

APPENDIX G-7

**Listed, Proposed Species, and Critical Habitat
Potentially Occurring or Known to Occur in the Project Region**

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Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
Invertebrates				
<i>Adela oplerella</i> Opler's longhorn moth	--/--/G2G3, S2S3	Opler's longhorn moth is recorded from 18 sites extending along the west side of the San Francisco Bay from 5 miles southeast of Nicasio in Marin County south to the Gilroy area of Santa Clara County and from the Oakland area on the inner Coast Ranges. Habitat for Opler's longhorn moth consists of serpentine grassland (Federal Register 50CFR17).	A	Suitable habitat for this species is not present within the project site.
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	--/--/G2, S2	Known occurrences in Contra Costa, Lake, Sonoma, Solano, Yolo, Tehamea, Sacramento, San Joaquin, El Dorado, and Placer Counties. Habitat consists of upland areas near vernal pools containing yellow carpet (<i>Blennosperma</i> sp.). Forages exclusively on flowering yellow carpet. This species excavates nests in soil in adjacent upland areas (Thorp 2008).	A	Yellow carpet is absent from the project site. Upland habitat adjacent to vernal pools in the area is composed of substrate, such as gravel, compacted soil, or heavily disturbed soil, which does not provide suitable nesting habitat for this species.
<i>Branchinecta conservatio</i> conservancy fairy shrimp	FE/--/--	Conservancy fairy shrimp inhabit rather large, cool-water vernal pools with moderately turbid water. It is likely the Conservancy fairy shrimp once occupied suitable vernal pool habitats throughout a large portion of the Central Valley and southern coastal regions of California. It may still exist in unsurveyed pools within this region. The species is currently known from several disjunct populations: the Vina Plains in Tehama County, south of Chico in Butte County, the Jepson Prairie Preserve and surrounding area in Solano County, Sacramento National Wildlife Refuge in Glenn County, Mapes Ranch west of Modesto, San Luis National Wildlife Refuge and the Haystack Mountain/Yosemite Lake area in Merced County, and two locations on the Los Padres National Forest in Ventura County (USFWS 2005a).	A	Suitable habitat for this species does not occur on site. The project site is outside of the currently known range of this species.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT/--/--	The vernal pool fairy shrimp occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. Although the species	HP	Freshwater wetland features within the project site may provide potential habitat for this species.

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		has been collected from large vernal pools, including one exceeding 25 acres, it tends to occur in smaller pools. It is most frequently found in pools measuring less than 0.05 acre. These are most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands. Vernal pool fairy shrimp is currently known to occur in a wide range of vernal pool habitats in the southern and Central Valley areas of California (USFWS 2005a).		
<i>Danaus plexippus</i> monarch butterfly	--/--/G5, S3	Monarch butterflies winter in central Mexico in coastal Monterey pine, Monterey cypress, eucalyptus, and fir forest. This species migrates to the United States and Canada during spring/summer. Caterpillars feed almost exclusively on milkweed (<i>Asclepias</i> sp.; Kane 1999).	A	While this species may use the project site for dispersal and collection of nectar, the host plant for this species was not detected within the project site during field surveys. Suitable reproductive habitat does not occur within the site.
<i>Helminthoglypta nickliniana bridgesi</i> Bridges' coast range shoulderband	--/--/G2T1, S1	Inhabits open hillsides of Alameda and Contra Costa counties. Habitat consists of rock piles and under grass in grass areas (NatureServe 2009) and under tall weeds.	A	Suitable habitat for this species does not occur within the project site.
<i>Speyeria callippe callippe</i> callippe silverspot butterfly	FE/--/--	Restricted to the northern coastal scrub of the San Francisco peninsula. Host plant for this species is <i>Viola pedunculata</i> . Most adults found on east facing slopes. Males congregate on hilltops in search of females (USFWS 2007a).	A	The project site is outside the known range for this species. The host plant for this species was not detected during focused plant surveys. Habitat for this species is not present on site.
<i>Speyeria zerene myrtleae</i> Myrtle's silverspot butterfly	FE/--/--	Occurs from Sonoma County south to San Francisco County. Occurs in coastal terrace prairie, coastal bluff scrub, and adjacent grassland habitats within three miles of the coast; elevation 0 to 250 meters (USFWS 2007b).	A	Suitable habitat for this species is not present within the project site.
<i>Syncaris pacifica</i> California freshwater shrimp	FE/SE/--	Occurs in coastal streams up to 380 feet above sea level in Napa, Marin, and Sonoma counties. Found in low gradient, perennial coastal streams. Streams typically 1-3 feet deep, with exposed live roots along undercut banks. Streams also contain overhanging debris or stream vegetation (2007c).	A	The project site is not within the known range of this species, nor is Refugio Creek connected to a watershed with a known California freshwater shrimp population.
<i>Tryonia imitator</i> Mimic tryonia (California brackishwater snail)	--/--/G2G3, S2S3	This species is found only in permanently submerged areas in a variety of sediment types and is able to withstand a wide range of salinities	HP	Salt marsh habitat within the project site could provide potential habitat for this species.

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		(CNDDDB 2009). Known occurrences in Alameda, Los Angeles, Marin, Monterey, Orange, San Diego, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Sonoma, and Ventura counties.		
Fish				
<i>Acipenser medirostris</i> green sturgeon	FT/--/--	Green sturgeon are anadromous and spawn in the Sacramento River. Adults and juveniles occur in San Pablo and San Francisco Bays (Moyle et al. 1995). The San Francisco and San Pablo Bays serve as migration corridors for anadromous fish species as they migrate to and from the ocean and upstream spawning grounds in rivers and streams.	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species.
<i>Archoplites interruptus</i> Sacramento perch	--/SSC/--	Freshwater systems of the San Francisco Bay. Require densely vegetated, shallow habitats to aggregate before spawning in mud and gravel pits (California State Coastal Conservancy and USFWS 2003).	A	Suitable habitat for this species does not occur within the project site.
<i>Eucyclogobius newberryi</i> tidewater goby	FE/--/--	Habitat consist of semi-closed estuaries or lagoons of small coastal streams that are low in salinity; ranges from San Diego to Humboldt County. Tidewater gobies are rare in San Francisco Bay, but nearby populations are located in coastal Gregorio Creek and Pescadero Creek in San Mateo County. In 1980, tidewater goby were found at the mouth of Novato Creek of San Pablo Bay (Wetlands and water resources, Inc 2007).	A	While this species may have historically occurred within the project vicinity, it has not been detected since the 1950's and is not expected to occur within the project site.
<i>Hypomesus transpacificus</i> Delta smelt	FT/--/--	Delta smelt are tolerant of a wide salinity range. They have been collected from estuarine waters up to 14 ppt (parts per thousand) salinity. For a large part of their one-year life span, delta smelt live along the freshwater edge of the mixing zone (saltwater-freshwater interface), where the salinity is approximately 2 ppt. Shortly before spawning, adults migrate upstream from the brackish-water habitat associated with the mixing zone and disperse into river channels and tidally-influenced backwater sloughs. They spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally-influenced backwater sloughs and channel edgewater.	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species. Delta smelt generally occur in open surface waters and shoal areas (USFWS 1996c) and do not associate strongly with structure (USFWS 2008). The majority of their one-year life span, delta smelt inhabit areas within the western Delta and Suisun Bay characterized by salinities of approximately 2 ppt. During periods of high river flow into the estuary, delta smelt distribution

