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#### EXISTING CONDITIONS REPORT: BIOLOGICAL RESOURCES

# MONTEREY LOCAL COASTAL PROGRAM UPDATE

PREPARED FOR

City of Monterey

March 2, 2016

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# MONTEREY LOCAL COASTAL PROGRAM UPDATE

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# I.0 INTRODUCTION

### I.I PURPOSE OF THIS DOCUMENT

This Existing Conditions and Issues Report expands upon and updates the existing conditions information contained in the existing subarea Land Use Plans (LUPs) for Cannery Row, Monterey Harbor, Del Monte Beach, Laguna Grande, and Skyline. The study area for this report is the City of Monterey Coastal Zone (see Figure 1, Location Map).

# I.2 METHODS

Reconnaissance-level field surveys to verify study area existing conditions were conducted at various times and locations by EMC Planning Group biologists Andrea Edwards and Stefanie Krantz on November 23 and 29, and December 1 and 4, 2015. The purpose of the field surveys was to document existing plant communities and wildlife habitats, and to evaluate the potential for special-status species and other sensitive biological resources to occur in the study area. Prior to conducting the surveys, project biologists reviewed maps, aerial photographs, database accounts, and scientific literature describing natural resources in the vicinity.

Biological resources present within the study area and vicinity were documented in field notes, including species observed, dominant plant communities, and significant wildlife habitat characteristics. Qualitative estimations of plant cover, structure, and spatial changes in species composition were used to determine plant communities and wildlife habitats, and habitat quality and disturbance level were noted.

#### 1.0 INTRODUCTION





Figure 1 Location Map

City of Monterey Local Coastal Program Update: Existing Conditions and Issues Report

#### 1.0 INTRODUCTION

# 2.0 BIOLOGICAL RESOURCE PLAN INFORMATION

# 2.1 GENERAL PLAN

The following study area biological resource information is excerpted from the City of Monterey General Plan (City of Monterey 2010). Note that this information is for the entire City, not just the Coastal Zone study area.

### **Conservation Element**

The City of Monterey is an urban community, which has developed over a 200-year period with a diverse natural environment. The interface between the natural and man-made environment is part of what makes Monterey a special place.

The Pacific Ocean forms the northern boundary of the City and is both a natural resource and an important community asset. The City's entire coastline is adjacent to the National Marine Sanctuary.

The land environment includes several vegetative communities/habitats, such as grasslands, central dune scrub, coastal foredune, coastal prairie, coastal scrub, maritime chaparral, mixed Monterey pine forest, Monterey pine forest, mixed chaparral, oak savanna, oak woodland, and riparian/wetland. A wide variety of plants and animals are located within this environment.

# **Open Space Element**

The City has an extensive open space network extending from the Monterey Bay to the ring of hillsides surrounding the City. The City's most important open space resources are the Monterey Bay and surrounding wooded hillsides. The bay is the focal point of the community as well as part of its economic foundation. It supports the commercial fishing industry and scientific

research. Visitors and residents also enjoy recreational activities such as sailing, kayaking, scuba diving, snorkeling, and recreational fishing on the bay, helping make Monterey a tourist destination.

The shoreline and beaches provide access to the bay as well as opportunities for the public to enjoy the ocean. The City also pursues restoration of the natural dune habitat along some areas of the beach.

Two large lakes are located in the City (Lake El Estero and Del Monte Lake), and two lakes (Roberts Lake and Laguna Grande Lake) are located directly adjacent to the City's eastern border within the City of Seaside. These lakes create a beautiful scenic entrance into the community. They also provide habitat for plants and animals, and are a natural flood protection mechanism. The City stocks Lake El Estero with fish, which helps create this habitat. Residents and visitors are able to use the lakes for fishing and some recreation such as the paddleboats on Lake El Estero.

Greenbelts create a beautiful setting and preserve a number of natural resources including Monterey pine trees. These greenbelts are located both in the City as well as Monterey County. The County's greenbelts are the hillsides and ridgelines that frame the City. The Urban Design Element encourages preservation of these forested hillsides as an essential element of the City setting. The City's greenbelts provide open space directly adjacent to developed areas. The City has an extensive active park system, which complements this open space network.

