

1.0 Introduction

This Biological Assessment (BA) has been prepared by Phillips 66 Company (Phillips 66) in accordance with Section 7 of the Endangered Species Act (ESA). It describes both the direct and indirect potential effects of the Port Costa Wharf Deconstruction Project (Proposed Action or Project) at Port Costa, Contra Costa County, California, on special-status plant and animal species listed as threatened or endangered under the ESA (so-called "listed" species), candidate species proposed for listing ("proposed" species), and designated critical habitat for these species. Emphasis is given to federally listed and proposed species under the ESA; however, for the purposes of this BA, special-status species also include those listed as endangered or threatened under the California Endangered Species Act (CESA) or otherwise protected by the State of California. This BA also describes the Proposed Action and reviews relevant biological information on the special-status species potentially occurring within the action area. In addition, the BA describes measures that have been developed as part of the Proposed Action that will avoid or minimize potential effects on special-status species.

This BA provides the information necessary to support consultation with the National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (USFWS) as required by 50 Code of Federal Regulations (CFR) 402.12-402.14 and Section 7 of the ESA. It provides the best available scientific and commercial data on special-status species and designated critical habitat in and around the action area. It is the intent of this BA to establish the basis upon which Phillips 66 will request concurrence from NMFS and USFWS with the conclusion that the Proposed Action may affect, but is not likely to adversely affect, listed or proposed species or adversely modify critical habitat.

This BA also briefly summarizes potential impacts to essential fish habitat (EFH) in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267). A formal EFH assessment for this project has been conducted by AECOM Technical Services, Inc. (AECOM) (2013). This BA also discusses the results of a preliminary delineation of jurisdictional waters conducted for areas to be used for temporary onshore parking and storage.

1.1 Project Location and Site Description

The Port Costa Wharf is located in the southeast side of the Carquinez Strait in Port Costa, California at latitude 38.03911° and longitude -122.17528° (see Figure 1-1). The Assessor's Parcel Number is 368-110-007.

The action area includes the bounds of the historical and current California State Lands Commission (CSLC) lease, and extends approximately 200 feet into the water, covering approximately 8.89 acres within the Carquinez Strait (see Figure 1-2). Because the action area is located in the Carquinez Strait, it is subject to the jurisdiction of the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act, the California Department of Fish and Wildlife (CDFW) under the CESA, the San Francisco Bay Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA, and the San Francisco Bay Conservation and Development Commission under the McAteer-Petris Act. In addition to the approval from the CSLC, permits from these agencies will be obtained prior to deconstruction.

Adjacent to the action area is the Union Pacific Railroad right-of-way, which includes two active rail lines for both passenger and freight transport (see Figure 1-2). Areas between the mean high water line (MHWL) and the rail lines are located in primarily ruderal/disturbed areas consisting of concrete rip rap that is serving as shoreline stabilization and weedy vegetation, such as non-native annual grasses (e.g., *Avena* spp. and *Bromus* spp.) and fennel (*Foeniculum vulgare*).

In addition to the in-water action area, up to 1.5 acres of temporary staging areas for upland parking, storage of non-hazardous materials, and sanitary stations may be required for onshore access to the MOT site by Phillips 66, its contractors, site monitors, agency representatives, or others wishing to observe operations. The proposed locations are located approximately 700 feet southwest and upland of the former MOT site on the adjacent property formerly owned by TXI/Pacific Custom Materials, Inc. (TXI). See Figure 1-3 for proposed onshore staging areas.

1.2 Purpose and Need

Phillips 66 seeks authorization to remove the existing non-operational MOT wharf located near Port Costa (Port Costa Wharf), in the Carquinez Strait (see Figure 1-1) in accordance with the terms and conditions of its existing CSLC lease (PRC 2869.1). The intent is to safely remove wood, steel, and concrete structures and other materials associated with the wharf that remain within the bounds of the historical and current CSLC leases. See Appendix A for photographs.

1.3 Special-Status Species and Critical Habitat with Potential to Occur in the Project Area

Preliminary research pertaining to special-status species and critical habitat with potential to occur in the Project area was completed in addition to reconnaissance-level site surveys conducted by AECOM biologists. Preliminary habitat assessments were conducted for the action area in May 2012 and for the proposed staging areas at the former TXI property in February 2013. The following sections provide an overview of special-status plant and animal species and designated critical habitats that may occur in or around the Project area.

1.3.1 Wildlife and Plants

Special-status species addressed in this BA include those listed as endangered or threatened under the ESA or CESA, candidate species and species proposed for listing under the ESA or CESA, and species otherwise protected by the State of California and included in the CDFW's California Natural Diversity Database (CNDDDB). A search was conducted of the latest version of the CNDDDB (CDFW 2012d) to obtain recorded occurrences of special-status plant and animal species in the Project vicinity. The search included the United States Geological Survey 7.5-minute quad that the Project area occurs in and the eight surrounding quads.

Because CNDDDB is limited to recorded observations, additional information on species that may occur in the Project area was obtained from NMFS (2012b). Based on information from NMFS and the CNDDDB survey, Table 1-1 lists special-status species and natural communities that have the potential to occur within a 5-mile radius of the action area. Complete results of the CNDDDB search are provided in Appendix B. Spatial distribution of CNDDDB records within 5 miles of the Project is shown in Figure 1-4 (fauna) and Figure 1-5 (flora). Information about the various species and their habitats were accumulated from a variety of sources, including documents from NMFS, USFWS, CDFW, and California Native Plant Society (CNPS).