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		Although spawning has not been observed in the wild, the eggs are thought to attach to substrates such as cattails, tules, tree roots and submerged branches. Delta smelt are found only from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties (USFWS 1995).		can transiently extend as far west as the Napa River and San Pablo Bay (USFWS 2008). However, because free-swimming life stages of delta smelt mainly occupy offshore waters (USFWS 2008), delta smelt are unlikely to occur in the Action Area
<i>Lampetra ayresi</i> River lamprey	--/SSC/--	Occurs in coastal streams from San Francisco Bay to Alaska (Moyle 2002). Adults migrate back into freshwater through San Pablo Bay during the fall and spawn from April to June in small tributary streams (Wang 1986, CDM and the Bay Institute of San Francisco 2000).	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species.
<i>Oncorhynchus kisutch</i> Central California coast coho salmon	FE/SE/-- CH	Anadromous; migrates through and spawns in coastal rivers and streams from Santa Cruz to Mendocino County (NOAA Fisheries 2005). The San Francisco and San Pablo Bays serve as migration corridors for anadromous fish species as they migrate to and from the ocean and upstream spawning grounds in rivers and streams.	HP	This species may occur within San Pablo Bay. San Pablo Bay represents critical habitat for this species. Refugio Creek does not represent suitable habitat for this species.
<i>Oncorhynchus mykiss</i> central California coastal steelhead	FT/--/-- CH	Anadromous; occur in coastal rivers, streams and creeks from Santa Cruz County north to Russian River basin including tributaries to San Francisco Bay (NOAA Fisheries 2006). The San Francisco and San Pablo Bays serve as migration corridors for anadromous fish species as they migrate to and from the ocean and upstream spawning grounds in rivers and streams.	HP	This species may occur within San Pablo Bay. San Pablo Bay represents critical habitat for this species. Refugio Creek does not represent suitable habitat for this species.
<i>Oncorhynchus mykiss</i> Central Valley steelhead	FT/--/-- CH	Steelhead spawn in rivers and streams with cool, clear, water and suitable substrate. The Central Valley Steelhead distinct population segment includes all naturally spawned anadromous <i>O. mykiss</i> (steelhead) populations below natural and manmade impassable barriers in the Sacramento and San Joaquin Rivers and their tributaries, excluding steelhead from San Francisco and San Pablo Bays and their tributaries, as well as two artificial propagation programs: the Coleman NFH, and Feather River Hatchery steelhead hatchery programs (NOAA Fisheries 2006). The San	HP	This species may occur within San Pablo Bay. San Pablo Bay represents critical habitat for this species. Refugio Creek does not represent suitable habitat for this species.

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		Francisco and San Pablo Bays serve as migration corridors for anadromous fish species as they migrate to and from the ocean and upstream spawning grounds in rivers and streams.		
<i>Oncorhynchus tshawytscha</i> Central Valley fall-/late fall-run Chinook salmon	--/SSC/--	Chinook salmon spawn in rivers and streams with cool, clear, water and suitable substrate. The Central Valley fall- and late fall-run Chinook salmon ESU includes all naturally spawned populations of fall- and late fall-run Chinook salmon in the Sacramento and San Joaquin River Basins and their tributaries, east of Carquinez Strait, in California (NOAA Fisheries Website 2009). The San Francisco and San Pablo Bays serve as migration corridors for anadromous fish species as they migrate to and from the ocean and upstream spawning grounds in rivers and streams.	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species.
<i>Oncorhynchus tshawytscha</i> Central Valley spring-run Chinook salmon	FT/--/--	Chinook salmon spawn in rivers and streams with cool, clear, water and suitable substrate. The Central Valley spring-run Chinook ESU includes all naturally spawned populations of spring-run Chinook salmon in the Sacramento River and its tributaries in California, including the Feather River (64 FR 50394; September 16, 1999). One artificial propagation program is considered part of the ESU: The Feather River Hatchery spring run Chinook program (NOAA Fisheries 2005). The San Francisco and San Pablo Bays serve as migration corridors for anadromous fish species as they migrate to and from the ocean and upstream spawning grounds in rivers and streams.	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species.
<i>Oncorhynchus tshawytscha</i> Winter-run Chinook salmon	FE/--/--	Chinook salmon spawn in rivers and streams with cool, clear, water and suitable substrate. The Sacramento winter-run Chinook ESU includes all naturally spawned populations of winter-run Chinook salmon in the Sacramento River and its tributaries in California (59 FR 440; January 1, 1994), as well as two artificial propagation programs: Winter-run Chinook from the Livingston Stone National Fish Hatchery (NFH), and winter run Chinook in a captive broodstock program	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species.

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		maintained at Livingston Stone NFH and the University of California Bodega Marine Laboratory (NOAA Fisheries 2005). The San Francisco and San Pablo Bays serve as migration corridors for anadromous fish species as they migrate to and from the ocean and upstream spawning grounds in rivers and streams.		
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	--/SSC/--	Slow-moving sections of rivers and sloughs, flooded vegetation. This species inhabits the Sacramento-San Joaquin river system and the Delta, including the brackish northern reaches of the San Francisco Estuary (California State Coastal Conservancy and USFWS 2003).	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species.
<i>Spirinchus thaleichthys</i> Longfin smelt	--/ST/--	This species occupies waters ranging from almost pure seawater to areas of pure freshwater. They tend to inhabit the middle to lower portion of the water column. They spawn in freshwater in the upper part of Suisun Bay and the lower and middle Delta. Except when spawning, longfin smelt are most abundant in Suisun and San Pablo bays (Moyle 2002).	HP	This species may occur within San Pablo Bay. Refugio Creek does not represent suitable habitat for this species.
Amphibians				
<i>Ambystoma californiense</i> California tiger salamander, central population	FT/SSC/--	California tiger salamanders are generally restricted to vernal pools and seasonal ponds, including many constructed stockpools, in grassland and oak savannah plant communities from sea level to about 1,500 feet in central California. In the Coastal region, populations are scattered from Sonoma County in the northern San Francisco Bay Area to Santa Barbara County, and in the Central Valley and Sierra Nevada foothills from Yolo to Kern counties (USFWS 2009a).	A	There are no records of this species within the Mare Island quad or adjacent eight quads. Pools and ponds within the project site do not contain sufficient vegetation to support egg laying for this species. Upland habitat in the vicinity of pool and pond features on site are disturbed and do not provide aestivation habitat. Suitable habitat for this species is not present on site.
<i>Rana aurora draytonii</i> California red-legged frog	FT/SSC/--	The California red-legged frog occupies a fairly distinct habitat, combining both specific aquatic and riparian components. The adults require dense, shrubby or emergent riparian vegetation closely associated with deep (greater than 2 1/3-foot deep) still or slow moving water. The largest densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging	HP	Occurrences of CRLF have been recorded approximately one mile upstream of the project site on Refugio Creek. Refugio Creek within the project site is likely too saline to support CRLF and there are no suitable ponds along Refugio Creek to support a breeding population.