Open space areas include:

- a. **Monterey Bay.** The Monterey Bay is the City's most significant natural resource. It is the visual focal point of the City and home to a wide variety of marine life and birds. The bay is important to the City's fishing and research industries as well as for recreational use.
- b. **Shoreline and Beaches.** The City's shoreline invites both active and passive uses. Active use facilities include the wharves, the marina, boat docks, various boat launch areas, and public use beach areas. The City has several shoreline parks including San Carlos Beach Park, Fisherman's Shoreline Park, Monterey Bay Recreational Trail, Del Monte Beach, and Monterey Bay Park. In addition to these active beaches, the Navy has an area reserved for dune restoration along the beach, east of Sloat Avenue. This area is protected from pedestrians and is an effort to preserve the dune habitat.
- c. **Greenbelts.** The City's greenbelts form the backdrop of the City and extend from the Monterey Bay to the hillsides. They provide a visual break from urban development as well as serve as wildlife corridors.

- d. **Lakes.** Lakes have multiple functions. They provide a pleasant visual entry into the city, habitat for plants and animals, flood protection, and recreation opportunities.
- e. **Streams.** A number of intermittent streams are located in the City of Monterey.
- f. Active Parks. The City of Monterey has provided its citizenry with a well-balanced and healthy park and recreation system. In many ways, the City's park system is the cornerstone of the community as it provides places for residents to gather.
- g. Linkages. The City has developed an extensive network of open spaces over the past years. A particular emphasis is connecting those open spaces both for public access, connecting with pedestrian and bicycle resources, and for habitat conservation.

# 2.2 LAND USE PLANS

The following study area biological resource information is excerpted from the existing Land Use Plans (LUPs) [with references to associated Local Coastal Programs (LCPs)] for the City of Monterey Coastal Zone five subareas (City of Monterey 1992, 2003a, 2003b, and 2004; City of Seaside/City of Monterey 2000). Some typographical errors have been corrected and formatting changes have been made. This section presents available detailed biological resource information for each LUP subarea. Refer to Section 3.0 for a summary of current biological existing conditions in the study area as observed during the 2015 reconnaissance-level field surveys.

### Cannery Row Land Use Plan (City of Monterey 2004)

Combined effects of underwater canyons, currents, and upwelling create a unique buildup of nutrients in the waters along Cannery Row. Reduced wave action and turbidity (due to Point Pinos, kelp beds, breakwater, and orientation) create a large amount of life-supporting light which also makes marine life more easily observed. Varying tidal exposure and diverse bottom features (rock, sand, shale, gravel, rock outcrops, and pilings) support a broad range of intertidal and subtidal marine life.

The kelp beds, rock outcrops, pilings, breakwater, and entire intertidal zone support marine mammals (including otter, seal, and sea lion populations) and marine birds (including the threatened brown pelican, as well as the full range of intertidal and subtidal marine life abalone, sea urchins, sand dollars, squid, octopus, fish, anemone, starfish, crab, snails, barnacles, mussels, etc.).

Stormwater runoff, oil spills, blockages of light to intertidal areas from over the water construction, and human abuse all represent potential threats to the fragile marine environment off Cannery Row.

The broad range of intertidal marine life discussed above exists along the length of Cannery Row at approximately elevations –2 through +7 feet above sea level.

### Monterey Harbor Land Use Plan (City of Monterey 2003b)

The Monterey Harbor LUP contains the following biological resource information:

- a. In the Harbor LCP area, marine resources are confined primarily to the littoral or intertidal zone and, to a lesser degree, the sub-tidal zone. The highest concentrations of marine life are located in the harbor itself. The rocky shoreline along the western shore, as well as the pilings and breakwater of the wharf, have proved to be ideal settling grounds for many algae and invertebrate organisms. An abundance of sea life exists in the harbor despite intense use by private and commercial fishing and boating operations.
- b. As on other intertidal shores in California, vertical tidal zonation of organisms occurs along the rocky coast and on the pilings and breakwaters. The most common organisms found in the higher levels are barnacles, mussels, and anemones. The middle zone is dominated by starfish, white hydroids and the scale worm. Along the lower intertidal zone, which is rarely exposed, the anemone and the tunicate also appear. Many other filter feeders such as hydrozoans, bryozoans, and sponges utilize the high concentrations of suspended matter found in the subtidal zone of the harbor. Healthy populations of chitons, limpets, and crabs, as well as many species of gastropods, exist throughout the intertidal zone of the harbor.
- c. The intertidal zone of the beach, east of the harbor, while being less diverse in marine life, also has vertical zonation up the beach. The higher, more exposed area is dominated primarily by beach hoppers and beach fleas. At the lower end of the intertidal zone are found sand crabs, blood worms (named for their bright red color), and several species of bivalves, including the Pismo clam, the Bean clam, and the Razor clam.
- d. There are many vertebrate species also associated with the marine habitats of the Monterey Harbor LCP area. Though not as abundant in actual numbers, these animals are much more visible than their invertebrate counterparts. Sea birds such as the Brandt's Cormorant, Western Gull, California Gull, Common Murre, and the endangered Brown Pelican are all common sights throughout this area. Harbor seals, California sea lions, and Steller sea lions can often be observed from the wharves and breakwaters competing for the abundant supply of fish throughout the harbor. The California sea otter, an endangered species, also frequents the Monterey harbor, feeding primarily on shellfish.

