on the HBRP project site, but the edges of brackish ponds or drainages ditches on the PG&E property could provide habitat for Lyngbye's sedge.

Similar habitat might be suitable for **flaccid sedge** (*Carex leptalea*). This species is also considered rare and endangered in California but more common elsewhere (CNPS, 2001), although, the species is considered sensitive in Idaho. A historic collection from Humboldt Hill has not been relocated since its 1918 observation. The plant is also known from Del Norte and Trinity counties, and is thought to be extirpated in Marin County (CNPS, 2001). Flaccid sedge is delicate and grass-like with narrow leaves (2-3 mm) and single, short (1 cm), few-flowered inflorescences.

Neither of these sedges were found on the PG&E property. Three species of common sedges were collected from the site. Slough sedge (*Carex obnupta*) forms dense tussocks and large spreading mats in the red alder riparian forest and at a few points along the Point Buhne

bluff. It is similar to Lyngbye's sedge but differs in growth habit, inflorescence characteristics, and habitat preferences. Wood rush sedge (*Carex luzulina* var. *luzulina*) also grows in the red alder riparian area, while Jones sedge (*Carex jonesii*) was collected from the grassland east of the intake canal. None of these species could be confused with the delicate flaccid sedge of wet meadows and swamp habitats.

Marsh pea (*Lathyrus palustris*) is considered rare and endangered in California but more common elsewhere (CNPS, 2001). Historic 1949 collections of this plant are attributed to slough habitat around the Elk River near Martin Slough, though the exact site of the population is unknown. No new records for this plant in the Buhne Hill area have been recorded. Drainage ditches, riparian forest, and marsh edges are the only habitats that may be appropriate for this species on the PG&E property. There is no potential habitat in the HBRP work areas and the plant is not expected to be found there.

Several locations for **Western lily** (*Lilium occidentale*) are found in the Humboldt Hill and Fields Landing areas. Known populations are found within 2 miles of the PG&E property (CNDDDB). Western lily is listed as endangered by the USFWS and the CDFG and is considered rare and endangered in California and elsewhere by CNPS (2001). Horticultural collecting is one of the factors contributing to its rarity. It grows in a wide range of moist north coast habitats including coastal scrub, coastal bluff scrub, coastal prairie, north coast coniferous forest, freshwater marsh, and bogs and fens. The north coast riparian forest and moist slope of Buhne Point could be potential habitat for this species, though no western lilies were found during July field surveys. There is no potential habitat for western lily in the HBRP project area.

Coast checkerbloom (*Sidalcea oregana* ssp. *eximia*) is considered rare and endangered in California and elsewhere by CNPS (2001). Locally, it is only known from historic 1937 collections south of Fields Landing "along a ditch" in the Elk Prairie (CNDDDB). Similar, although degraded, habitat could be present along drainage ditches on the PG&E property, but no checkerbloom plants were located.

Special-Status Wildlife

Table 8.2A-2 (following pages) lists the special-status wildlife species known to occur in the Buhne Point vicinity, along with their status by regulating agencies, describes the habitats where they are found, and provides a discussion of their potential to occur within or near the Humboldt Bay Repowering Project area.

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TABLE 8.2A-2
Special-Status Wildlife Species Potentially Occurring in Humboldt Bay Region Evaluated for HBRP Project

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^c	Potential Occurrence in Project Area
Fish				
Tidewater goby	<i>Eucyclogobius newberryi</i>	FE, CSC	Shallow lagoons and coastal streams, waters of coastal lagoons, estuaries, and marshes; historically ranged from Tillas Slough to Agua Hedionda Lagoon	No suitable aquatic habitat on project site. May be found in tributaries to Humboldt Bay. No impacts to potential tidewater goby habitat (steams, sloughs, channels, marshes, or bay habitats) are expected from HBRP.
S. Oregon/ N. California Coho salmon	<i>Oncorhynchus kisutch</i>	FE, CT	Coho spend the first half of their life in streams and small freshwater tributaries. The remainder of their life is spent foraging in estuaries and marine waters of the Pacific Ocean prior to returning to their stream of origin to spawn and die.	No suitable habitat on site. May potentially be found in the power plant intake canal and Humboldt Bay. The proposed project site is within the evolutionarily significant units (ESUs) for the Southern Oregon/Northern California Coasts Coho Salmon. No impacts to salmon habitat (steams, sloughs, channels, or bay habitat) are expected from HBRP.
Ca coastal Chinook salmon	<i>Oncorhynchus tshawytscha</i>	FT, CT	Chinook salmon like the Coho salmon spend the first half of their life in streams and small freshwater tributaries. The remainder of their life is spent foraging in estuaries and marine waters of the Pacific Ocean prior to returning to their stream of origin to spawn and die.	No suitable aquatic habitat on site. May potentially be found in the power plant intake canal and Humboldt Bay. The proposed project site is within the ESUs for the California Coastal Chinook Salmon. No impacts to salmon habitat (steams, sloughs, channels, or bay habitat) are expected from HBRP.
Northern California steelhead	<i>Oncorhynchus mykiss</i>	FT	Steelhead is the anadromous form of rainbow trout, they are born in fresh water streams where they spend the first portion of their life and later migrate to the ocean. Steelhead unlike most salmonids do not necessarily die after spawning and are able to spawn more than once.	No suitable habitat on site. May be found in the power plant intake canal or Humboldt Bay. The proposed project site is within the evolutionarily significant units (ESUs) for the Northern California Steelhead. No impacts to steelhead habitat (steams, sloughs, channels, or bay habitat) are expected from HBRP.
Amphibians				
Northern red- legged frog	<i>Rana aurora aurora</i>	CSC	Breeding habitat typically consists of permanent or temporary water bodies bordered by dense grassy or shrubby vegetation. (Storm et al).	Suitable breeding habitat observed in ditch and marsh area northeast of temporary laydown area. N. red-legged frogs observed in sump area adjacent to hazardous material wash-out ponds and in landscaped areas east and southwest of project area. Also, known from Humboldt Bay NWR (Humboldt Bay NWR 2004 Northern Red-Legged Frog Malformation Report study).

TABLE 8.2A-2
Special-Status Wildlife Species Potentially Occurring in Humboldt Bay Region Evaluated for HBRP Project

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^c	Potential Occurrence in Project Area
Reptiles				
Loggerhead turtle	<i>Caretta caretta</i>	FT	Continental shelves, bays, estuaries, and lagoons in temperate, subtropical, and tropical waters	No suitable nesting or aquatic habitat on site. May be found in Humboldt Bay. No impacts to Bay habitats from HBRP.
Green turtle	<i>Chelonia mydas</i>	FT	Oceanic beaches (for nesting), convergence zones in the open ocean, and benthic feeding grounds in coastal areas. Nests in Baja California, Mexico.	No suitable nesting or aquatic habitat on site. May be found in Humboldt Bay foraging in eelgrass habitats. No impacts to Bay habitats from HBRP.
Leatherback turtle	<i>Dermochelys coriacea</i>	FE	Sandy nesting beaches backed with vegetation and sloped sufficiently so the crawl to dry sand is not too far, the preferred beaches have proximity to deep water and generally rough seas	No suitable nesting or aquatic habitat on site. May be found in Humboldt Bay. No impacts to Bay habitats from HBRP.
Olive ridley sea turtle	<i>Lepidochelys olivacea</i>	FT	Mainly protected, shallow, marine waters, including bays and lagoons. Nests on beaches.	No suitable nesting or aquatic habitat on site. May be found in Humboldt Bay. No impacts to Bay habitats from HBRP.
Birds				
California clapper rail	<i>Rallus longirostris obsoletus</i>	FE, CE	Found in salt and brackish marshes dominated by pickleweed (<i>Salicornia virginica</i>) and Pacific cordgrass (<i>Spartina foliosa</i>).	California clapper rails are now primarily restricted to the marshes of San Francisco estuary, where the only breeding populations are known to occur. Historic location and critical habitat on Indian Island in Humboldt Bay. No impacts to Bay habitats from HBRP.
Marbled murrelet	<i>Brachyramphus marmoratus</i>	FT, CE	Most nest sites are found in large intact stands of old growth forests. Murrelets utilize near shore environments in the ocean and feed on zooplankton, squid and fish.	Most marbled murrelets nest in old growth forests or utilize tall trees for nesting. No suitable habitat on site may forage within Humboldt Bay. No impacts to Bay or forest habitats from HBRP.
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FT	Intertidal mudflats, beaches, dunes, salt flats and dikes	No suitable habitat on site, proposed critical habitat designated 1-mile west of this proposed project along the South Spit of Samoa Peninsula. No impacts to dune habitats from HBRP. Low potential for collisions with HBRP electric transmission lines.