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		willows (<i>Salix</i> spp.) and an intermixed fringe of cattails (<i>Typha latifolia</i>). Well-vegetated terrestrial areas within the riparian corridor may provide important sheltering habitat during winter. California red-legged frogs aestivate (enter a dormant state during summer or dry weather) in small mammal burrows and moist leaf litter. They have been found up to 100 feet from water in adjacent dense riparian vegetation. Studies have indicated that this species can not inhabit water bodies that exceed 70° F, especially if there are no cool, deep portions (USFWS 2002).		One pond occurs on site, however this pond lacks vegetation and is isolated from other aquatic features by areas of severe disturbance. While no suitable habitat occurs within the project area, individual CRLF may have the potential to disperse onto the site.
Reptiles				
<i>Actinemys marmorata</i> western pond turtle	--/SSC/--	Western pond turtle occurs from the west coast of North America from southern Washington, USA to northern Baja California, Mexico. Many populations have been extirpated and others continue to decline throughout the range, especially in southern California. This species requires aquatic habitats with suitable basking sites. Nest sites most often characterized as having gentle slopes (<15 percent) with little vegetation or sandy banks (CDFG 1994).	A	Refugio Creek represents poor quality habitat for this species and upland areas are heavily disturbed, not allowing for basking sites.
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	FT/ST/--	Occurs within the inner Coast Range in western and central Contra Costa and Alameda counties. Habitats include herbaceous grassland, chaparral/shrubland, and rocky canyons with watercourses (USFWS 2005b).	A	Suitable habitat for this species is not present within the project site.
<i>Thamnophis gigas</i> giant garter snake	FT/ST/--	The giant garter snake is endemic to the San Joaquin and Sacramento Valley floors. Counties include Butte, Colusa, Contra Costa, Fresno, Glenn, Kern, Madera, Merced, Sacramento, San Joaquin, Solano, Sutter, Yolo, and Yuba. Inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands. Requires adequate water during its active season (early spring through mid-fall) to provide food and cover, emergent, herbaceous wetland vegetation for foraging and cover, grassy banks	A	Suitable habitat for this species is not present within the project site, as water within the site has a high salinity and there are not sufficient aestivation sites along Refugio Creek. Occurrences of GGS have not been reported within the Mare Island quad or the surrounding eight quads.

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		and openings in waterside vegetation for basking, and higher elevation uplands for cover and refuge from flood waters during its dormant season (winter). Inhabits small mammal burrows and other soil crevices with sunny exposure along south and west facing slopes, above prevailing flood elevations when dormant. Primarily found in marshes and sloughs. May be found in slow-moving creeks but are absent from large rivers. They are generally aquatic but often bask on emergent vegetation such as cattails and tulles (2009b).		
Mammals				
<i>Antrozous pallidus</i> Pallid bat	--/SSC/--	Found in deserts, grasslands, shrublands, woodlands, and forests. It is most common in open dry habitats with rocky areas for roosting. Feeds mainly in open areas on beetles and other large insects, often landing on ground to catch prey. Roosts in caves, rock crevices, and buildings. Roosts must be sufficient to protect this species from high temperatures. Pallid bat is extremely sensitive to disturbance of roosting sites (CDFG 1998).	HP	Large culverts that pass under the railroad provide potential habitat for this species.
<i>Dipodomys heermanni berkeleyensis</i> Berkeley kangaroo rat	--/--/G3G4T1, S1	Prefers arid or semi-arid habitats with short grasses and open patches of bare ground. Highly adapted to arid conditions and rarely needs to drink water (NatureServe 2009).	A	Habitat for this species is not present within the project site.
<i>Lasiurus cinereus</i> hoary bat	--/--/G5, S4	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Preferred sites are hidden from above, with few branches below, and have ground cover of low reflectivity. Females and young tend to roost at higher sites in trees. Feeds primarily on moths and requires water (NatureServe 2009).	HP	While unlikely, large trees within the willow riparian habitat type on site may provide potential habitat for this species.
<i>Microtus californicus sanpabloensis</i> San Pablo vole	--/SSC/--	All known occurrences are in Contra Costa County, in the salt marshes of San Pablo creek, on the south shore of San Pablo Bay. Habitat consists of grassy habitats associated with salt marshes (CDFG 1998).	<u>HP</u>	Limited habitat for this species occurs within the coastal tidal marsh habitat within the project site.

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<i>Nyctinomops macrotis</i> big free-tailed bat	--/SSC/--	This species is rare in California and probably does not breed in California. Prefers rugged, rocky terrain. Found up to 2500 meters in New Mexico, southern Arizona, and Texas. Roosts in buildings, caves, and occasionally in holes in trees. Also roosts in crevices in high cliffs or rock outcrop (CDFG 1998).	A	Suitable habitat for this species is not present within the project site.
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	FE/SE,FP/--	Only found in the saline emergent wetlands of San Francisco Bay and its tributaries. Critically dependent on dense cover and their preferred habitat is pickleweed (<i>Salicornia virginica</i>). Seldom found in cordgrass or alkali bulrush. Occur in marshes with an upper zone of peripheral halophytes (salt-tolerant plants), vegetation to escape the higher tides, and may even spend a considerable portion of their lives there. Mice also move into the adjoining grasslands during the highest winter tides (USFWS 2008b).	HP	Marginal habitat for this species occurs within the coastal tidal marsh habitat within the project site. However the tidal marsh habitat on site is too small and isolated to support a viable population.
<i>Sorex ornatus sinuosus</i> Suisun shrew	--/SSC/--	Occurs in tidal marshes of the northern shores of San Pablo and Suisun bays. Occurs in herbaceous wetlands and tidal marshes in dense, low-lying cover of salicornia (CDFG 1998).	A	The project site is not within the range of this species. The Carquinez Strait serves as a dispersal barrier from known records of this species.
<i>Sorex vagrans halicoetes</i> salt-marsh wandering shrew	--/SSC/--	Occurs in salt marshes of the south arm of San Francisco bay. Prefers a low, dense cover of salicornia (CDFG 1998).	HP	Marginal habitat for this species occurs within the tidal marsh habitat within the project site.
<i>Taxidea taxus</i> American badger	--/SSC/--	Suitable habitat for this species occurs in the drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers are generally associated with treeless regions, prairies, park lands, and cold desert areas (CDFG 1998).	A	Suitable habitat for this species does not occur within the project site.
Birds				
<i>Accipiter cooperi</i> Cooper's hawk (nesting)	--/--/G5, S3	Known to occur from Siskiyou County south to San Diego County. Also scattered nesting in interior valleys and woodlands of Coast Range from Humboldt County south, and in the western foothills of the Sierra Nevada. Habitat consists of deciduous, mixed, and evergreen forests, and deciduous stands of riparian habitat. Habitat ranges from sea level to above 2,700 meters (NatureServe 2009).	HP	Suitable nesting habitat occurs within the willow riparian habitat within the project site. Trees on and bordering the Chelsea Mitigation area provide suitable nesting.