Figure 1-1 Project Site Location

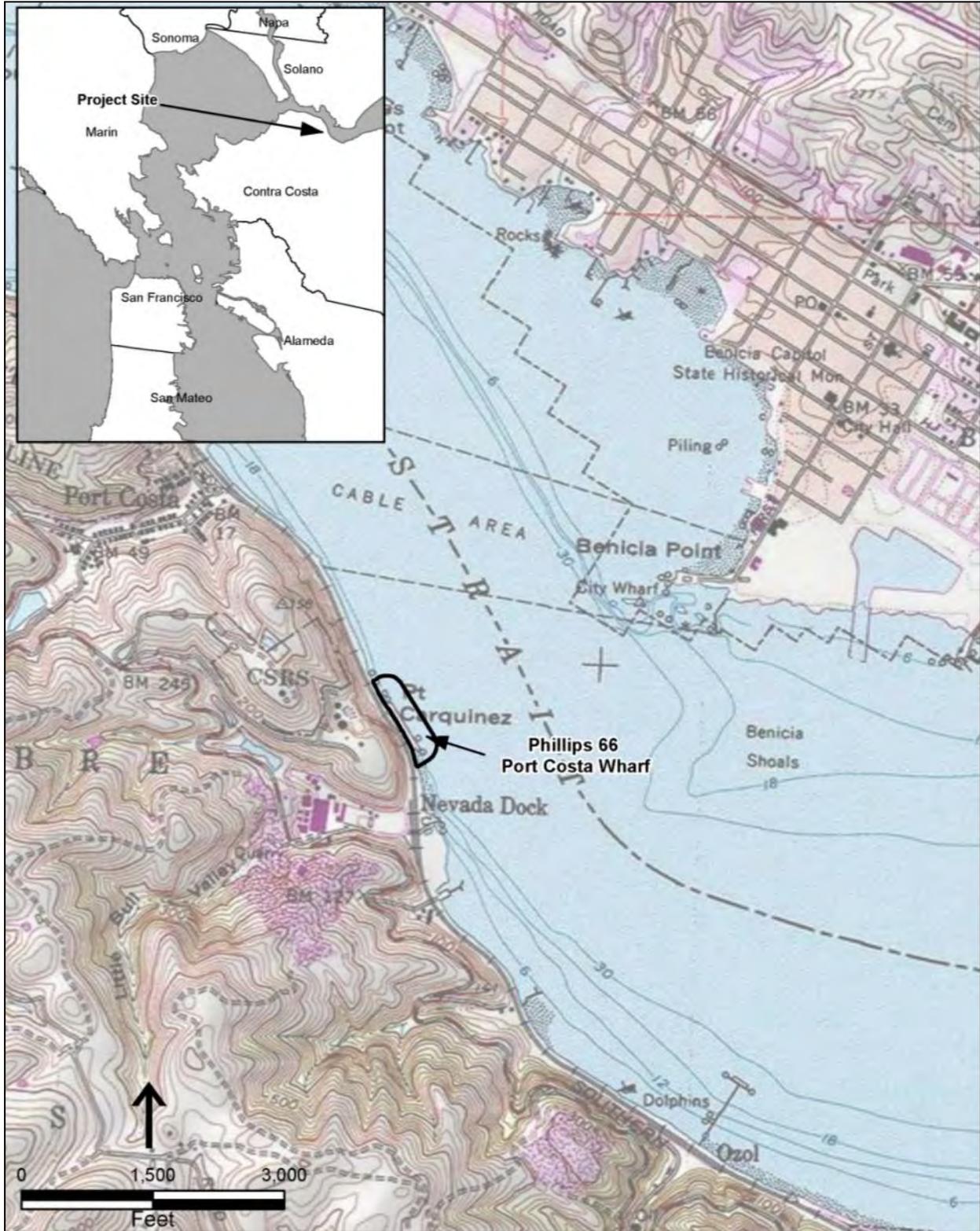
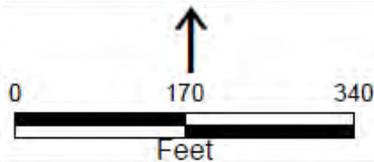
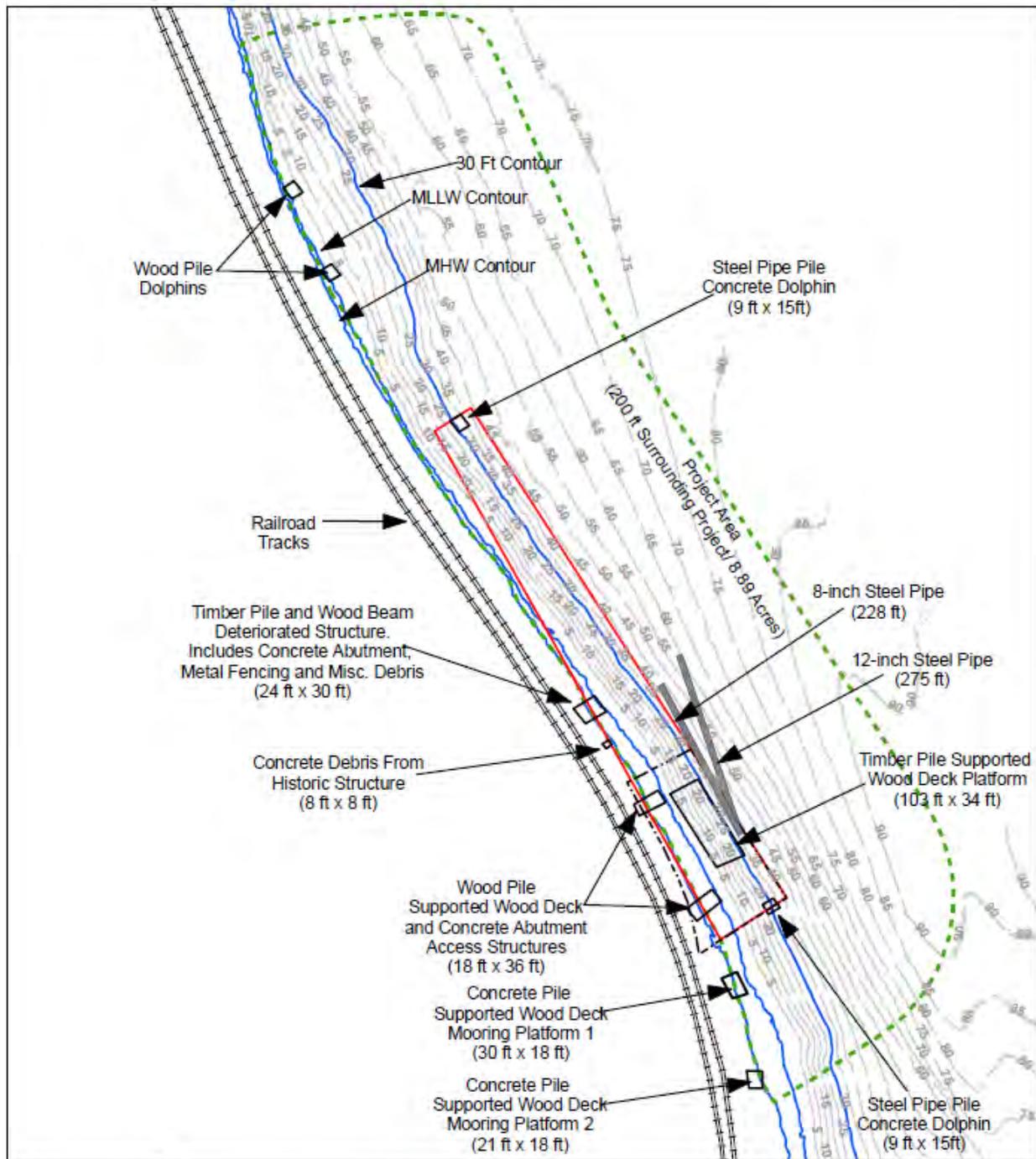