TABLE 8.2A-2
Special-Status Wildlife Species Potentially Occurring in Humboldt Bay Region Evaluated for HBRP Project

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^c	Potential Occurrence in Project Area
Western yellow-billed cuckoo	<i>Coccyzus americanus</i>	CE	Cottonwood-tree willow riparian forest	No suitable habitat on or near site. No impacts from HBRP.
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT, CE, FP	Various habitats primarily near water bodies	Unlikely to occur on site with the exception of foraging within the cooling canal. None observed during surveys, undocumented sighting of foraging adult in intake canal by Humboldt Bay Power Plant security personnel. No roosting or nesting habitat on site. Low potential for collisions with HBRP electric transmission lines.
California brown pelican	<i>Pelecanus occidentalis californicus</i>	FE, CE, FP	Estuarine, marine subtidal and marine pelagic waters. Nesting in undisturbed islands. Roosts on hard shore foraging over water.	Suitable nesting habitat occurs outside of project vicinity, adults and juveniles observed flying over, loafing and foraging along bay shoreline. No roosting or nesting habitat on site. Low potential for collisions with HBRP electric transmission lines.
Short-tailed albatross	<i>Phoebastria albatrus</i>	FE	Feeds in open marine waters; primarily nests on islands near Japan	No suitable open water habitat on or near site. No impacts to Bay habitats from HBRP.
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT	Coniferous forests for hunting, and nesting occasionally hunts on forest edges or in small clearings.	No suitable habitat on or near site. No impacts to forest habitats from HBRP.
Xantus's murrelet	<i>Synthliboramphus hypoleucus</i>	ST	Open ocean, pelagic. Known to nest on islands in southern California and Baja Mexico	No suitable habitat on or near site. No impacts to Bay or forest habitats from HBRP.
Mammals				
Sei whale	<i>Balaenoptera borealis</i>	FE	Migrates along north coast on way to calving lagoons in Baja California	No suitable aquatic habitat on or near site. No impacts to ocean or Bay habitats from HBRP.
Blue whale	<i>Balaenoptera musculus</i>	FE	Found in all oceans of the world with migration to tropical-to-temperate waters during winter months to mate and give birth to calves.	No suitable aquatic habitat on or near site. No impacts to ocean or Bay habitats from HBRP.

TABLE 8.2A-2
Special-Status Wildlife Species Potentially Occurring in Humboldt Bay Region Evaluated for HBRP Project

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^c	Potential Occurrence in Project Area
Fin whale	<i>Balaenoptera physalus</i>	FE	Fin whales are found in all oceans of the world. They may migrate to subtropical waters for mating and calving during the winter months and to the colder areas of the Arctic and Antarctic for feeding during the summer months; although recent evidence suggests that during winter fin whales may be dispersed in deep ocean waters.	No suitable aquatic habitat on or near site. No impacts to ocean or Bay habitats from HBRP.
Humpback whale	<i>Megaptera novaengliae</i>	FE	Found in all the world's oceans, most populations of humpback whales follow a regular migration route, summering in temperate and polar waters for feeding, and wintering in tropical waters for mating and calving.	No suitable aquatic habitat on or near site. No impacts to ocean or Bay habitats from HBRP.
Sperm whale	<i>Physeter macrocephalus</i>	FE	Sperm whales are found in all oceans of the world. The males, alone or in groups, are found in higher latitudes. From time to time they migrate toward lower latitudes, and only the largest mature males appear to enter the breeding grounds close to the equator. Females, calves, and juveniles remain in the warmer tropical and sub-tropical waters of the Pacific, Atlantic, and Indian Oceans year round.	No suitable aquatic habitat on or near site. No impacts to ocean or Bay habitats from HBRP.
Steller sea-lion	<i>Eumetopias jubatus</i>	FT	Steller sea lions are distributed across the North Pacific Ocean rim from Northern Japan and Russia, the Aleutian Islands, central Bering Sea, southern coast of Alaska, and south to the Channel Islands of California. Opportunistic predators, steller sea lions feed on a variety of fish and cephalopods including walleyed pollock, salmon and squid.	No suitable aquatic or loafing habitat on or near site. May be found foraging in Humboldt Bay. No impacts to ocean or Bay habitats from HBRP.

TABLE 8.2A-2
Special-Status Wildlife Species Potentially Occurring in Humboldt Bay Region Evaluated for HBRP Project

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^c	Potential Occurrence in Project Area
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Notes:

^a Scientific names are based on the following sources: AOU (1983); Jennings (1983); Zeiner et al. (1990a-c).

^b Status of species relative to the Federal and California State Endangered Species Acts and Fish and Game Code:

Federal Status

FE = Federally listed as endangered.

FT = Federally listed as threatened.

FPE = Proposed endangered.

FPT = Proposed threatened.

FC = Candidate for listing as federally endangered or threatened. Proposed rules have not yet been issued because they have been precluded at present by other listing activity.

FD = Delisted from Federal threatened or endangered status.

FSC = Federal Species of Special Concern. Proposed rules have not yet been issued because they have been precluded at present by other listing activity.

MB = Migratory Bird Treaty Act. of 1918. Protects native birds, eggs, and their nests.

California Status

CE = State listed as endangered. Species whose continued existence in California is jeopardized.

CT = State listed as threatened. Species that although not presently threatened in California with extinction are likely to become endangered in the foreseeable future.

CSC = California Department of Fish and Game "Species of Special Concern." Species with declining populations in California.

FP = Fully protected against take pursuant to the Fish and Game Code Sections 3503.5, 3511, 4700, 5050, 5515.

Other Status

CNPS = California Native Plant Society Listing (does not apply to wildlife species).

IB = Plants, rare, threatened or endangered in California and elsewhere and are rare throughout their range. According to CNPS, all of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

^c Season = Blooming period for plants. Season of use for animals. RES = Resident; SUMR = Summer; WNTR = Winter.

^d Primary Habitat = Most likely habitat association.

Source: California Dept. of Fish and Game, California Natural Diversity Database, July 2006; California Native Plant Society, Inventory of Rare and Endangered Vascular Plants of California, 2001.

Charadrius alexandrinus nivosus

western snowy plover

Element Code: ABNNB03031

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G4T3	CDFG Status: SC
State: None	State: S2	

Habitat Associations

General: (NESTING) FEDERAL LISTING APPLIES ONLY TO THE PACIFIC COASTAL POPULATION.
Micro: SANDY BEACHES, SALT POND LEVEES & SHORES OF LARGE ALKALI LAKES. NEEDS SANDY, GRAVELLY OR FRIABLE SOILS FOR NESTING.

Occurrence No. 78	Map Index: 06770	EO Index: 25739	Dates Last Seen
Occ Rank: Unknown			Element: 1977-XX-XX
Origin: Natural/Native occurrence			Site: 1977-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-08-18
Main Source: PAGE, G. & L. STENZEL 1981 (LIT)			

Quad Summary: FIELDS LANDING (4012462/654B), CANNIBAL ISLAND (4012463/655A), EUREKA (4012472/672C)
County Summary: HUMBOLDT

Lat/Long: 40.73089° / -124.24892°	UTM: Zone-10 N4509634 E394536	Area: 666.6 ac	Elevation: 10 ft	Mapping Precision: NON-SPECIFIC	Symbol Type: POLYGON	Township: 04N	Range: 02W	Section: 13	Qtr: XX	Meridian: H
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Location: SOUTH HUMBOLDT BAY SPIT, HUMBOLDT COUNTY.