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<i>Agelaius tricolor</i> Tricolored blackbird	--/SSC/--	Common locally throughout central California. Nests and seeks cover in emergent wetland vegetation, specifically cattails and tules. Nesting area must be large enough to support a minimum colony of 50 pairs as they are a highly colonial species. Forages on ground in croplands, grassy fields, flooded land, and edges of ponds (CDFG 2008).	HP	Suitable nesting habitat occurs within the cattail, tule habitat within Refugio Creek, adjacent to the project site and in the Chelsea Mitigation area.
<i>Aquila chrysaetos</i> golden eagle	--/--/G5, S3	Breeds throughout California, except along coast, flat portions of Central Valley, and southeastern desert. Inhabits open country from barren areas to open coniferous forests. They are primarily in hilly and mountainous regions in habitats such as grasslands and oak savannah, but also in rugged deserts, on the plains, and in tundra. Prefers cliffs and large trees with large horizontal branches and for roosting, nesting, and perching (NatureServe 2009).	A	Suitable habitat for this species does not occur within the project site.
<i>Ardea alba</i> great egret (nesting)	--/--/G5, S4	Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures. Nests and roosts in large trees (NatureServe 2009).	A	Suitable foraging habitat occurs within and adjacent to the project site. No suitable rookery habitat occurs within the project site; however rookery habitat does exist in the Chelsea Mitigation area. This species was observed adjacent to the project site during field surveys.
<i>Ardea herodias</i> great blue heron (nesting)	--/--/G5, S4	Resides in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills (NatureServe 2009).	A	Suitable foraging habitat occurs within and adjacent to the project site. No suitable rookery habitat occurs within the project site; however, however h does exist immediately south of the southern-end of the project boundary for Track Option B. This species was observed adjacent to the project site during field surveys.
<i>Asio flammeus</i> short-eared owl	--/SSC/--	Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands. Nests usually located on dry sites with enough	A	Suitable habitat for this species does not occur within the project site.

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		vegetation to conceal incubating female (CDFG 2008).		
<i>Athene cunicularia</i> Burrowing owl	--/SSC/--	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. This species nests underground in existing burrows created by a number of burrowing mammals, most often ground squirrels (CDFG 2008).	HP	Suitable nesting habitat does not occur within the project site, however marginal wintering habitat may occur. One burrowing owl was sighted during November 2007 surveys.
<i>Branta hutchinsii leucopareia</i> cackling (=Aluetian Canada) goose	FD/--/--	Winters in the Sacramento and northern San Joaquin Valleys. Roosts on ponds or open ground. Often found on marshes, grassland, or agricultural fields (NatureServe 2009).	A	Suitable habitat for this species is not present within the project site.
<i>Buteo regalis</i> ferruginous hawk	--/--/G4, S3S4	Occurs in open grasslands, sagebrush flats, desert scrub, low foothills and surrounding valleys, and fringes of pinyon-juniper habitats. In California, the ferruginous hawk is an uncommon winter resident and migrant at lower elevations in the Modoc Plateau area, Central Valley, and Coast Ranges. It is a more common winter resident in southwestern California. Significant winter occurrences found in the Central Valley and along the central and north coasts (NatureServe 2009).	A	The project site is not within the breeding range of this species. Suitable wintering habitat for this species does not occur within the project site.
<i>Buteo swainsoni</i> Swainson's hawk	--/ST/--	Forages in grasslands, suitable grain or alfalfa fields, or livestock pastures adjacent to nesting habitat. Nests on large trees in open areas (CDFG 2006).	A	Suitable habitat for this species does not occur within the project site.
<i>Charadrius alexandrinus nivosus</i> western snowy plover	FT/SSC/--	Occurs along the California coast and inland near the Salton Sea, Mono Lake, and alkali lakes. Most breeding occurs on dune-backed beaches, barrier beaches, and salt-evaporation ponds. This species requires sandy, gravelly, or friable soil substrates for nesting. Winter habitat is primarily coastal: beaches, tidal flats, lagoon margins, and salt-evaporation ponds. Inland some birds regularly winter at agricultural waste-water ponds in the San Joaquin Valley and at desert saline lakes (particularly Salton Sea) in southern California (USFWS 2009c).	A	Suitable nesting habitat does not occur within the project site.
<i>Circus cyaneus</i> northern harrier	--/SSC/--	Permanent residents of the northeastern plateau and coastal areas and are less common residents of the Central Valley. Habitat consists of coastal	HP	Marginal nesting habitat occurs in the upper margins of marshes on Hercules Point, adjacent to the