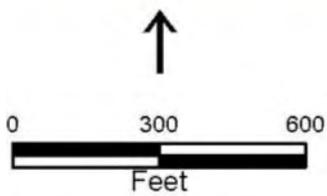
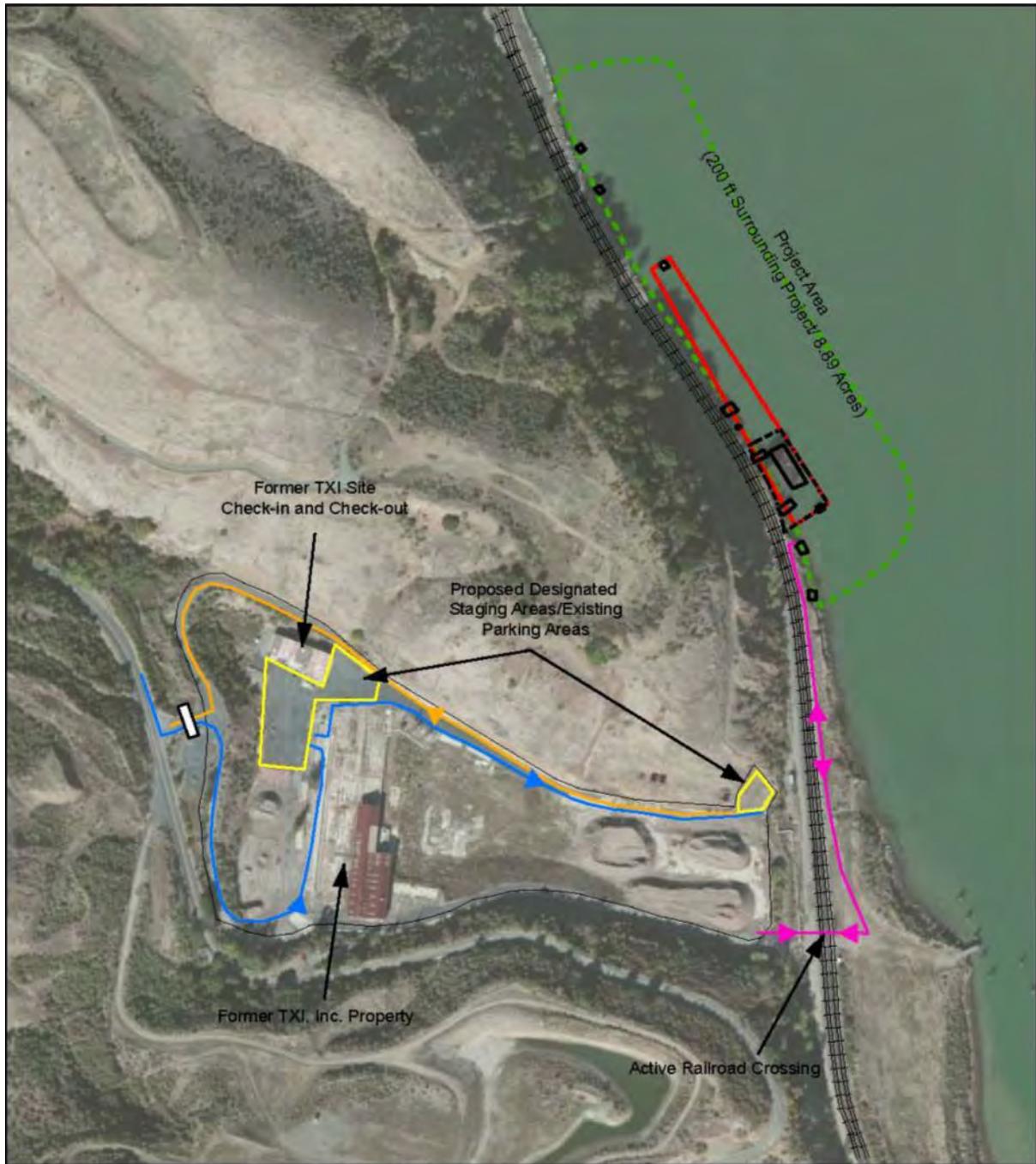
Figure 1-2 Site Map