General: FOUR PAIRS OBSERVED DURING MAY-JUNE 1977 STUDY. AREA ALSO USED BY WINTERING BIRDS. NESTING RECORDS IN HUMBOLDT BAY AREA EXTEND BACK TO 1899. PORTION OF SITE PRIVATELY OWNED; REMAINDER OWNED BY HUMBOLDT COUNTY OR OTHER MUNICIPAL AGENCY.

Owner/Manager: PVT, OTHER?

Occurrence No. 79	Map Index: 06788	EO Index: 25736	Dates Last Seen
Occ Rank: Unknown			Element: 1977-XX-XX
Origin: Natural/Native occurrence			Site: 1977-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-08-18
Main Source: PAGE, G. & L. STENZEL 1981 (LIT)			

Quad Summary: EUREKA (4012472/672C)
County Summary: HUMBOLDT

Lat/Long: 40.76544° / -124.20077°	UTM: Zone-10 N4513413 E398655	Area: 70.8 ac	Elevation: 10 ft	Mapping Precision: NON-SPECIFIC	Symbol Type: POLYGON	Township: 04N	Range: 01W	Section: 05	Qtr: XX	Meridian: H
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Location: ELK RIVER SPIT, HUMBOLDT BAY.

General: ONE MUSEUM EGG SET COLLECTED IN 1920. ONE PAIR OBSERVED DURING MAY-JUNE 1977 STUDY.

Owner/Manager: UNKNOWN

Occurrence No. 80	Map Index: 06786	EO Index: 5678	Dates Last Seen
Occ Rank: Unknown			Element: 1978-XX-XX
Origin: Natural/Native occurrence			Site: 1978-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-02-20
Main Source: PAGE, G. & L. STENZEL 1981 (LIT)			

Quad Summary: EUREKA (4012472/672C)
County Summary: HUMBOLDT

Lat/Long: 40.80480° / -124.20111°	UTM: Zone-10 N4517782 E398686	Area: 649.8 ac	Elevation: 20 ft	Mapping Precision: SPECIFIC	Symbol Type: POLYGON	Township: 05N	Range: 01W	Section: 20	Qtr: XX	Meridian: H
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Location: NORTH HUMBOLDT BAY SPIT.

General: TWENTY-TWO EGG SETS COLLECTED FROM 1899-1948; ADULTS OBSERVED MAY-JUNE DURING 1910S DECADE; 6 PAIRS DETECTED MAY-JUNE 1978.

Owner/Manager: DOT-COAST GUARD, PVT

Erysimum menziesii ssp. eurekaense

Humboldt Bay wallflower

Element Code: PDBRA160E2

Status
 Federal: Endangered
 State: Endangered

NDDB Element Ranks
 Global: G3?T1
 State: S1.1

Other Lists
 CNPS List: 1B
 R-E-D Code: 3-3-3

Habitat Associations

General: COASTAL DUNES.

Micro: FOREDUNES W/ARTEMISIA PYCNOCEPHALA, SOLIDAGO SPATHULATA, LATHYRUS SP., ETC. 0-10M.

Occurrence No. 2 Map Index: 23680 EO Index: 7254 Dates Last Seen
 Occ Rank: Good Element: 199X-XX-XX
 Origin: Natural/Native occurrence Site: 199X-XX-XX
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1996-09-02
 Main Source: MILLER, L. 1988 (OBS)

Quad Summary: EUREKA (4012472/672C), TYEE CITY (4012482/672B)

County Summary: HUMBOLDT

Lat/Long: 40.87298° / -124.15866° Township: 06N
 UTM: Zone-10 N4525302 E402367 Range: 01W
 Area: 45.7 ac Mapping Precision: SPECIFIC Section: 26 Qtr: W
 Elevation: 20 ft Symbol Type: POLYGON Meridian: H

Location: SAND DUNES; FROM NORTHWEST OF THE MOUTH OF MAD RIVER SLOUGH, SOUTH FOR ABOUT 1 MILE.

Location Detail: ALSO IN SECTIONS 27 AND 34. PLANTS REPORTED BY A. PICKART TO BE EXTANT AT 1996 RECOVERY WORKSHOP (EXACT DATE SEEN UNKNOWN).

Ecological: GROWING AMONG DUNES IN ASSOCIATION WITH ARTEMISIA PYCNOCEPHALA, SOLIDAGO SPATHULATA, LATHYRUS LITTORALIS, LAYIA CARNOSA, AMMOPHILA ARENARIA, AND LUPINUS ARBOREUS.

Threat: ORV USE AND INVASIVE WEEDY SPECIES (L. ARBOREUS AND AMMOPHILA) THREATEN.

General: 500 PLANTS SEEN IN 1988. INCLUDES FORMER ERYSIMUM MENZIESII OCCURRENCE 41. BLM TO DEVELOP MANAGEMENT PLAN. PORTION OF SITE FENCED BY CSU, HUMBOLDT FOR MENZIES' WALLFLOWER RESEARCH PROGRAM. PORTION OWNED BY LOUISIANA-PACIFIC.

Owner/Manager: BLM-ARCATA RA, PVT

Occurrence No. 3 Map Index: 06821 EO Index: 7255 Dates Last Seen
 Occ Rank: Good Element: 199X-XX-XX
 Origin: Natural/Native occurrence Site: 199X-XX-XX
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1996-09-02
 Main Source: MILLER, L. 1988 (OBS)

Quad Summary: EUREKA (4012472/672C)

County Summary: HUMBOLDT

Lat/Long: 40.85789° / -124.16698° Township: 06N
 UTM: Zone-10 N4523637 E401643 Range: 01W
 Area: 12.4 ac Mapping Precision: SPECIFIC Section: 34 Qtr: E
 Elevation: 20 ft Symbol Type: POLYGON Meridian: H

Location: SAND DUNES NORTH OF MANILA, SAMOA PENINSULA.

Location Detail: AT DUNE END OF TRAIL THROUGH HUNT FARM. AT 1996 RECOVERY WORKSHOP, PLANTS REPORTED BY A. PICKART TO STILL BE EXTANT AT THIS SITE, BUT EXACT DATE SEEN UNKNOWN.

Ecological: GROWING ON DUNES IN ASSOCIATION WITH SOLIDAGO SPATHULATA, POA DOUGLASII, LATHYRUS LITTORALIS, AND LAYIA CARNOSA.

Threat: ORV TRESPASS AND EXOTIC SPECIES ENCROACHMENT (ESPECIALLY AMMOPHILA ARENARIA) THREATEN THIS SITE.

General: 136 PLANTS COUNTED IN 1988. PROPERTY IS POSTED BY LANDOWNERS BUT ORV TRESPASS STILL OCCURS. THIS POPULATION INCLUDES FORMER ERYSIMUM MENZIESII OCCURRENCE 23.

Owner/Manager: PVT

Erysimum menziesii ssp. eurekaense

Humboldt Bay wallflower

Element Code: PDBRA160E2

Status
 Federal: Endangered
 State: Endangered

NDDB Element Ranks
 Global: G3?T1
 State: S1.1

Other Lists
 CNPS List: 1B
 R-E-D Code: 3-3-3

Habitat Associations

General: COASTAL DUNES.

Micro: FOREDUNES W/ARTEMISIA PYCNOCEPHALA, SOLIDAGO SPATHULATA, LATHYRUS SP., ETC. 0-10M.

Occurrence No. 4

Map Index: 06786

EO Index: 5679

Dates Last Seen

Occ Rank: Good
 Origin: Natural/Native occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Main Source: MILLER, L. 1988 (OBS)

Element: 1994-03-16
 Site: 1994-03-16

Record Last Updated: 1996-09-02

Quad Summary: EUREKA (4012472/672C)

County Summary: HUMBOLDT

Lat/Long: 40.80480° / -124.20111°
 UTM: Zone-10 N4517782 E398686
 Area: 649.8 ac
 Elevation: 20 ft

Mapping Precision: SPECIFIC
 Symbol Type: POLYGON

Township: 05N
 Range: 01W
 Section: 20 Qtr: XX
 Meridian: H

Location: SAND DUNES OF SAMOA PENINSULA, FROM COAST GUARD STATION NORTH TO MANILA.