- e. A large variety of algae species grow on the rocks and pilings of the harbor. Green algae is the most common in the upper intertidal zone, while the red and brown algae occupy the middle and lower zones. Kelp beds, which are prevalent throughout the Monterey area, are found within the Harbor and also east of Wharf #2. These kelp beds provide habitat for rock fish, bass, and cod which utilize these kelp forests for shelter and food. Fishing is allowed in the area east of the harbor.
- f. The dune habitat is the major habitat of the coastal strand. This area, though highly sensitive to disturbance, exists as one of the few remaining natural habitats in the Monterey Harbor LCP Area.
- g. The dunes in the Harbor area are characterized by low-growing groundcover vegetation consisting primarily of several species of ice plant. These species of ice plant have replaced many less competitive native plants from the seaward side of the dunes back to the access road which borders the railroad tracks. Also associated with the ice plant, but not as abundant, are a wide variety of shore wildflowers and some herbaceous annuals and perennials.

There is native vegetation in these dunes which provides habitat in the form of cover and forage for many other organisms in this ecosystem, such as mice, gophers, brush rabbits, raccoons, and garter snakes. Quail, gulls, sparrows, pigeons, sandpipers, and other shore birds also rely on this habitat for food and protection. Footpaths, roads, and parking areas have the potential to mar this habitat. Frequent use by tourists and residents who stroll through these dunes has eliminated most plant growth in several areas.

While no current plant surveys have been done of the Harbor dunes, a number of specialstatus plant species are found on the adjacent Navy property and Del Monte Beach area. Therefore, these species have the potential to occur in the Harbor dunes. These specialstatus species include, but are not limited to, Monterey spineflower (*Chorizanthe pungens* var. *pungens*), sand gilia (*Gilia tenuiflora* ssp. *arenaria*), coast wallflower (*Erysimum ammophilum*), Monterey paintbrush (*Castilleja latifolia*), dune manzanita (*Arctostaphylos pumilia*), Eastwood's ericameria (*Ericameria fasciculata*), and seaside bird's beak (*Cordylanthus rigidus*).

Several special-status wildlife species have the potential to occur in the dunes area, including but not limited to, Smith's blue butterfly (*Euphilotes enoptes smithi*), the Black legless lizard (*Anniella pulchra nigra*), and the Western snowy plover (*Charadrius alexandrinum nivosus*). Smith's blue butterfly is federally listed as endangered and is known only from Monterey County. This butterfly spends its entire life cycle in association with two buckwheat plants (*Eriogonum latifolium* and *E. parvifolium*). The Black legless lizard is a California Species of Special Concern. This lizard inhabits coastal dunes in Monterey

County between the Salinas and Carmel Rivers. The Western snowy plover is federally listed as threatened and is a California Species of Special Concern. Snowy plovers typically nest on beaches in debris located above the tide line. Nesting by snowy plovers has been documented in recent years in Monterey along beaches east of the Harbor LUP area.

- h. A small, disturbed grassland community is found in the Presidio of Monterey. This grassland supports a small community of non-native and native grasses. Particularly affecting this Presidio grassland is a weed control and fire protection program whereby the grasses are mown before the seeds have matured. This, in turn, reduces the forage for birds and rodents associated with this area.
- i. A semi-window of mixed eucalyptus and cypress trees exists behind the dune habitat. There are, additionally, a few cypress trees located along the recreation trail, in a small grove on Lighthouse Curve at the west end of the study area, and in front of and around the condominiums at the east end. These trees have some value in that they provide nesting and roosting sites for many bird species as well as cover and shade for animals and plants.
- j. A scattering of Coast live oak occurs within the Monterey Presidio. While the grassland understory has been disturbed by the landscaping and gardening associated with the Presidio, the oak trees have remained intact. In the course of Presidio development, trees were removed, thus thinning the population from its natural state. However, populations have now stabilized and provide a valuable source of wildlife habitat. Unfortunately, naturally occurring species of plants and shrubs associated with the Coast live oak habitat have been replaced by ornamentals and introduced grasses which lessen the value of this habitat relative to natural habitats.
- k. A very small and disturbed creek flows along the eastern edge of the Presidio before being channeled, by way of a culvert, into the harbor. Introduced ornamental plants have replaced most of the naturally occurring shrubs of this riparian habitat, though the persistent wild blackberry and poison oak still retain a foothold here along with several Coast redwoods and several species of wildflowers.