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		scrub, Great Basin grassland, marsh and swamp (coastal and fresh water), riparian scrubs, valley and foothill grassland, and wetlands. Nests on the ground, usually in tall, dense clumps of vegetation, either alone or in loose colonies. Occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 3000 meters (CDFG 2008).		project site. Suitable nesting habitat is present in the Chelsea Mitigation site.
<i>Egretta thula</i> snowy egret (nesting)	--/--/G5, S4	Rookery sites occur near marshes, tide-flats, lakes, rivers/streams and wet meadows. Prefers shallow water for foraging, including salt-marsh pools, tidal channels, shallow bays, grassy ponds and marshes, and flooded rice fields (NatureServe 2009).	A	Suitable foraging habitat occurs within and adjacent to the project site, however no suitable rookery habitat occurs within the project site. This species was observed adjacent to the project site during field surveys.
<i>Elanus leucurus</i> White-tailed kite (nesting)	--/FP/--	Occurs primarily in rolling foothills and valley margins with scattered oaks as well as river bottomlands or marshes next to deciduous woodland. Uses isolated, dense topped, trees in open areas for nesting and perching and forages in a variety of habitats including grassland, marshes, and agricultural fields. Feeds on rodents, snakes, and insects (NatureServe 2009).	HP	Suitable nesting habitat occurs within the willow riparian habitat within the project site. Species frequently occurs in in the Chelsea Mitigation area, and suitable nesting habitat is present as well.
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/SD,FP/--	Active nesting sites known along the coast north of Santa Barbara and other mountains in northern California. Breeds mostly in woodland, forest, and coastal habitats. Breeds near water on high cliffs or banks and will nest on human-made structures (NatureServe 2009).	A	No nesting or foraging habitat for this species is present within the project site. Suitable foraging habitat for this species occurs in San Pablo Bay, but does not occur within the project site.
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	--/SSC/--	Breeding range bounded by Tomales Bay on the north, Carquinez Strait on the east, and Santa Cruz county to south, with occurrences in the Bay Area during migration and winter. Occurs in salt marshes. Nests just above ground or over water, in thick herbaceous vegetation, often at base of shrub or sapling, sometimes higher in weeds or shrubs up to about 1 meter (CDFG 2008).	HP	Suitable habitat for this species occurs within the tidal marsh habitat within the project site and in the Chelsea Mitigation area.
<i>Haliaeetus leucocephalus</i> bald eagle	FD/SE/--	Found near ocean shorelines, lakes, reservoirs, river systems, and coastal wetlands. Usually less than 2 km to water that offers foraging	A	Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		opportunities. Suitable foraging habitat consists of large bodies of water or rivers with abundant fish and adjacent perching sites such as snags or large trees (CDFG 1999).		
<i>Hydroprogne caspia</i> Caspian tern	--/--/G5, S4	Breeds in scattered colonies along the coast and prefers sandy or pebbly shores of lakes and large rivers and along the coast (NatureServe 2009).	A	Suitable habitat for this species does not occur within the project site, due to site high disturbance.
<i>Laterallus jamaicensis coturniculus</i> California black rail	--/ST/--	In coastal California during breeding season, presently found at Bodega Bay, Tomales Bay, Bolinas Lagoon, San Francisco Bay estuary, and Morro Bay. Overwhelming majority of birds in n. San Francisco Bay (San Pablo Bay) at relatively few sites. Occurs irregularly south to Baja California. Inland in small numbers in Salton Trough and on lower Colorado River from Bill Williams River (historically) to Laguna Dam. Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation. Uses sites with shallower water than other North American rails. Most breeding areas vegetated by fine-stemmed emergent plants, rushes, grasses, or sedges. Sites used in coastal California characterized by taller vegetation, greater coverage and height of alkali heath (<i>Frankenia grandifolia</i> ; NatureServe 2009).	HP	Marginal habitat for this species occurs within the tidal marsh habitats within the project site. However these habitats are likely too small and patchy to support a breeding population. The Chelsea Mitigation site provides marginal habitat for the species; however, the species has been document in the pickleweed tidal marsh near this area.
<i>Melospiza melodia maxillaris</i> Suisun song sparrow	--/SSC/--	Occurs in brackish estuarine marshes, at or near sea level, in Suisun Bay from the vicinity of the confluence of the Sacramento and San Joaquin rivers west to the Carquinez Straights (CDFG 2008).	A	The project site is not within the range of this species.
<i>Melospiza melodia pusillula</i> Alameda song sparrow	--/SSC/--	Known to occur in areas bordering southern and eastern fringes of San Francisco bay. Commonly found in saltmarsh, brackish marsh, and fringe areas, where marsh vegetation is limited to edges of dikes, land fills, or other margins of high ground bordering salt or brackish water areas (CDFG 2008).	HP	The project site is not within the range of this species; however, it is known to nest in areas adjacent to the Chelsea Mitigation area.
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	--/SSC/--	Distributed in marshes around San Pablo Bay continuously from Gallinas Creek in the west, along the northern San Pablo bayshore, and throughout the extensive marshes along the Petaluma,	HP	Suitable habitat for this species occurs within the project site. This species was observed within the project site during field surveys.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		Sonoma, and Napa rivers. Commonly found in saltmarsh, brackish marsh, salt marsh (altered), brackish marsh (altered), and fringe areas, where marsh vegetation is limited to edges of dikes, land fills, or other margins of high ground bordering salt or brackish water areas (CDFG 2008).		
<i>Nycticorax nycticorax</i> black-crowned night heron (nesting)	--/--/G5, S3	Yearlong residents in lowlands and foothills throughout most of California, including the Salton Sea and Colorado River areas. Habitat consists of marshes and swamps, riparian forest, riparian woodlands, and wetlands. Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas (NatureServe 2009).	A	Suitable foraging habitat occurs within and adjacent to the project site, however no nesting habitat occurs within the project site.
<i>Pandion haliaetus</i> osprey	--/--/G5, S3	Breeds from Cascade Ranges south to Lake Tahoe, and along the North Coast Ranges south to Marin County. Associated strictly with large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitats. Uses large trees, snags, and dead-topped trees in open forest habitats for cover and nesting. Requires open, clear waters for foraging such as rivers, lakes, reservoirs, bays, estuaries, and surf zones (NatureServe 2009).	A	Suitable foraging habitat occurs within and adjacent to the project site, however no nesting habitat occurs within the project site and Chelsea Mitigation area. An osprey was observed adjacent to the project site during field surveys and is frequently observed in the Chelsea Mitigation area
<i>Pelecanus occidentalis californicus</i> California brown pelican	FE/SD/--	Occurs in estuarine, marine subtidal, and marine pelagic waters along the California coast. Nests on coastal islands of small to moderate size which afford immunity from attack by ground dwelling predators. Usually rests on water or inaccessible rocks (either offshore or on mainland), but also uses mudflats, sandy beaches, wharfs, and jetties (USFWS 2008c).	A	The project site is not within the breeding range of this species. Suitable foraging habitat for this species occurs in the deeper parts of the San Pablo Bay, but does not occur within or adjacent to the project site.
<i>Phalacrocorax auritus</i> double-crested cormorant (nesting)	--/--/G5, S3	Resides along the coast of California and on inland lakes, in fresh, salt and estuarine waters. Colonial nester on coastal cliffs, offshore islands and along lake margins in the interior of the state. Prefers water less than 9 meters deep with rocky or gravel bottom. Roosts beside water on offshore rocks, islands, steep cliffs, dead branches of trees, wharfs, jetties, or transmission lines. Perching sites must be barren of vegetation (NatureServe 2009).	A	Suitable foraging habitat occurs within and adjacent to the project site, however no nesting habitat occurs within the project site. This species was observed during field surveys.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
<i>Rallus longirostris obsoletus</i> California clapper rail	FE/SE/--	Occurs in coastal wetlands and brackish areas around San Francisco Bay. In saline emergent wetlands, nests mostly in lower zones, where cordgrass is abundant and tidal sloughs are nearby. Builds a platform concealed by a canopy of woven cordgrass stems or pickleweed and gumweed. Also uses dead drift vegetation as platform. In fresh or brackish water, builds nest in dense cattail or bulrush. Forages in higher marsh vegetation, along vegetation and mudflat interface, and along tidal creeks (USFWS 2009d).	HP	Marginal habitat for this species occurs within the tidal marsh habitats within the project site and Chelsea Mitigation area. However these habitats are likely too small and patchy to support a breeding population.
<i>Sternula antillarum browni</i> California least tern	FE/SE/--	Breeding colonies are located along the coast from southern California to San Francisco Bay. Occur along marine and estuarine shores where small fish are abundant. Nest in loose colonies on the ground relatively free of human or predatory disturbance (USFWS 2007d).	A	Suitable habitat for this species does not occur within the project site, due to a high level of disturbance.
<i>Strix occidentalis caurina</i> northern spotted owl	FT/--/--	Resides in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2,300 meters. In southern California, nearly always associated with oak and oak-conifer habitats (USFWS 2009e).	A	Suitable habitat for this species does not occur within the project site.
<i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird	--/SSC/--	Nests in fresh water marshes, typically with vegetation such as cattails, tules, and bulrush with 2 to 4 foot deep water below. During the winter months, often forages in open fields, cultivated fields, and pastures (CDFG 2008).	A	This species is likely locally extirpated. The last record of this species in the vicinity of the site is over 100 years old.