Location Detail: FROM S 1/2 OF SECTION 31 NORTH TO SW 1/4 OF SECTION 3. SEVERAL COLLECTIONS FROM THE SAMOA PENINSULA ATTRIBUTED TO THIS OCCURRENCE.

Ecological: GROWING ON DUNES IN ASSOCIATION WITH ARTEMISIA PYCNOCEPHALA, SOLIDAGO SPATHULATA, AMMOPHILA ARENARIA, LUPINUS ARBOREUS, LAYIA CARNOSA, LATHYRUS LITTORALIS, ERIOGONUM LATIFOLIA, ABRONIA LATIFOLIA, AND POA DOUGLASII.

Threat: ORV ACTIVITY, PEDESTRIAN TRAFFIC, DEVELOPMENT, AND INVASIVE WEEDS (AMMOPHILA, CARPOBROTUS AND L. ARBOREUS) THREATEN.

General: APPROX. 12,000 PLANTS OBSERVED IN 1988. INCLUDES FORMER ERYSIMUM MENZIESII OCCURRENCES #17, 18, 19, 21, AND 22. ADDITIONAL OWNERS INCL THE BLM, AND THE COAST GUARD.

Owner/Manager: PVT, CITY OF EUREKA, OTHERS

Occurrence No. 6

Map Index: 28265

EO Index: 2584

Dates Last Seen

Occ Rank: Good
 Origin: Natural/Native occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Main Source: EICHER, A. & M. BIVIN 1994 (OBS)

Element: 1994-03-25
 Site: 1994-03-25

Record Last Updated: 1996-09-10

Quad Summary: EUREKA (4012472/672C)

County Summary: HUMBOLDT

Lat/Long: 40.85295° / -124.16820°
 UTM: Zone-10 N4523090 E401533
 Area: 4.6 ac
 Elevation: 20 ft

Mapping Precision: SPECIFIC
 Symbol Type: POLYGON

Township: 05N
 Range: 01W
 Section: 03 Qtr: NW
 Meridian: H

Location: MANILA; MANILA COMMUNITY SERVICES DISTRICT - LEACHFIELD SITE. NORTH OF LEACHFIELD.

Ecological: IN NORTHERN FOREDUNE COMMUNITY. ASSOCIATED WITH SOLIDAGO SPATHULATA, POA DOUGLASII, AND LAYIA CARNOSA.

Threat: LEACHFIELD SITE WAS UNDER REVIEW IN 1994 FOR SITE MODIFICATIONS; SHOULD AVOID AREAS WHERE PLANTS ARE FOUND.

General: 39 PLANTS IN 1994. SITE IS BEING ACTIVELY MANAGED AND RESTORED WITH COASTAL CONSERVANCY FUNDING ACC TO A. PICKART (PERS. COMM. 1996).

Owner/Manager: PVT, MANILA COMM SERVICES DIST

Layia carnosa

beach layia

Element Code: PDAST5N010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered State: Endangered	Global: G1 State: S1.1	CNPS List: 1B R-E-D Code: 3-3-3

Habitat Associations

General: COASTAL DUNES. HUGELY REDUCED IN RANGE ALONG CALIFORNIA'S NORTH COAST DUNES.
Micro: ON SPARSELY VEGETATED SEMI-STABILIZED DUNES, USUALLY BEHIND FOREDUNES. 0-75M.

Occurrence No.	Map Index:	EO Index:	Dates Last Seen
12	06781	4540	Element: 1996-03-31 Site: 1996-03-31
Occ Rank: Good Origin: Natural/Native occurrence Presence: Presumed Extant Trend: Unknown Main Source: BERG, K. 1987 (OBS)			Record Last Updated: 1998-03-02

Quad Summary: EUREKA (4012472/672C)
County Summary: HUMBOLDT

Lat/Long: 40.78607° / -124.21279°	Township: 05N
UTM: Zone-10 N4515717 E397672	Range: 01W
Area: 491.9 ac	Section: 29
Elevation: 20 ft	Meridian: H
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POLYGON	

Location: SAMOA PENINSULA, FROM SOUTHERN TIP OF SPIT NORTH ABOUT 4 MILES.
Location Detail: SCATTERED POPULATIONS, MOSTLY WEST OF SAMOA AVE AND NEW NAVY BASE ROAD.
Ecological: IN REMNANT NORTHERN FOREDUNE COMMUNITY. DOMINATES ARE ARTEMISIA PYCNOCEPHALA AND SOLIDAGO SPATHULATA. OTHER ASSOCIATES INCLUDE ERYSIMUM MENZIESII EUREKENSE, FRAGARIA CHILOENSIS, ERIOGONUM LATIFOLIUM, LUPINUS ARBOREUS, AMMOPHILA, AND POA.
Threat: SEVERE ORV DAMAGE IN PLACES, PROPOSED INDUSTRIAL DEVELOPMENT, RECREATIONAL USE BY BEACHGOERS, COMPETITION FROM EXOTICS.
General: ABUNDANT IN 1987, 1988. 30,000+ PLANTS OBSERVED IN 1991 BY DUEBENDORFER. MAP DETAIL FROM 1988. INCLUDES FORMER OCCURRENCE #13 AND 16. AMMOPHILA REMOVAL HAS BENEFITTED LAYIA HERE (A. PICKART 1996 PERS. COMM.).
Owner/Manager: BLM, DOT-COAST GUARD, OTHERS

Occurrence No.	Map Index:	EO Index:	Dates Last Seen
17	06816	4541	Element: 1998-04-22 Site: 1998-04-22
Occ Rank: Good Origin: Natural/Native occurrence Presence: Presumed Extant Trend: Unknown Main Source: MILLER, L. 1988 (MAP)			Record Last Updated: 1994-11-14

Quad Summary: EUREKA (4012472/672C), TYEE CITY (4012482/672B)
County Summary: HUMBOLDT

Lat/Long: 40.85028° / -124.17218°	Township: 05N
UTM: Zone-10 N4522798 E401194	Range: 01W
Area: 374.6 ac	Section: 03
Elevation: 20 ft	Meridian: H
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POLYGON	

Location: SAMOA PENINSULA, NORTH SPIT, ALONG COAST NORTH OF SAMOA FOR ABOUT 4.5 MILES.
Location Detail: SCATTERED ALONG SAND DUNES ON WEST SIDE OF THE PENINSULA. AMMOPHILA REMOVAL HAS BENEFITTED LAYIA HERE (A. PICKART 1996 PERS. COMM.).
Ecological: GROWING IN NORTHERN FOREDUNE COMMUNITY. DOMINANTS ARE SOLIDAGO SPATHULATA AND LATHYRUS LITTORALIS WITH ERYSIMUM MENZIESII EUREKENSE, FRAGARIA CHILOENSIS, ERIOGONUM LATIFOLIUM, POA DOUGLASII, ABRONIA LATIFOLIA, ARTEMISIA PYCNOCEPHALA ETC.
Threat: ORV USE, BEACHCOMBING, HORSES, CAMPING, LEACHFIELD MODIFICATIONS, COMPETITION FROM WEEDS-AMMOPHILA AND LUPINUS ARBOREUS.
General: ABUNDANT IN 1988. 42,000+ PLANTS OBSERVED IN 1991, 200,000-500,000 PLANTS ESTIMATED IN 1993. SITE CURRENTLY MANAGED FOR ENDANGERED SPECIES AND PUBLIC ACCESS.
Owner/Manager: PVT, BLM, MANILA COM SERV DIST

Layia carnosa

beach layia

Element Code: PDAST5N010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G1	CNPS List: 1B
State: Endangered	State: S1.1	R-E-D Code: 3-3-3

Habitat Associations

General: COASTAL DUNES. HUGELY REDUCED IN RANGE ALONG CALIFORNIA'S NORTH COAST DUNES.
Micro: ON SPARSELY VEGETATED SEMI-STABILIZED DUNES, USUALLY BEHIND FOREDUNES. 0-75M.