Current Lease Boundary
 Historic Lease Boundary
 ft= Feet
 MHW= Mean High Water Line
 MLLW= Mean Lower Low Water Line

Phillips 66 Company Port Costa Wharf

Figure 1-3 Proposed Onshore Staging Areas



- - - Historic Lease Boundary
 - - - 200 ft Project Buffer
 - - - Proposed Staging Areas for Parking, Sanitation Stations and Other Incidental Uses (Not to exceed 1.5 acres) within Existing Parking Areas
 - Ingress
 - Egress
 - Pedestrian Path to Site
 - Entry Gate
- ft = Feet

Table 1-1 Potential Special-Status Species within Five Miles of the Project Area

Species	Status ¹ / Ranking ²	CNDDB Record	Habitat Requirements / Life History Descriptions	Potential to Occur within Action Area
Mammals				
salt-marsh harvest mouse (<i>Reithrodontomys raviventris</i>)	FE, SE, FP	Yes	Typically inhabits coastal salt marshes, in areas with cattails, tules, and other sedges as well as pickleweed.	Not expected – No suitable habitat present.
Suisun shrew (<i>Sorex ornatus sinuosus</i>)	SSC	Yes	Tidal and brackish marsh communities along the north shore of San Pablo and Suisun Bays. They prefer areas of low, dense vegetation where invertebrates are abundant.	Not expected – No suitable habitat present.
big free-tailed bat (<i>Nyctinomops macrotis</i>)	SSC	Yes	Primarily roost in crevices in cliffs or rocky outcrops in arid areas. This species breeds most likely in the rugged, wooded, mountainous areas of California.	Not expected – No suitable habitat present.
Birds				
American peregrine falcon (<i>Falco peregrines anatum</i>)	DL, FP	Yes	Nesting and wintering habitats include wetlands, woodlands, other forested habitats, cities, agricultural area, and coastal habitats. This species is known to utilize cliffs, banks, dunes, mounds, and human-made structures. They feed on passerines caught in flight.	Not expected – No suitable habitat present.
California black rail (<i>Laterallus jamaicensis coturniculus</i>)	ST, FP	Yes	Generally occurs in saltwater, brackish, and freshwater marshes. Prefers vegetation dominated by pickleweed. Nesting habitat has water depths of about 1 inch that do not fluctuate during the year and that have dense vegetation to provide cover.	Not expected – No suitable habitat present.
California clapper rail (<i>Rallus longirostris obsoletus</i>)	FE, SE, FP	Yes	Tidal marshes of the San Francisco estuary in areas of high quality, dense vegetation dominated by pickleweed and cordgrass.	Not expected – No suitable habitat present.
Cooper's hawk (<i>Accipiter cooperii</i>)	WL	Yes	Primarily in areas with dense tree stands or patchy woodland habitat. They nest in trees 20-50 feet above the ground.	Not expected – No suitable habitat present.
double-crested cormorant (<i>Phalacrocorax auritus</i>)	WL	No	Various aquatic habitats, such as ponds, lakes, estuaries, and open coastline. Nest on the ground, in trees, or on cliffs.	Present – Observed during 2012 site reconnaissance
golden eagle (<i>Aquila chrysaetos</i>)	FP, WL	Yes	Grasslands, deserts, savannahs, rolling foothills, and mountain areas. Nest on cliffs and in large trees in open areas.	Not expected – No suitable habitat present.