Plants				
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	--/--/1B	Occurs in the inner north coast ranges, western central portion of Central Valley, and San Francisco Bay Area. Habitat consists of grassland, coastal scrub, and open woodland; elevations 3-500 meters. Blooms March to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Arctostaphylos hookeri</i> ssp. <i>montana</i> Mt. Tamalpais manzanita	--/--/1B	Known occurrences only in Marin county. Habitat consists of chaparral and valley and foothill grassland with serpentine and rocky soil; elevations 160 to 760 meters. Blooms February to April (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Arctostaphylos pallida</i> pallid manzanita	FT/SE/1B	Known occurrences in Alameda and Contra Costa counties. Habitat consists of broadleafed upland forest, closed-cone coniferous forest, chaparral,	A	Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		cismontane woodland, coastal scrub (siliceous shale, sandy or gravelly); elevations 185 to 465 meters. Blooms from December to March (CNPS 2007).		
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	--/--/1B	Known occurrences in Alameda, Contra Costa, Merced, Monterey, Napa, San Benito, Santa Clara, San Francisco, San Joaquin, Solano, Sonoma, Stanislaus, and Yolo Counties. Found in alkali playas, valley and foothill grassland in adobe clay, and vernal pools at elevations from 1 to 60 meters. Blooms from March to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site. Pool and puddle features within the project site are disturbed, are on fill substrate, and do not support typical vernal pool vegetation.
<i>Atriplex joaquiniana</i> San Joaquin spearscale	--/--/1B	Known populations in Alameda, Contra Costa, Colusa, Glenn, Merced, Monterey, Napa, Sacramento, San Benito, Santa Clara, San Joaquin, Solano, Tulare, and Yolo counties. Habitat consists of chenopod scrub, meadows and seeps, playas, valley and foothill grasslands with alkaline soils; elevations 1 to 835 meters. Blooms from April to October (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i> big-scale balsamroot	--/--/1B	Occurs in Sacramento Valley, Sierra Nevada foothills, and San Francisco Bay Area. Habitat consists of chaparral, cismontane woodland, and open grassy slopes and valleys, sometimes in serpentine soil; elevations 90 to 1400 meters. Blooms from March to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Blennosperma bakeri</i> Sonoma sunshine	FE/SE/1B	Known occurrences only in Sonoma County. Found in wetland areas in grassland and in vernal pools; elevations 10 to 110 meters. Blooms from March to May (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site. Pool and puddle features within the project site are disturbed, are on fill substrate, and do not support typical vernal pool vegetation.
<i>Blepharizonia plumose</i> big tarplant	--/--/1B	Known occurrences in Alameda, Contra Costa, Kern, Monterey, San Benito, San Joaquin, San Luis Obispo, Solano, and Stanislaus counties. Found in dry valley and foothill grassland; elevations 30 to 505 meters. Blooms from July to October (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>California macrophylla</i> round-leaved filaree	--/--/1B	Found in California's Central Coast and Central Valley, Southern California, Baja California, and in Oregon. Habitat consists of cismontane woodland and valley and foothill grassland with clay soils;	A	Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		elevations 15 to 1,200 meters. Blooms from March to May (CNPS 2007).		
<i>Calochortus pulchellus</i> Mt. Diablo fairy-lantern	--/--/1B	Known occurrences in Contra Costa and Solano Counties. Habitat consists of chaparral, woodland and grassland, often in adobe soil; elevations 30 to 840 meters. Blooms from April to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Calochortus tiburonensis</i> Tiburon mariposa-lily	FT/ST/1B	Known occurrences only in Marin county. Habitat consists of valley and foothill grassland with serpentine soil; elevations 50 to 150 meters. Blooms from March to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Calystegia purpurata</i> ssp. <i>saxicola</i> coastal bluff morning-glory	--/--/1B	Known occurrences in Mendocino, Marin, and Sonoma counties. Habitat consists of coastal dunes, coastal scrub; elevation 15 to 105 meters. Blooms from May to August (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Castilleja affinis</i> ssp. <i>neglecta</i> Tiburon paintbrush	FE/ST/1B	Known occurrences in Marin, Napa, and Santa Clara Counties. Known from six occurrences. Found in serpentine valley and foothill grasslands at elevations from 60 to 400 meters. Blooms from April to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Ceanothus purpureus</i> holly-leaved ceanothus	--/--/1B	Known occurrences within Napa, Solano, and Sonoma Counties. This species is known to occur within chaparral habitats; elevations from 120 to 640 meters. Blooms from February to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant	--/--/1B	Known occurrences in Alameda, Contra Costa, Monterey, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, and Solano counties. Found in alkaline valley and foothill grassland; elevations from 1 to 230 meters. Blooms from May to November (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Centromadia parryi</i> ssp. <i>parryi</i> pappose tarplant	--/--/1B	Occurs in the southern Sacramento Valley, southern Inner Coast Ranges, and San Francisco Bay Area. Habitat consists of coastal grassland, and alkaline grassland or marsh; elevations from 2 to 420 meters. Blooms from May to November (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Cicuta maculate</i> var. <i>bolanderi</i> Bolander's water-hemlock	--/--/2	Known occurrences in Contra Costa, Los Angeles, Marin, Sacramento, Santa Barbara, San Luis Obispo, and Solano counties. Current distribution	A	The project site is outside the known range for this species.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		in the San Francisco Estuary is limited to the Suisun Bay. Habitat consists of coastal marshes and swamps with fresh or brackish water; elevations from 0 to 200 meters. Blooms from July to September (Goals Project 2000, CNPS 2007).		
<i>Cirsium andrewsii</i> Franciscan thistle	--/--/1B	Known populations in Contra Costa, Marin, San Francisco, and San Mateo counties. Habitat consists of broadleaved upland forest, coastal bluff scrub, coastal prairie, coastal scrub/mesic, sometimes with serpentine soils; elevations 0 to 135 meters. Blooms from March to July (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Cordylanthus maritimus</i> ssp. <i>palustris</i> Point Reyes bird's-beak	--/--/1B	Known populations in Alameda, Humboldt, Marin, Santa Clara, San Mateo and Sonoma counties. Habitat consists of marshes and swamps (coastal salt); elevations 0 to 10 meters. Blooms from June to October (CNPS 2007).	HP	Suitable habitat for this species occurs within the tidal marsh habitat within the project site.
<i>Cordylanthus mollis</i> ssp. <i>mollis</i> soft bird's-beak	FE/SR/1B	Known populations in Contra Costa, Marin, Napa, Sacramento, Solano, and Sonoma counties. Habitat consists of coastal salt marshes and swamps; elevations 0 to 3 meters. Blooms July to November (CNPS 2007).	HP	Suitable habitat for this species occurs within the tidal marsh habitat within the project site. Critical habitat for this species occurs approximately 3 miles southwest on the Point Pinole shoreline.
<i>Dirca occidentalis</i> western leatherwood	--/--/1B	Known occurrences in Alameda, Contra Costa, Marin, Santa Clara, San Mateo, and Sonoma counties. Habitat consists of broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland with mesic soils; elevations 50 to 395 meters. Blooms from January to March (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Downingia pusilla</i> dwarf downingia	--/--/2	Known populations from Fresno, Merced, Mariposa, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties. Habitat consists of valley and foothill grassland (mesic), vernal pools; elevation 1 to 445 meters. Blooms from March to May (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site. Pool and puddle features within the project site are disturbed, are on fill substrate, and do not support typical vernal pool vegetation.
<i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	--/--/1B	Known occurrences in Alameda, Colusa, Lake, Marin, Napa, Santa Clara, San Mateo, Solano, and Sonoma Counties. Found in areas with serpentine soil. Found in chaparral, coastal prairie, and valley	A	Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		and foothill grassland at elevations from 10 to 500 meters. Blooms from June to September (CNPS 2007).		
<i>Fritillaria liliacea</i> fragrant fritillary	--/--/1B	Known populations in Alameda, Contra Costa, Monterey, Marin, San Benito, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma counties. Habitat consists of cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland, often in serpentine soils; elevations 3 to 410 meters. Blooms from February to April (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site. Pool and puddle features within the project site are disturbed, are on fill substrate, and do not support typical vernal pool vegetation.
<i>Helianthella castanea</i> Diablo helianthella	--/--/1B	Known occurrences from Alameda, Contra Costa, Marin, San Diego, San Francisco, and San Mateo counties. Habitat consists of closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub/rocky; elevations 15 to 490 meters. Blooms from March to July (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Hemizonia congesta</i> ssp. <i>congesta</i> pale yellow hayfield tarplant	--/--/1B	Known occurrences from Mendocino, Marin, and San Francisco counties. Habitat consists of valley and foothill grassland and sometimes roadsides; elevations 20 to 560 meters. Blooms from April to November (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Hesperolinon congestum</i> Marin western flax	FT/ST/1B	Known occurrences from Marin, San Francisco, and San Mateo counties. Habitat consists of chaparral and valley and foothill grassland with serpentine soils; elevations 5 to 370 meters. Blooms from April to July (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Hoita strobilina</i> Loma Prieta hoita	--/--/1B	Known occurrences in Alameda, Contra Costa, Santa Clara, and Santa Cruz counties. Habitat consists of chaparral, cismontane woodland, and riparian woodland, usually with serpentinite, mesic soils. Elevations 30 to 860 meters. Blooms from May to October (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT/SE/1B	Known occurrences in Alameda, Contra Costa, Monterey, Marin, Santa Cruz, and Sonoma counties. Habitat consists of coastal prairie, coastal scrub, and valley and foothill grassland, often in sandy clay soils; elevations 10 to 220 meters. Blooms from June to October (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE/--/1B	Occurs on the North, Central and South Coast; San Francisco Bay; and southern Sacramento Valley.	A	Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		Habitat consists of vernal pools, woodland, grassland, and alkaline playas, generally in wet areas; elevations 0 to 470 meters. Blooms from March to June (CNPS 2007).		Pool and puddle features within the project site are disturbed, are on fill substrate, and do not support typical vernal pool vegetation.