Occurrence No.: 27	Map Index: 30346	EO Index: 4539	Dates Last Seen
Occ Rank: Fair			Element: 2000-04-05
Origin: Natural/Native occurrence			Site: 2000-04-05
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-10-16
Main Source: DUEBENDORFER, T. 1991 (OBS)			

Quad Summary: FIELDS LANDING (4012462/654B), CANNIBAL ISLAND (4012463/655A), EUREKA (4012472/672C)
County Summary: HUMBOLDT

Lat/Long: 40.72669° / -124.25218°	UTM: Zone-10 N4509171 E394254	Area: 255.4 ac	Elevation: 10 ft	Mapping Precision: SPECIFIC	Symbol Type: POLYGON	Township: 04N	Range: 02W	Section: 13	Qtr: XX	Meridian: H
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Location: SOUTH SPIT OF HUMBOLDT BAY.

Location Detail: SCATTERED POPULATIONS ON BOTH SIDES OF SOUTH JETTY ROAD FROM EXTREME NORTHERN TIP OF SPIT TO JUST NORTH OF TABLE BLUFF.

Ecological: GROWING IN OPENINGS WITHIN NORTHERN FOREDUNE COMMUNITY. ASSOCIATED WITH ERIOGONUM LATIFOLIUM, POA DOUGLASII, LATHYRUS LITTORALIS, FRAGARIA CHILOENSIS, ABRONIA LATIFOLIA, CALYSTEGIA SOLDANELLA, CAMISSONIA CHEIRANTHIFOLIA, HYPOCHAERIS, ETC.

Threat: BEACHCOMBING, ORV USE, CAMPING, AND HIKING THREATEN.

General: MORE THAN 20,000 PLANTS OBSERVED IN 1991 BY DUEBENDORFER. PLANT OBSERVED IN 2000 DURING ERYSIMUM MENZIESII SSP. EUREKENSE SURVEY.

Owner/Manager: PVT-GREEN DIAMOND, TEXACO

Occurrence No.: 29	Map Index: 40401	EO Index: 35408	Dates Last Seen
Occ Rank: Good			Element: 2000-04-17
Origin: Natural/Native occurrence			Site: 2000-04-17
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2000-03-16
Main Source: PICKART, A. 1998 (OBS)			

Quad Summary: EUREKA (4012472/672C)
County Summary: HUMBOLDT

Lat/Long: 40.76331° / -124.19921°	UTM: Zone-10 N4513174 E398783	Area: 95.9 ac	Elevation: 10 ft	Mapping Precision: SPECIFIC	Symbol Type: POLYGON	Township: 04N	Range: 01W	Section: 05	Qtr: NE	Meridian: H
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Location: MOUTH OF THE ELK RIVER, SOUTHWEST OF EUREKA.

Location Detail: MAPPED ALONG SAND SPIT ALONG WEST SIDE OF THE MOUTH OF THE RIVER, FROM RR TRACKS NORTH TO THE END OF THE SPIT.

Ecological: SAND VERBENA-BURSAGE SERIES WITH LATHYRUS LITTORALIS, ARTEMISIA PYCNOCEPHALA, CALYSTEGIA SOLDANELLA, FRAGARIA CHILOENSIS AND ERYSIMUM MENZIESII EUREKENSE. EXOTIC AMMOPHILA ARENARIA, BRIZA MAXIMA, CORTADERIA JUBATA, AND CARPOBROTUS EDULIS.

Threat: INVASIVE NON-NATIVE PLANTS; DIRT BIKE TRACKS EVIDENT.

General: 1000+ PLANTS OBSERVED IN 1998. 100+ PLANTS IN 1999. PLANTS SEEN AS PART OF ANOTHER SURVEY IN 2000. SPIT IS UNDEVELOPED. SITE IS NOT CURRENTLY MANAGED; EXOTICS APPEAR TO BE TAKING OVER.

Owner/Manager: CITY OF EUREKA

Rallus longirostris obsoletus

California clapper rail

Element Code: ABNME05016

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G5T1	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: SALT-WATER & BRACKISH MARSHES TRAVERSED BY TIDAL SLOUGHS IN THE VICINITY OF SAN FRANCISCO BAY.
Micro: ASSOCIATED WITH ABUNDANT GROWTHS OF PICKLEWEED, BUT FEEDS AWAY FROM COVER ON INVERTEBRATES FROM MUD-BOTTOMED SLOUGHS.

Occurrence No.: 56	Map Index: 06814	EO Index: 25838	Dates Last Seen
Occ Rank: None			Element: 1932-XX-XX
Origin: Natural/Native occurrence			Site: 1932-XX-XX
Presence: Extirpated			
Trend: Unknown			Record Last Updated: 1998-08-12
Main Source: GILL, R. 1979 (LIT)			

Quad Summary: EUREKA (4012472/672C)

County Summary:

Lat/Long: 40.81462° / -124.16685°	Township: 05N
UTM: Zone-10 N4518833 E401590	Range: 01W
Area: 249.8 ac	Section: 15
Elevation:	Meridian: H
	Qtr: XX
Mapping Precision: NON-SPECIFIC	
Symbol Type: POLYGON	

Location: INDIAN ISLAND IN HUMBOLDT BAY.

General: BREEDING POPULATIONS EXISTED HERE IN 1932, BUT NO CONFIRMED BREEDING RECORDS HAVE BEEN REPORTED SINCE.

Owner/Manager: CITY OF EUREKA

Charadrius alexandrinus nivosus

western snowy plover

Element Code: ABNNB03031

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G4T3
State: S2

Other Lists
CDFG Status: SC

Habitat Associations

General: (NESTING) FEDERAL LISTING APPLIES ONLY TO THE PACIFIC COASTAL POPULATION.

Micro: SANDY BEACHES, SALT POND LEVEES & SHORES OF LARGE ALKALI LAKES. NEEDS SANDY, GRAVELLY OR FRIABLE SOILS FOR NESTING.

Occurrence No. 78

Map Index: 06770

EO Index: 25739

Dates Last Seen

Occ Rank: Unknown

Element: 1977-XX-XX

Origin: Natural/Native occurrence

Site: 1977-XX-XX

Presence: Presumed Extant

Trend: Unknown

Record Last Updated: 1998-08-18

Main Source: PAGE, G. & L. STENZEL 1981 (LIT)

Quad Summary: FIELDS LANDING (4012462/654B), CANNIBAL ISLAND (4012463/655A), EUREKA (4012472/672C)

County Summary: HUMBOLDT

Lat/Long: 40.73089° / -124.24892°

Township: 04N

UTM: Zone-10 N4509634 E394536

Range: 02W

Area: 666.6 ac

Mapping Precision: NON-SPECIFIC

Section: 13

Qtr: XX

Elevation: 10 ft

Symbol Type: POLYGON

Meridian: H

Location: SOUTH HUMBOLDT BAY SPIT, HUMBOLDT COUNTY.

General: FOUR PAIRS OBSERVED DURING MAY-JUNE 1977 STUDY. AREA ALSO USED BY WINTERING BIRDS. NESTING RECORDS IN HUMBOLDT BAY AREA EXTEND BACK TO 1899. PORTION OF SITE PRIVATELY OWNED; REMAINDER OWNED BY HUMBOLDT COUNTY OR OTHER MUNICIPAL AGENCY.

Owner/Manager: PVT, OTHER?

Haliaeetus leucocephalus

bald eagle

Element Code: ABNKC10010

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G5	CDFG Status:
State: Endangered	State: S2	

Habitat Associations

General: (NESTING & WINTERING) OCEAN SHORE, LAKE MARGINS, & RIVERS FOR BOTH NESTING & WINTERING. MOST NESTS WITHIN 1 MI OF WATER.
Micro: NESTS IN LG, OLD-GROWTH, OR DOMINANT LIVE TREE W/OPEN BRANCHES. ESPECIALLY PONDEROSA PINE. ROOSTS COMMUNALLY IN WINTER.