Species	Status ¹ / Ranking ²	CNDDB Record	Habitat Requirements / Life History Descriptions	Potential to Occur within Action Area
great blue heron (<i>Ardea herodias</i>)	-	Yes	Typically nests in colonies in tall trees or cliffsides. Rookeries in close proximity to foraging areas, such as shallow estuary systems, marshes, lake margins, tide-flats, rivers, streams, and wet meadows.	Not expected – No suitable habitat present.
merlin <i>Falco columbarius</i>	WL	No	Prefer fairly open habitat with a mix of low and medium height vegetation with some trees. Not very habitat-specific and can be found from sea level to the treeline.	Present – Observed during 2013 site reconnaissance
northern harrier (<i>Circus cyaneus</i>)	SSC	Yes	Freshwater marshes, brackish and saltwater marshes, wet meadows, riparian woodlands, pastures, croplands, grasslands. They nest on the ground in undisturbed open fields or meadows.	Not expected – No suitable habitat present.
osprey (<i>Pandion haliaetus</i>)	WL	Yes	Ocean shore, bays, lakes and large streams. Nests in tree-tops within 15 miles of foraging waters.	Present – Observed during 2012 site reconnaissance
San Pablo song sparrow (<i>Melospiza melodia samuelis</i>)	SSC	Yes	Salt marshes of the San Pablo Bay and on the north side of the San Francisco Bay. Often associated with pickleweed or other dense, high marsh vegetation.	Not expected – No suitable habitat present.
Suisun song sparrow (<i>Melospiza melodia maxillaris</i>)	SSC	Yes	Tidal marshes in Suisun Bay. Dense vegetation, song perches, and cover for refuge from predators are needed.	Present – Observed during 2013 site reconnaissance.
saltmarsh common yellowthroat (<i>Geothlypis trichas sinuosa</i>)	SSC	Yes	Brackish marsh, riparian woodlands, freshwater marshes, and salt marshes. Prefer the ecotone between moist and upland habitats; proximity of various habitat types enhances overall habitat suitability.	Not expected – No suitable habitat present.
tricolored blackbird (<i>Agelaius tricolor</i>)	SSC	Yes	Cattail marshes and riparian woodlands. Nests in colonies in areas with open access to water, protective nesting substrate (e.g. spiny vegetation) and adequate insect prey.	Not expected – No suitable habitat present.
Reptiles				
Alameda whipsnake (<i>Masticophis lateralis euryxanthus</i>)	FT, ST	Yes	Riparian woodlands and chaparral. They may occur in inner coast range plant communities, including grasslands, open woodlands, rocky slopes, and along open streams and arroyos near scrub and chaparral.	Low – Although suitable habitat is present along the south side of the former TXI property, it is more likely to stay within higher quality habitat to the southwest away from the proposed temporary staging areas.

Species	Status ¹ / Ranking ²	CNDDDB Record	Habitat Requirements / Life History Descriptions	Potential to Occur within Action Area
western pond turtle (<i>Emys marmorata</i>)	SSC	Yes	Permanent or ephemeral freshwater bodies with aquatic vegetation. Undisturbed upland habitat with sparse vegetation is needed for basking and nesting.	Not expected – No suitable habitat present.
Amphibians				
California red-legged frog (<i>Rana draytonii</i>)	FT, SSC	Yes	Dense, shrubby, or emergent riparian vegetation associated with deep, still or slow-moving freshwater. Breeding occurs in aquatic environments; well-vegetated terrestrial areas are utilized during the winter.	Not expected – No suitable habitat present.
Fish⁵				
delta smelt (<i>Hypomesus transpacificus</i>)	FT, SE	No	A pelagic euryhaline species found in the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Suisun Bay and Carquinez Strait fall within designated critical habitat for this species. Seldom found at salinities > 10 parts per thousand (ppt); most often at salinities <2 ppt. In wet winters, there may be more outflow from the Sacramento Delta, increasing the occurrence in Suisun Bay. Spawning February-July, peak from March to May, in upstream areas, river channels, backwater sloughs.	Low – This species is more likely to occur in waters with lower salinities; however, in a wet year they may occur further downstream. Spawning times outside in-water work windows.
green sturgeon (<i>Acipenser medirostris</i> , southern Distinct Population Segment [DPS])	FT, SSC	No	Found in marine waters from Baja California to the Bering Sea. Spawning populations found in medium-sized rivers from the Sacramento-San Joaquin system north. Spawning occurs in the Sacramento River March-June, with peak April-June, in deep, fast water. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock. Larvae stay close to the bottom and rear in rivers well upstream of estuaries. Juveniles feed on small crustaceans. Adults take a wider variety of benthic invertebrates and fish. Suisun Bay is included in designated critical habitat for this species. Spawning – March-July, with peak April-June. Present in Project area January-August (juveniles).	High – The Project Area is within the known distribution. This species forages in and migrates through Carquinez Strait. Spawning times within in-water work windows

Species	Status ¹ / Ranking ²	CNDDDB Record	Habitat Requirements / Life History Descriptions	Potential to Occur within Action Area
longfin smelt (<i>Spirinchus thaleichthys</i>)	ST, SSC	No	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater. Adults concentrated in Suisun, San Pablo, and North San Francisco Bays. Spawning occurs October-December in freshwater streams close to the ocean. In the San Francisco Estuary, the center of their distribution gradually moves down the estuary during the summer.	High – The Project Area is within the known distribution. This species forages in and migrates through the Carquinez Strait. Spawning occurs in freshwater streams and not within the proposed action area.
river lamprey (<i>Lampetra ayresi</i>)	SSC	No	Occurs in coastal streams from San Francisco Bay/Lower Sacramento River to southeast Alaska. Anadromous - starts life in rivers, migrates to the sea, then returns upstream to spawn. Spawning April to May, in clean, gravelly riffles. Ammocoetes (larvae) need sandy backwaters or stream edges, good water quality and temperatures <25°C. Potentially present in Project vicinity fall and spring, possibly year-round.	High – The Project Area is within the known distribution. This species forages in and migrates through the Carquinez Strait. Spawning times outside in-water work windows.
Sacramento splittail (<i>Pogonichthys macrolepidotus</i>)	SSC	Yes	Endemic to lakes and rivers of the central valley, but now confined to the Sacramento Delta, Suisun Bay, and associated marshes. Found in estuarine environments in water with salinities from 10-18 ppt, slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young. Peak reproduction occurs in March and April.	Not expected – no suitable habitat present.
steelhead trout (<i>Oncorhynchus mykiss irideus</i> , California Central Valley ESU)	FT	No	ESU includes naturally spawned populations in the Sacramento and San Joaquin Rivers and tributaries, excluding San Francisco/Suisun Bays and tributaries. Adults migrate upstream to spawn in gravel or cobble riffles in upper sections of cool, clear, well oxygenated, fast flowing streams, December-June. Juveniles remain in fresh water 1 or more years before migrating to ocean, where they stay for 2-3 years prior to returning to natal streams to spawn as 4-or 5-year-olds. Suisun Bay is within designated critical habitat for this species. Potentially present in Project Region December-May (NMFS work window: June-November).	Present – Steelhead observed during 2013 site reconnaissance. This species forages in and migrates through the Carquinez Strait. Spawning and general presence occurs outside in-water work windows.