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	--/--/1B	Documented occurrences within Alameda, Contra Costa, Solano, Sacramento, Napa, Santa Clara, and San Joaquin counties. Current distribution is in Suisun Marsh and tidal brackish marshes along Napa River (DutchmanSlough). Habitat consists of marshes and swamps (freshwater and brackish). Found at elevations below 100 feet. Blooms from May to September (Goals Project 2000, CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Legenere limosa</i> Legenere	--/--/1B	Known occurrences in Lake, Napa, Placer, Sacramento, Shasta, San Mateo, Solano, Sonoma, Stanislaus, and Tehama counties. Habitat consists of vernal pools; elevation 1 to 880 meters. Blooms from April to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site. Pool and puddle features within the project site are disturbed, are on fill substrate, and do not support typical vernal pool vegetation.
<i>Lilaeopsis masonii</i> Mason's liliaeopsis	--/SR/1B	Known occurrences in Alameda, Contra Costa, Napa, Sacramento, San Joaquin, and Solano counties. Habitat consists of marshes and swamps (brackish or freshwater) and riparian scrub; elevations 0 to 10 meters. Blooms from April to November (CNPS 2007).	HP	Suitable habitat for this species occurs within the tidal marsh habitat within the project site.
<i>Limnanthes vinculans</i> Sebastopol meadowfoam	FE/SE/1B	Known occurrences in Napa and Sonoma counties. Found in meadows, seeps, valley and foothill grassland, and vernal pools, usually in vernal mesic areas; elevations 15 to 305 meters. Blooms from April to May (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site. Pool and puddle features within the project site are disturbed, are on fill substrate, and do not support typical vernal pool vegetation.
<i>Meconella oregano</i> Oregon meconella	--/--/1B	Known occurrences in Contra Costa and Santa Clara counties and in Oregon and Washington. Habitat consists of coastal prairie and coastal scrub; elevations 250 to 620 meters. Blooms from March to April (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Monardella villosa</i> ssp. <i>globosa</i> robust monardella	--/--/1B	Occurs within the outer North Coast Ranges and San Francisco Bay Area. Habitat consists of oak woodland, chaparral, coastal scrub, grassland, and openings in woodland and chaparral; elevations 100 to 915 meters. Blooms from June to July	A	Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		(CNPS 2007).		
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	FE/SE/1B	Known occurrences in Marin, Santa Cruz, and San Mateo counties. Habitat consists of cismontane woodland and valley and foothill grassland, often with serpentine soils; elevations 35 to 620 meters. Blooms from March to May (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Plagiobothrys glaber</i> hairless popcorn-flower	--/--/1A	Known from population occurrences in Alameda, Merced, Marin, San Benito, and Santa Clara counties. Presumed extinct. Habitat consists of meadows and seeps (alkaline), marshes and swamps (coastal salt); elevations 15 to 180 meters. Blooms from March to May (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Polygonum marinense</i> Marin knotweed	--/--/3	Known occurrences in Marin, Napa, Solano, and Sonoma counties. Habitat consists of marshes and swamps (coastal salt or brackish); elevations 0 to 10 meters. Blooms from April to October (CNPS 2007).	A	The project site is outside the known range for this species.
<i>Senecio aphanactis</i> chaparral ragwort	--/--/2	Occurs in coastal counties in California from the Bay Area to San Diego. Habitat consists of chaparral, cismontane woodland, coastal scrub with alkaline soil; elevations 15 to 800 meters. Blooms from January to April (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> most beautiful jewel flower	--/--/1B	Known occurrences in Alameda, Contra Costa, Monterey, Santa Clara, and San Luis Obispo Counties. Chaparral, cismontane woodland, valley and foothill grassland (often in serpentinite soil); elevations 110 to 1000 meters. Blooms March to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Streptanthus niger</i> Tiburon jewel-flower	FE/SE/1B	Known occurrences only from Marin County. Habitat consists of valley and foothill grassland with serpentine soils; elevations 30 to 150 meters. Blooms from May to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Suaeda californica</i> California seablite	FE/--/1B	Known populations in Alameda, Santa Clara, San Francisco, and San Luis Obispo counties. Presumed extinct in San Francisco Estuary. Habitat consists of coastal salt marsh and coastal strand; elevations 0 to 15 meters. Blooms from July to October (Goals Project 2000, CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Symphotrichum lentum</i> Suisun Marsh aster	--/--/1B	Known occurrences in Contra Costa, Napa, Sacramento, San Joaquin, and Solano counties.	A	Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
		Habitat consists of marshes and swamps (brackish and freshwater); elevations 0 to 3 meters. Blooms from May to November (CNPS 2007).		
<i>Trifolium amoenum</i> showy rancheria clover	FE/--/1B	Known occurrences in the San Francisco Bay Area and southern North Coast Range. Habitat consists of grassland and coastal bluff scrub, sometimes in serpentine soil; elevations 5 to 415 meters. Blooms from April to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
<i>Trifolium depauperatum</i> var. <i>hydrophilum</i> saline clover	--/--/1B	Known populations in Alameda, Monterey, Napa, San Benito, Santa Clara, San Luis Obispo, San Mateo, Solano, and Sonoma counties. Occurs in marshes and swamps; mesic/alkaline areas in valley and foothill grassland; and in vernal pools; elevations 0 to 300 meters. Blooms from April to June (CNPS 2007).	A	The project site is outside the known range for this species.
<i>Triquetrella californica</i> coastal triquetrella	--/--/1B	Known populations in Contra Costa, Mendocino, San Diego, and San Francisco counties. Habitats consist of coastal bluff scrub and coastal scrub/soil; elevations 10 to 100 meters. This species in a non-flowering moss.	A	Suitable habitat for this species does not occur within the project site.
<i>Viburnum ellipticum</i> oval-leaved viburnum	--/--/2	Known populations in Contra Costa, Fresno, El Dorado, Glenn, Humboldt, Mendocino, Napa, Shasta, and Sonoma counties. Deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest; elevations 215 to 1,400 meters. Blooms from May to June (CNPS 2007).	A	Suitable habitat for this species does not occur within the project site.
Natural Communities				
Coastal Brackish Marsh	--/--/G2, S2.1	Similar to Coastal Salt Marshes, but brackish from freshwater input. Most extensively developed around Suisun Bay at the mouth of the Sacramento-San Joaquin Delta. Salinity may vary considerably, and may increase at high tide or during seasons of low freshwater runoff or both. Usually intergrades with Coastal Salt Marshes toward the ocean and occasionally with Freshwater Marshes at the mouths of rivers, especially in the Sacramento-San Joaquin River Delta. Dominated by perennial, emergent, herbaceous monocots to 2m tall. Cover is often complete and dense (Holland 1986).	HP	This habitat type is present along the lower reach of Refugio Creek.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
Coastal Terrace Prairie	--/--/G2, S2.1	Forms on sandy loams on marine terraces near the coast (below approximately 700-1,000 feet) within the zone of coastal fog incursion. Dense, tall grassland (to 1m tall) dominated by both sod and tussock-forming perennial grasses. Most stands are quite patchy and variable in composition, reflecting local differences in available soil moisture capacity (Holland 1986).	A	This habitat type is not present within the project site.
Northern Coastal Salt Marsh	--/--/G3, S3.2	Marsh of sheltered inland margins of bays, lagoons, and estuaries, from the California-Oregon border south to Pt. Conception. Plant species are usually segregated horizontally with cord grass nearer the open water, pickleweed at mid-littoral elevations, and a richer mixture closer to high ground (Holland 1986).	HP	This habitat type is present along the margin of Hercules Point.
Northern Maritime Chaparral	--/--/G1, S1.2	A fairly open chaparral (50-80 percent cover, usually fairly easy to walk through) found from Santa Cruz to Sonoma County near the coast, usually as islands in Mixed Evergreen Forests or adjacent to Northern Coastal Scrub. Dominated by several narrowly restricted <i>Manzanita</i> or <i>Ceanothus</i> species. Associated with sandy substrates within the zone of coastal fog incursion, usually on rolling to hilly terrain.	A	This habitat type is not present within the project site.
Northern Vernal Pool	--/--/G2, S2.1	Vernal pool classification that encompasses northern hardpan vernal pool and northern claypan vernal pool. Found on terraces and basin rims from central San Joaquin Valley north to Shasta County. Vegetation is of a low, amphibious, herbaceous community dominated by annual herbs and grasses. Germination and growth begin with winter rains. Rising spring temperatures evaporate the pools, leaving bands of vegetation that colorfully encircle the pool (Holland 1986).	A	This habitat type is not present within the project site.
Serpentine Bunchgrass	--/--/G2, S2.2	Perennial grassland of serpentine soils. Serpentine soils are scattered in the Coast Ranges and Sierra Nevada mountains throughout California. Dominated by perennial bunchgrasses in genera such as <i>Bromus</i> , <i>Melica</i> , <i>Nassella</i> , <i>Poa</i> , <i>Calamagrostis</i> , and <i>Festuca</i> .	A	This habitat type is not present within the project site.