Occurrence No.: 250	Map Index: 64209	EO Index: 64304	Dates Last Seen
Occ Rank: Excellent			Element: 2005-04-25
Origin: Natural/Native occurrence			Site: 2005-04-25
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2006-03-13
Main Source: BRADLEY, L. 2005 (OBS)			

Quad Summary: FIELDS LANDING (4012462/654B)

County Summary: HUMBOLDT

Lat/Long: 40.68326° / -124.18009°	Township: 04N
UTM: Zone-10 N4504266 E400277	Range: 01W
Radius: 80 meters	Section: 33
Elevation: 580 ft	Meridian: H
Mapping Precision: SPECIFIC	Qtr: SE
Symbol Type: POINT	

Location: UPPER END OF THE WILLOW BROOK DRAINAGE, 3.5 MILES NE OF LOLETA

Location Detail: NEST TREE IS LOCATED NEAR THE TOP OF THE WILLOW BROOK DRAINAGE AND HAS A COMMANDING VIEW OF SOUTH HUMBOLDT BAY. THE NEST IS LOCATED ~30' FROM THE TOP ON THE EAST SIDE AND IS SUPPORTED BY SEVERAL LARGE BRANCHES. NEST DIMENSIONS: 5' X 4' X 3'

Ecological: NEST TREE IS A LIVE RESIDUAL REDWOOD (250-300' TALL); SURROUNDING HABITAT CONSISTS OF SECOND-GROWTH REDWOOD/ALDER FOREST CONTAINING NUMEROUS, SCATTERED RESIDUAL (LEGACY) REDWOOD TREES.

Threat: THREATENED BY TIMBER HARVEST .

General: NEST IS RELATIVELY SMALL AND IS PROBABLY A FIRST-YEAR NEST; BIRDS DID NOT NEST AT THIS LOCATION IN 2004. NEST DISCOVERED ON 25 APR; 2 YOUNG WERE FULLY-FEATHERED, BUT NOT YET FLEDGED, ON 18 JUL 2005.

Owner/Manager: PVT

Layia carnosa

beach layia

Element Code: PDAST5N010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G1	CNPS List: 1B
State: Endangered	State: S1.1	R-E-D Code: 3-3-3

Habitat Associations

General: COASTAL DUNES. HUGELY REDUCED IN RANGE ALONG CALIFORNIA'S NORTH COAST DUNES.
 Micro: ON SPARSELY VEGETATED SEMI-STABILIZED DUNES, USUALLY BEHIND FOREDUNES. 0-75M.

Occurrence No. 27	Map Index: 30346	EO Index: 4539	Dates Last Seen
Occ Rank: Fair			Element: 2000-04-05
Origin: Natural/Native occurrence			Site: 2000-04-05
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-10-16
Main Source: DUEBENDORFER, T, 1991 (OBS)			

Quad Summary: FIELDS LANDING (4012462/654B), CANNIBAL ISLAND (4012463/655A), EUREKA (4012472/672C)
 County Summary: HUMBOLDT

Lat/Long: 40.72669° / -124.25218°	Township: 04N	
UTM: Zone-10 N4509171 E394254	Range: 02W	
Area: 255.4 ac	Section: 13	Qtr: XX
Elevation: 10 ft	Mapping Precision: SPECIFIC	Meridian: H
	Symbol Type: POLYGON	

Location: SOUTH SPIT OF HUMBOLDT BAY.

Location Detail: SCATTERED POPULATIONS ON BOTH SIDES OF SOUTH JETTY ROAD FROM EXTREME NORTHERN TIP OF SPIT TO JUST NORTH OF TABLE BLUFF.

Ecological: GROWING IN OPENINGS WITHIN NORTHERN FOREDUNE COMMUNITY. ASSOCIATED WITH ERIOGONUM LATIFOLIUM, POA DOUGLASII, LATHYRUS LITTORALIS, FRAGARIA CHILOENSIS, ABRONIA LATIFOLIA, CALYSTEGIA SOLDANELLA, CAMISSONIA CHEIRANTHIFOLIA, HYPOCHAERIS, ETC.

Threat: BEACHCOMBING, ORV USE, CAMPING, AND HIKING THREATEN.

General: MORE THAN 20,000 PLANTS OBSERVED IN 1991 BY DUEBENDORFER. PLANT OBSERVED IN 2000 DURING ERYSIMUM MENZIESII SSP. EUREKENSE SURVEY.

Owner/Manager: PVT-GREEN DIAMOND, TEXACO

Lilium occidentale

western lily

Element Code: PMLIL1A0G0

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G1	CNPS List: 1B
State: Endangered	State: S1.2	R-E-D Code: 3-3-2

Habitat Associations

General: COASTAL SCRUB, FRESHWATER MARSH, BOGS AND FENS, COASTAL BLUFF SCRUB, COASTAL PRAIRIE, NO. COAST CONIFEROUS FOREST.
Micro: WELL-DRAINED, OLD BEACH WASHES OVERLAIN WWIND-BLOWN ALLUVIUM & ORG. TOPSOIL; USU NEAR MARGINS OF SITKA SPRUCE. 2-185M.

Occurrence No. 4	Map Index: 06787	EO Index: 19760	Dates Last Seen
Occ Rank: Unknown			Element: 1918-07-21
Origin: Natural/Native occurrence			Site: 1918-07-21
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-05-13
Main Source: TRACY, J. #5078 UC (HERB)			

Quad Summary: FIELDS LANDING (4012462/654B)
County Summary: HUMBOLDT

Lat/Long: 40.71123° / -124.19590°	Township: 04N
UTM: Zone-10 N4507389 E398984	Range: 01W
Radius: 1 mile	Section: 21
Elevation: 600 ft	Meridian: H
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: HUMBOLDT HILL, AROUND HUMBOLDT BAY.

General: NONE.

Owner/Manager: UNKNOWN

Occurrence No. 5	Map Index: 06782	EO Index: 1400	Dates Last Seen
Occ Rank: Unknown			Element: 1938-07-15
Origin: Natural/Native occurrence			Site: 1938-07-15
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-11
Main Source: TRACY, J. #16065 UC (HERB)			

Quad Summary: FIELDS LANDING (4012462/654B)
County Summary: HUMBOLDT

Lat/Long: 40.69873° / -124.20590°	Township: 04N
UTM: Zone-10 N4506013 E398120	Range: 01W
Radius: 1 mile	Section: 29
Elevation: 20 ft	Meridian: H
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: IN SEDGE SWAMP NEAR STILL RANCH, 2 MI S OF FIELDS LANDING.

Ecological: IN SEDGE SWAMP.

General: SP SEEN IN 1938.

Owner/Manager: UNKNOWN

* SENSITIVE *	Occurrence No. 10	Map Index: 06769	EO Index: 7760	Dates Last Seen
	Occ Rank: Good			Element: 1991-07-09
	Origin: Natural/Native occurrence			Site: 1991-07-09
	Presence: Presumed Extant			
	Trend: Unknown			Record Last Updated: 1993-12-04
	Main Source: GELDIN-MEYERS, C. 1983 (OBS)			

Quad Summary: FIELDS LANDING (4012462/654B)
County Summary: HUMBOLDT

* SENSITIVE *	Lat/Long:	Township:
	UTM:	Range:
	Radius:	Section:
	Elevation:	Meridian:
	Mapping Precision:	Qtr:
	Symbol Type:	

Location: *SENSITIVE* Location information suppressed.

Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: ALONG OCEAN HEADLANDS ON PERIPHERY OF STIKA SPRUCE AND ADJACENT MARSH IN OPEN HABITAT.

Threat: HAS BEEN THREATENED BY BULB COLLECTIONS AND CATTLE GRAZING IN PAST. FENCE ERECTED IN 1988 PROTECTS 85% OF POPULATION.