Species	Status ¹ / Ranking ²	CNDDDB Record	Habitat Requirements / Life History Descriptions	Potential to Occur within Action Area
steelhead trout (<i>Oncorhynchus mykiss irideus</i> , Central California Coast ESU)	FT	No	ESU includes all naturally spawned populations in streams from the Russian River to Aptos Creek, and drainages of San Francisco and Suisun Bays eastward to the Napa River, excluding Sacramento-San Joaquin River Basin. Life history similar to California Central Valley ESU described above. Suisun Bay and Carquinez Strait are within designated critical habitat for this species. Potentially present in Project Region December-May (NMFS work window: June-November).	Present – Steelhead observed during 2013 site reconnaissance. This species forages in and migrates through the Carquinez Strait. Spawning and general presence outside in-water work windows.
Invertebrates				
monarch butterfly (<i>Danaus plexippus</i>)	-	Yes	Roosts along California coast (Mendocino to Baja) during the winter in wind-protected tree groves with nectar and water sources nearby.	Not expected – No suitable habitat present.
Plants				
big tarplant (<i>Blepharizonia plumose</i>)	1B.1	Yes	Valley and foothill grasslands.	Not expected – No suitable habitat present.
Bolander's water-hemlock (<i>Cicuta maculata</i> var. <i>bolanderi</i>)	2.1	Yes	Fresh or brackish water marshes.	Not expected – Only two records exist within the 5-mile radius, the most recent one from 1938 in Benicia, over two miles from the action area.
Carquinez goldenbush (<i>Isocoma arguta</i>)	1B.1	Yes	Valley and foothill grasslands, in alkaline soils, flats, lower hills, low benches near drainages and on tops and sides of mounds in swale habitat.	Not expected – No suitable habitat present.
chaparral ragwort (<i>Senecio aphanactis</i>)	2.2	Yes	Cismontane woodlands and coastal scrub, in drying, alkaline flats.	Not expected – No suitable habitat present.
Congdon's tarplant (<i>Centromadia parryi</i> ssp. <i>congdonii</i>)	1B.2	Yes	Valley and foothill grassland, in alkaline soils sometimes described as heavy white clay.	Not expected – No suitable habitat present.
Contra Costa goldfields (<i>Lasthenia conjugens</i>)	FE, 1B.1	Yes	Valley and foothill grasslands, vernal pools, cismontane woodlands, often near vernal pools, swales, low depressions, or open grassy areas.	Not expected – No suitable habitat present.
Delta tule pea (<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>)	1B.2	Yes	Found in freshwater and brackish marshes, often with <i>Typha</i> , <i>Aster lentus</i> , <i>Rosa californica</i> , <i>Juncus spp.</i> , <i>Scirpus</i> .	Not expected – No suitable habitat present.

Species	Status ¹ / Ranking ²	CNDDDB Record	Habitat Requirements / Life History Descriptions	Potential to Occur within Action Area
Diablo helianthella (<i>Helianthella castanea</i>)	1B.2	Yes	Upland forest, chaparral, riparian and cismontane woodlands, coastal scrub, valley and foothill grasslands.	Not expected – No suitable habitat present.
Mason’s lilaeopsis (<i>Lilaeopsis masonii</i>)	SR, 1B.1	Yes	Freshwater and brackish water marshes and riparian areas. Generally found in tidal zones in muddy or silty soil.	Not expected – No suitable habitat present.
Mt. Diablo fairy-lantern (<i>Calochortus pulchellus</i>)	1B.2	Yes	Chaparral, cismontane and riparian woodland, valley and foothill grasslands.	Not expected – No suitable habitat present.
saline clover (<i>Trifolium hydrophilum</i>)	1B.2	Yes	Marshes and swamps, valley and foothill grasslands, vernal pools. Prefer moist, alkaline sites.	Not expected – No suitable habitat present.
soft bird’s beak (<i>Chloropyron molle</i> ssp. <i>molle</i>)	FE, SR, 1B.2	Yes	Coastal salt marsh, often with <i>Distichlis</i> , <i>Salicornia</i> , <i>Frankenia</i> .	Not expected – No suitable habitat present.
Suisun Marsh aster (<i>Symphotrichum lentum</i>)	1B.2	Yes	Brackish and freshwater marshes and swamps, most often along sloughs with <i>Phragmites</i> , <i>Scirpus</i> , <i>Rubus</i> , <i>Typha</i> .	Not expected – No suitable habitat present.
western leatherwood (<i>Dirca occidentalis</i>)	1B.2	Yes	Upland forest, chaparral, closed-cone conifer forest, cismontane woodland, north coast conifer forest, riparian woodland.	Not expected – No suitable habitat present.
Vegetation Communities				
Coastal Brackish Marsh	HI	Yes	A subcategory of temperate and boreal salt marsh on the North American Pacific coast., often characterized by semi-natural stands of fat hen and brass buttons.	Not expected – This habitat was not identified during the 2012 site reconnaissance.
Natural Communities				
Northern Coastal Salt Marsh	HI	Yes	A subcategory of temperate and boreal salt marsh on the North American Pacific coast., often characterized by semi-natural stands of fat hen and brass buttons.	Not expected – This habitat was not identified during the 2012 site reconnaissance.
¹ Status DL = Delisted FE = Federal Endangered FP = Fully Protected (CDFW 2012b) FT = Federal Threatened HI = Highly Imperiled (CDFW 2010) SE = State Endangered SR = State Rare SSC = Species of Special Concern ST = State Threatened WL = Watch List (CDFW 2011)		² CNPS rankings for plants 1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California 1B.2 = Rare, threatened or endangered in California and elsewhere; fairly threatened in California 2.1 = Rare, threatened or endangered in California, but more common elsewhere; seriously threatened in California 2.2 = Rare, threatened or endangered in California, but more common elsewhere; fairly threatened in California		