Scientific Name/ Common Name	Federal/State/ CNPS/other Status	General Habitat Description	Habitat Present/ Absent	Rationale
<p>Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is, or may be present. The species may be present. Critical Habitat [CH] - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); Federal Delisted (FD); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); State Delisted (SD); California Native Plant Society (CNPS), etc.</p>				
<p>California Native Plant Society (CNPS) 1A = Presumed extinct or extirpated in California. 1B = Rare, threatened, or endangered in California and elsewhere. 2 = Rare, threatened, or endangered in California but more common elsewhere. 3 = Review list. Plants about which more information is needed to assign to other lists or reject.</p> <p>Global Ranking Species or Natural Community Level G1 = Less than 6 viable element occurrences (EO) OR less than 1000 individuals OR less than 2000 acres. G2 = 6-20 EOs OR 1000-3000 individuals OR 2000-10000 acres. G3 = 21-100 EOs OR 3000-10000 individuals OR 10000-50000 acres. G4 = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat). G5 = Population or stand demonstrably secure to ineradicable due to being commonly found in the world</p> <p>Subspecies Level Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species; whereas, the T-rank reflects the global situation of just the subspecies.</p> <p>State Ranking S1 = Less than 6 EOs OR less than 100 individuals OR less than 2000 acres S1.1 = very threatened S1.2 = threatened S1.3 = no current threats known S2 = 6-20 EOs OR 1000-3000 individuals OR 2000-10000 acres S2.1 = very threatened S2.2 = threatened S2.3 = no current threats known S3 = 21-100 EOs OR 3000-10000 individuals OR 10000-50000 acres S3.1 = very threatened S3.2 = threatened S3.3 = no current threats known S4 = Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat. NO THREAT RANK. S5 = Demonstrably secure to ineradicable in California. NO THREAT RANK.</p>				

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