Owner/Manager:

Lilium occidentale

western lily

Element Code: PMLL1A0G0

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G1	CNPS List: 1B
State: Endangered	State: S1.2	R-E-D Code: 3-3-2

Habitat Associations

General: COASTAL SCRUB, FRESHWATER MARSH, BOGS AND FENS, COASTAL BLUFF SCRUB, COASTAL PRAIRIE, NO. COAST CONIFEROUS FOREST.
Micro: WELL-DRAINED, OLD BEACH WASHES OVERLAIN W/WIND-BLOWN ALLUVIUM & ORG. TOPSOIL; USU NEAR MARGINS OF SITKA SPRUCE. 2-185M.

Occurrence No. 21	Map Index: 06771	EO Index: 22493	Dates Last Seen
Occ Rank: Good			Element: 1991-07-05
Origin: Natural/Native occurrence			Site: 1991-07-05
Presence: Presumed Extant			
Trend: Increasing			Record Last Updated: 1993-03-23
Main Source: THE NATURE CONSERVANCY 1988 (LIT)			

Quad Summary: FIELDS LANDING (4012462/654B)
County Summary: HUMBOLDT

* SENSITIVE *	Lat/Long:	Township:	
	UTM:	Range:	
	Radius:	Section:	Qtr:
	Elevation:	Meridian:	
		Mapping Precision:	
		Symbol Type:	

Location: *SENSITIVE* Location information suppressed.

Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: PLANTS IN COASTAL BLUFF SCRUB. ASSOCIATES INCLUDE CALAMAGROSTIS, HOLCUS, ANTHOXANTHUM, RUBUS VITIFOLIUS, GAULTHERIA SHALLON, ROSA NUTKANA, PTERIDIUM AQUILINUM, RUBUS PROCERUS, LEDUM, CAREX, AND JUNCUS.

Threat: SOME GRAZING IN AREA, THOUGH GRAZING ANIMALS HAVE BEEN EXCLUDED FROM AREA OF PLANTS FOR 4 YEARS.

Owner/Manager:

Occurrence No. 24	Map Index: 06772	EO Index: 12208	Dates Last Seen
Occ Rank: Unknown			Element: 1991-06-29
Origin: Natural/Native occurrence			Site: 1991-06-29
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1993-03-23
Main Source: IMPER, D. 1984 (OBS)			

Quad Summary: FIELDS LANDING (4012462/654B)
County Summary: HUMBOLDT

* SENSITIVE *	Lat/Long:	Township:	
	UTM:	Range:	
	Radius:	Section:	Qtr:
	Elevation:	Meridian:	
		Mapping Precision:	
		Symbol Type:	

Location: *SENSITIVE* Location information suppressed.

Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: IN MOIST, SATURATED, AND DRY HABITATS. IN MIXTURE OF COASTAL SCRUB, RIPARIAN-FRESH WATER MARSH. ASSOCIATED SPP RUBENS VITIFOLIUS; JUNCUS SP, CAREX ETC. IN WET AREAS, HOLCUS LANATUS IN DRIER AREAS.

Threat: OCCASIONAL CATTLE GRAZING IN PAST. DEER INSIDE EXCLOSURE BUT IMPACT TO LILIES APPEARS LIGHT.

Owner/Manager:

Eucyclogobius newberryi

tidewater goby

Element Code: AFCQN04010

----- Status ----- NDDDB Element Ranks ----- Other Lists -----
 Federal: Endangered Global: G3 CDFG Status: SC
 State: None State: S2S3

----- Habitat Associations -----

General: BRACKISH WATER HABITATS ALONG THE CALIF COAST FROM AGUA HEDIONDA LAGOON, SAN DIEGO CO. TO THE MOUTH OF THE SMITH RIVER.
 Micro: FOUND IN SHALLOW LAGOONS AND LOWER STREAM REACHES, THEY NEED FAIRLY STILL BUT NOT STAGNANT WATER & HIGH OXYGEN LEVELS.

Occurrence No. 6 Map Index: 06914 EO Index: 28575 Dates Last Seen -----
 Occ Rank: Unknown Element: 1988-XX-XX
 Origin: Natural/Native occurrence Site: 1988-XX-XX
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1997-11-12
 Main Source: SWIFT, C. ET AL 1986 (LIT)

Quad Summary: ARCATA SOUTH (4012471/672D)
 County Summary: HUMBOLDT

Lat/Long: 40.85129° / -124.09590° Township: 05N
 UTM: Zone-10 N4522827 E407625 Range: 01E
 Area: 295.0 ac Mapping Precision: NON-SPECIFIC Section: 5 Qtr: XX
 Elevation: Symbol Type: POLYGON Meridian: X

Location: HUMBOLDT BAY (ARCATA BAY), NE SHORE IN THE VICINITY OF THE OXIDATION PONDS AND RADIO STATIONN KATA.
 Location Detail: INCLUDES THE MOUTH OF MAD RIVER SLOUGH AND THE MOUTH OF JACOBY CREEK.
 General: LACM 42667-6 COLL 6/13/81. COLLECTED IN 1988. POPULATION PRESUMED EXTANT IN 1990 BY SWIFT.
 Owner/Manager: CITY OF EUREKA, ARCATA, OTHER

Occurrence No. 7 Map Index: 06918 EO Index: 28574 Dates Last Seen -----
 Occ Rank: Unknown Element: 1984-XX-XX
 Origin: Natural/Native occurrence Site: 1984-XX-XX
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1996-01-02
 Main Source: SWIFT, C. ET AL 1986 (LIT)

Quad Summary: ARCATA SOUTH (4012471/672D)
 County Summary: HUMBOLDT

Lat/Long: 40.84290° / -124.08561° Township: 05N
 UTM: Zone-10 N4521884 E408481 Range: 01E
 Radius: 1/5 mile Mapping Precision: NON-SPECIFIC Section: 5 Qtr: XX
 Elevation: Symbol Type: POINT Meridian: H

Location: HUMBOLDT BAY, VIC JACOBY CREEK AND HWY 101
 Ecological: LITTLE OR NO GENETIC EXCHANGE BETWEEN POPULATIONS.
 General: LACM 35335-5 COLL 7/30/75. POP PRESUMED EXTANT IN 1990 BY SWIFT.
 Owner/Manager: UNKNOWN

Lilium occidentale

western lily

Element Code: PMLIL1A0G0

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G1	CNPS List: 1B
State: Endangered	State: S1.2	R-E-D Code: 3-3-2

Habitat Associations

General: COASTAL SCRUB, FRESHWATER MARSH, BOGS AND FENS, COASTAL BLUFF SCRUB, COASTAL PRAIRIE, NO. COAST CONIFEROUS FOREST.
Micro: WELL-DRAINED, OLD BEACH WASHES overlain w/WIND-BLOWN ALLUVIUM & ORG. TOPSOIL; USU NEAR MARGINS OF SITKA SPRUCE. 2-185M.