Figure 1-4 Special-Status Wildlife Species with CNDDB Records within 5 Miles of Project Area

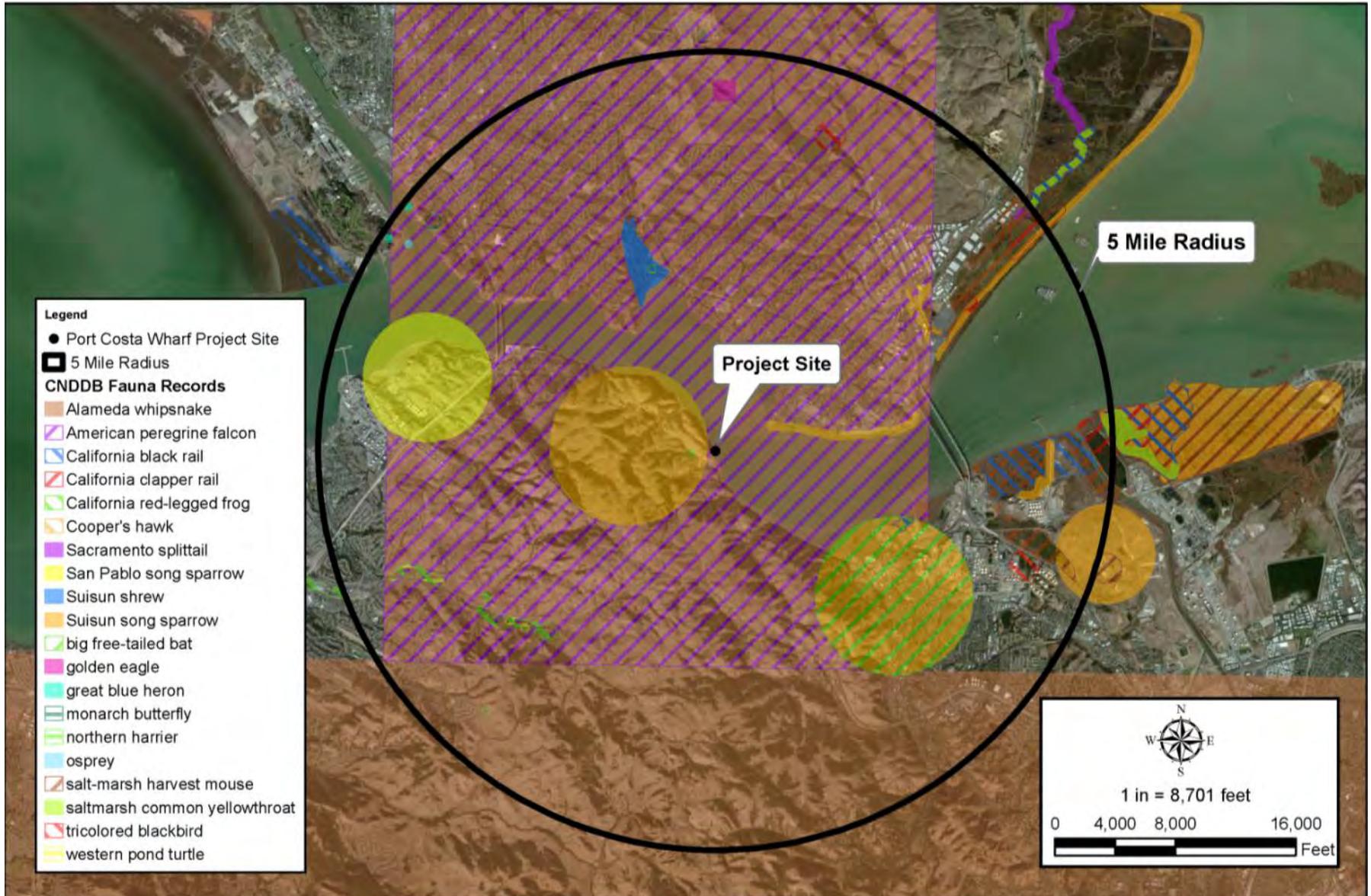
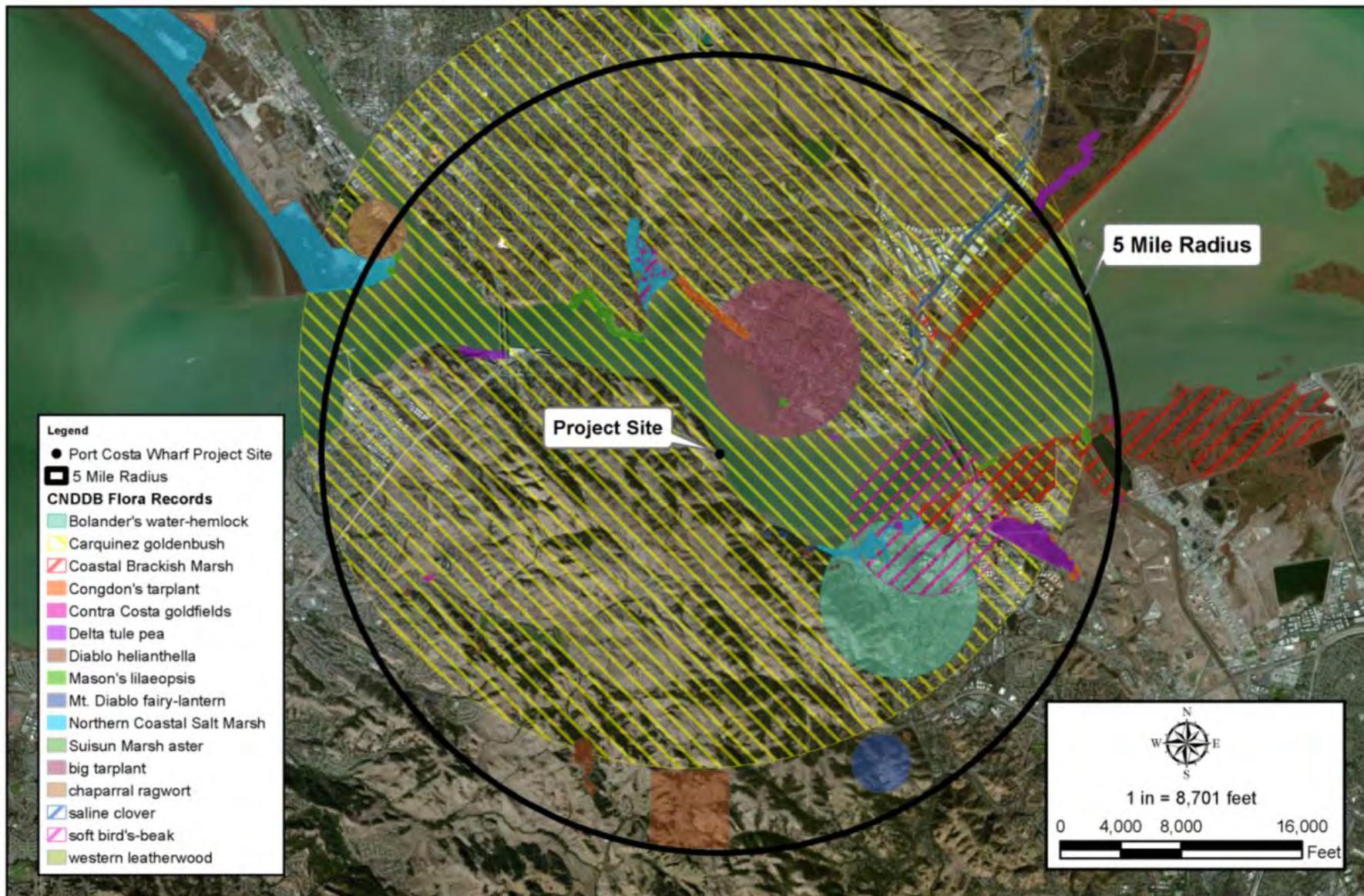