# Del Monte Beach Land Use Plan (City of Monterey 2003a)

Some of the land within the Del Monte Beach LCP area consists of sand dunes vegetated with non-native species, such as sea fig (*Carpobrotus chilensis*) and Hottentot fig (*Carpobrotus edulis*). Other existing vegetation includes shore wild flowers, herbaceous annuals, and various introduced and native grasses. A number of dune areas have been restored with native vegetation, e.g. portions of the Navy property and portions of State Parks and City property.

Additional habitat areas include eucalyptus woodland, coast live oak communities, some scattered conifers, and isolated areas of primarily ornamental shrubs.

Habitat areas include:

a. **Dunes Habitat.** Dunes habitat includes those areas vegetated with sea fig or grasses in combination with various herbaceous annuals, as well as restored areas. Most of the dunes have been moderately or heavily disturbed by construction. The existing vegetation varies between a variety of native dune plant species in restored areas and non-native species, especially sea fig and Hottentot fig (*Carpobrotus edulis* and *C. chilensis*), also known as ice plant. These two introduced species were commonly used along road cuts and banks to prevent erosion. In non-restored dune areas, vegetation consists almost wholly of these two species. These two plant species form dense mats of vegetation, often precluding or limiting the growth of native dune scrub plant species.

Restored dunes within the Del Monte Beach LUP area include:

- 1. **Naval Postgraduate School.** The federal government funded the restoration project; the City of Monterey, California accepted the funding and implemented the work through the City Parks Department. The vegetation that had existed was a combination of exotic plants, primarily ice plant. With funding secured, the City of Monterey and the Naval Postgraduate School agreed on the project scope and its implementation. Over 150,000 seedlings were planted, representing 26 species of native dune vegetation, and all exotic vegetation was removed using volunteers from the Monterey Dune Coalition and the Big Sur Land Trust. Only native plants were used to enhance the habitat for the endangered species known to frequent the area (see below).
- 2. **Monterey State Beach.** Previously Monterey State Beach comprised only 22 acres, including the area between the Monterey Beach Hotel and the former Phillips Petroleum property. In 1992 the California State Parks Department purchased the 37-acre Phillips Petroleum site to augment the State Beach. A dune stabilization and restoration program was undertaken several years ago on the original 22 acres. Dune restoration is ongoing.
- 3. **Ocean/Harbor House.** This development is located oceanward of Tide Avenue, in Del Monte Beach Tract #1. As part of a project to convert the rental complex to condominiums, dune restoration on either side of the structures was required.
- 4. **City Beach.** The City has also restored portions of the dunes in front of Tide Avenue to control erosion and to provide habitat.

- b. Live Oak Habitat. Clusters of native Coast Live Oak (*Quercus agrifolia*) occur in the study area on the steeper dune bluff slopes near Del Monte Avenue, primarily on the lee side of the dunes. These oak communities are important for stabilizing the dunes and also provide a valuable source of wildlife habitat. The live oaks found in this area are a remnant cluster of low-lying, shrub-sized trees and grow in association with sea fig, introduced grasses, or assorted herbaceous annuals. Additional shrub vegetation occurs in the vicinity of oak clusters. This vegetation contains some native shrubs, such as bush lupine (*Lupinus* ssp.), *Ceanothus*, California blackberry (*Rubus ursinus*), and coyote brush (*Baccharis pilularis*), as well as junipers and ornamental shrubbery of lesser value to wildlife populations.
- c. **Eucalyptus Woodland.** Eucalyptus woodland occurs primarily on the lee side of the dunes along the Monterey Recreational Trail/Transportation Corridor, formerly the Southern Pacific Railroad (SPRR) right-of-way. Beneath the trees is a sparse understory of herbaceous annuals. Though these introduced trees provide cover for a variety of wildlife, they are generally of lesser value as wildlife habitat than native trees, such as the Coast Live Oak.
- d. **Conifer Groves.** Scattered growth of two types of coniferous trees, Monterey cypress (*Cypressus macrocarpa*) and Monterey pine (*Pinus radiata*) occur in a small area at the southern extend of the Naval Postgraduate School property. The native pines provide some value as nesting or roosting sites. Though the Monterey cypress are native to the area, the few trees on the U.S. Navy property are planted and are not as biologically significant as more extensive groves elsewhere on the Monterey Peninsula. Some planted Monterey pines are found on the lee side of the dunes elsewhere in the study area and additional cypress trees have been planted near State Route 1.
- e. **Disturbed Habitat.** Graded, paved, and constructed areas make up the remainder of the land habitat in this LCP area. Disturbed habitat includes areas that have been significantly disrupted by human activities, such as the construction of buildings, roadways, and parking areas, placement of landfill, and the oil soaking at former petroleum storage tank sites located on Monterey State Beach.
- f. Rare and Endangered Plant Species. The habitat of endangered, threatened, and rare species takes on special significance because of federal and California state laws enacted to protect these species and their habitats. These laws include the "Endangered Species Act of 1973" and 1978 amendments, the "California Endangered Species Act of 1970," and the "California Plant Protection Act of 1977."