Occurrence No. 14	Map Index: 06933	EO Index: 21850	Dates Last Seen
Occ Rank: Unknown			Element: 1925-07-01
Origin: Natural/Native occurrence			Site: 1925-07-01
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-11
Main Source: KILDALE, D. #1338 DS (HERB)			

Quad Summary: ARCATA SOUTH (4012471/672D)
County Summary: HUMBOLDT

Lat/Long: 40.84373° / -124.06617°	Township: 05N
UTM: Zone-10 N4521957 E410121	Range: 01E
Radius: 1 mile	Section: 20
Elevation: 50 ft	Meridian: H
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: NEAR BAYSIDE, NEAR HUMBOLDT BAY.
Ecological: IN WET GROUND IN AZALEA PATCH NEAR BAY.
General: SP SEEN IN 1925.
Owner/Manager: UNKNOWN

Occurrence No. 18	Map Index: 06892	EO Index: 21851	Dates Last Seen
Occ Rank: Unknown			Element: 1912-09-01
Origin: Natural/Native occurrence			Site: 1912-09-01
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-07-13
Main Source: TRACY, J. #3982 UC (HERB)			

Quad Summary: ARCATA SOUTH (4012471/672D)
County Summary: HUMBOLDT

Lat/Long: 40.78540° / -124.10285°	Township: 05N
UTM: Zone-10 N4515520 E406947	Range: 01E
Radius: 1 mile	Section: 30
Elevation: 10 ft	Meridian: H
Mapping Precision: NON-SPECIFIC	Qtr: SE
Symbol Type: POINT	

Location: NEAR RYAN'S SLOUGH HILL, EUREKA.
Ecological: 0-200 FT IN FERNS ON NATURAL PRAIRIE GROUNDS.
General: SP SEEN IN 1912.
Owner/Manager: UNKNOWN

Occurrence No. 23	Map Index: 06924	EO Index: 21849	Dates Last Seen
Occ Rank: Unknown			Element: 1925-06-30
Origin: Natural/Native occurrence			Site: 1925-06-30
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-11
Main Source: KILDALE, D. #1337 DS (HERB)			

Quad Summary: ARCATA SOUTH (4012471/672D)
County Summary: HUMBOLDT

Lat/Long: 40.83512° / -124.07978°	Township: 05N
UTM: Zone-10 N4521015 E408962	Range: 01E
Radius: 1 mile	Section: 09
Elevation: 8 ft	Meridian: H
Mapping Precision: NON-SPECIFIC	Qtr: NW
Symbol Type: POINT	

Location: ON RD TO HUMBOLDT COUNTRY CLUB, 7 MI FROM (N?) EUREKA, MAPPED AT BAYSIDE CUTOFF.
Ecological: ON DRY SLOPES OF GULLY NEAR BAY.
Owner/Manager: UNKNOWN

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Listed/Proposed Threatened and Endangered Species for the FIELDS LANDING Quad (Candidates Included)

August 23, 2006

Document Number: 542595055-15492

TYPE	SCIENTIFIC NAME	COMMON NAME	CATEGORY	CRITICAL HABITAT
Plants				
	<i>Layia carnosa</i>	beach layia	E	N
	<i>Lilium occidentale</i>	western lily	E	N
Fish				
	<i>Eucyclogobius newberryi</i>	tidewater goby	E	Y
*	<i>Oncorhynchus kisutch</i>	S. OR/N. CA coho salmon	T	Y
*	<i>Oncorhynchus mykiss</i>	Northern California steelhead	T	Y
*	<i>Oncorhynchus tshawytscha</i>	CA coastal chinook salmon	T	Y
Birds				
	<i>Brachyramphus marmoratus</i>	marbled murrelet	T	Y
	<i>Charadrius alexandrinus nivosus</i>	western snowy plover	T	P
	<i>Coccyzus americanus</i>	Western yellow-billed cuckoo	C	N
	<i>Haliaeetus leucocephalus</i>	bald eagle	T	N
	<i>Pelecanus occidentalis californicus</i>	California brown pelican	E	N
	<i>Strix occidentalis caurina</i>	northern spotted owl	T	Y

KEY:	(PE) Proposed Endangered	Proposed in the Federal Register as being in danger of extinction
	(PT) Proposed Threatened	Proposed as likely to become endangered within the foreseeable future
	(E) Endangered	Listed in the Federal Register as being in danger of extinction
	(T) Threatened	Listed as likely to become endangered within the foreseeable future
	(C) Candidate	Candidate which may become a proposed species
	Critical Habitat	Y = Designated, P = Proposed, N = None Designated
	*	Denotes a species Listed by the National Marine Fisheries Service

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Listed/Proposed Threatened and Endangered Species for the ARCATA SOUTH Quad (Candidates Included)

August 23, 2006

Document Number: 542595055-155125

TYPE	SCIENTIFIC NAME	COMMON NAME	CATEGORY	CRITICAL HABITAT
Plants				
	<i>Lilium occidentale</i>	western lily	E	N
Fish				
	<i>Eucyclogobius newberryi</i>	tidewater goby	E	Y
*	<i>Oncorhynchus kisutch</i>	S. OR/N. CA coho salmon	T	Y
*	<i>Oncorhynchus mykiss</i>	Northern California steelhead	T	Y
*	<i>Oncorhynchus tshawytscha</i>	CA coastal chinook salmon	T	Y
Birds				
	<i>Brachyramphus marmoratus</i>	marbled murrelet	T	Y
	<i>Coccyzus americanus</i>	Western yellow-billed cuckoo	C	N
	<i>Haliaeetus leucocephalus</i>	bald eagle	T	N
	<i>Phoebastris albatrus</i>	short-tailed albatross	E	N
	<i>Strix occidentalis caurina</i>	northern spotted owl	T	Y
	<i>Synthliboramphus hypoleucus</i>	Xantus's murrelet	C	N

KEY:	(PE) Proposed Endangered	Proposed in the Federal Register as being in danger of extinction
	(PT) Proposed Threatened	Proposed as likely to become endangered within the foreseeable future
	(E) Endangered	Listed in the Federal Register as being in danger of extinction
	(T) Threatened	Listed as likely to become endangered within the foreseeable future
	(C) Candidate	Candidate which may become a proposed species
	Critical Habitat	Y = Designated, P = Proposed, N = None Designated
	*	Denotes a species Listed by the National Marine Fisheries Service

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Listed/Proposed Threatened and Endangered Species for the EUREKA Quad (Candidates Included)

August 23, 2006

Document Number: 542595055-154833

TYPE	SCIENTIFIC NAME	COMMON NAME	CATEGORY	CRITICAL HABITAT
Plants				
	<i>Erysimum menziesii</i>	Menzies' wallflower	E	N
	<i>Layia carnosa</i>	beach layia	E	N
	<i>Lilium occidentale</i>	western lily	E	N
Fish				
	<i>Eucyclogobius newberryi</i>	tidewater goby	E	Y
*	<i>Oncorhynchus kisutch</i>	S. OR/N. CA coho salmon	T	Y
*	<i>Oncorhynchus mykiss</i>	Northern California steelhead	T	Y
*	<i>Oncorhynchus tshawytscha</i>	CA coastal chinook salmon	T	Y
Reptiles				
*	<i>Caretta caretta</i>	loggerhead turtle	T	N
*	<i>Chelonia mydas (incl. agassizi)</i>	green turtle	T	N
*	<i>Dermochelys coriacea</i>	leatherback turtle	E	Y
*	<i>Lepidochelys olivacea</i>	olive (=Pacific) ridley sea turtle	T	N
Birds				
	<i>Brachyramphus marmoratus</i>	marbled murrelet	T	Y
	<i>Charadrius alexandrinus nivosus</i>	western snowy plover	T	P
	<i>Coccyzus americanus</i>	Western yellow-billed cuckoo	C	N
	<i>Haliaeetus leucocephalus</i>	bald eagle	T	N
	<i>Pelecanus occidentalis californicus</i>	California brown pelican	E	N
	<i>Phoebastria albatrus</i>	short-tailed albatross	E	N
	<i>Strix occidentalis caurina</i>	northern spotted owl	T	Y
	<i>Synthliboramphus hypoleucus</i>	Xantus's murrelet	C	N
Mammals				
*	<i>Balaenoptera borealis</i>	sei whale	E	N
*	<i>Balaenoptera musculus</i>	blue whale	E	N
*	<i>Balaenoptera physalus</i>	fin whale	E	N
*	<i>Eumetopias jubatus</i>	Steller (=northern) sea-lion	T	Y

*	<i>Megaptera novaengliae</i>	humpback whale	E	N
*	<i>Physeter macrocephalus</i>	sperm whale	E	N

KEY:	(PE) Proposed Endangered	Proposed in the Federal Register as being in danger of extinction
	(PT) Proposed Threatened	Proposed as likely to become endangered within the foreseeable future
	(E) Endangered	Listed in the Federal Register as being in danger of extinction
	(T) Threatened	Listed as likely to become endangered within the foreseeable future
	(C) Candidate	Candidate which may become a proposed species
	Critical Habitat	Y = Designated, P = Proposed, N = None Designated
	*	Denotes a species Listed by the National Marine Fisheries Service