Figure 1-5 Special-Status Plant Species with CNDDB Records within 5 Miles of Project Area



1.3.2 Critical Habitat

The ESA requires the Federal government to designate critical habitat for listed species. Critical habitat is defined under Section 3 of the ESA as: 1) geographic areas occupied by the species at the time of listing that contain physical or biological features essential to conservation of the species that may require special management considerations or protection, and 2) specific areas outside the aforementioned geographic area essential for the conservation of the species (determined by the Secretary of the Interior).

USFWS and NMFS designations of critical habitat were determined for the area within 5 miles of the action area (Figure 1-6). The action area is within aquatic designated critical habitat for delta smelt (*Hypomesus transpacificus*), green sturgeon (*Acipenser medirostris*; southern DPS), and steelhead trout (*Oncorhynchus mykiss irideus*; California Central Valley and Central California Coast ESUs). These species are Federal Threatened, and the delta smelt and green sturgeon are also State Threatened. Details about these species can be found in Table 1-1.

Additionally, there are several terrestrial habitats within the 5-mile radius that are designated critical habitat for federally listed species. Approximately 1.5 miles south of the action area there is designated critical habitat for the Alameda whipsnake (*Masticophis lateralis euryxanthus*) and the California red-legged frog (*Rana draytonii*). Both species are Federal Threatened, and the Alameda whipsnake is also State Threatened. There is additional California red-legged frog critical habitat at the edge of the 5-mile radius north of the action area. Critical habitat for soft bird's beak (Federal Endangered and State Rare, CNPS Rank 1B.1) is located approximately 2 miles northwest of the action area. The Contra Costa goldfields (*Lasthenia conjugens*) designated critical habitat occurs less than 4 miles southwest of the action area. Details about these species can be found in Table 1-1.

Figure 1-6 USFWS and NMFS Designated Critical Habitat within 5 Miles of the Project Area