A number of native plants known to occur in the Del Monte Beach LUP area are either already listed, or are considered a Species of Special Concern by the U.S. Fish and Wildlife Service (USFWS) including: 1) Sand gilia (*Gilia tenuiflora* ssp. *arenaria*), which is

federally listed as an endangered species, is state-listed as threatened, and is considered rare by the California Native Plant Society (CNPS); 2) Coast wallflower (*Erysimum ammophilum*), which is considered a Species of Special Concern by USFWS, is considered of limited distribution by CNPS, but is not state-listed; 3) Monterey spineflower (*Chorizanthe pungens* var. *pungens*), which is federally listed as a threatened species and is considered rare by CNPS and CDFW, but is not state-listed; 4) Monterey paintbrush (*Castilleja latifolia*), which is considered a Species of Special Concern by USFWS and is considered of limited distribution by CNPS, but is not state-listed; and 5) Seaside bird's beak (*Cordylanthus rigidus littoralis*), which is state-listed as an endangered species and is considered rare by CNPS. In addition, other plants recognized as species of concern by CNPS and known to occur in or near the Del Monte Beach LCP area include Dune manzanita (*Arctostaphylos pumila*), Eastwood's ericameria (*Ericameria fasciculata*), coast wallflower (*Erysimum ammophilum*), and Monterey ceanothus (*Ceanothus rigidus*).

The California Natural Diversity Database recognized the existence of Seaside bird's beak within a one-mile search radius of Laguna del Rey, which would include the study area. A survey of the former Phillips' Petroleum property (now State Parks property) was conducted during the species' flowering period in the summer of 1982. No Seaside bird's beak plants were found. The slender flowered gilia has been recorded within the Del Monte Dunes Re-Subdivision area and on the Naval Postgraduate School property. The coast wallflower is also known to occur at these sites. Monterey spineflower been found at the Del Monte Dunes Re-Subdivision site and Monterey State Beach. The Del Monte Beach LCP area is also within the one-mile search radius areas of known occurrence for Eastwood's ericameria, Monterey ceanothus, and Dune manzanita. In addition, special-status species have been re-introduced to restored dune areas within the Del Monte Beach LUP area.

g. Rare and Endangered Animal Species. The Del Monte Beach area is within the habitat range of the Smith's blue butterfly (*Euphilotes entopes smithi*), a rare and endangered species of butterfly. The Smith's blue butterfly is federally designated as an endangered species (no state designation exists, pending resolution of formal recognition of insects as endangered species). The range of the Smith's blue butterfly includes coastal cliffs and dunes from the southern Monterey County town of Gorda to north of Seaside. Originally, the species habitat in the Monterey/Seaside area was considered to include only coastal dunes. Large Smith's blue butterfly habitat areas have been recorded in dunes within Fort Ord, the City of Marina, and the Naval Postgraduate School property. The butterfly species utilizes either of two species of *Eriogonum latifolium* along the sand dunes, especially north of Monterey, and *Eriogonum parvifolium* on both coastal cliffs and sand dunes. Emerging in late summer and early autumn, the adults mate and lay eggs on the flowers of these host

plants. The eggs hatch shortly thereafter and the larvae begin to feed on the flowers of the plant. Following several weeks of feeding and development, the larvae molt to a pupal stage, beginning a ten-month period of transformation. The following year, as the *Eriogonum* again flower, the new adults emerge.

Important habitat for the Smith's blue butterfly is threatened by development and the invasion of non-native plants. Increasing automobile and foot traffic along the coast is causing degradation of the coastal scrub and coastal dune ecosystems. Many introduced plants, primarily European beach grass and ice plant, have served to stabilize the dune systems of the California coast, formerly very active dunes. Many plants, including the Smith's blue butterfly host *Eriogonum*, are adapted to conditions of active sand and require disruption in order to spread successfully.

Several sites along Monterey Bay are now being managed for preservation of Smith's blue butterfly and its host plants including a preserve established by the U.S. Army at Fort Ord, the nation's first insect-based preserve. These sites are being replanted with *Eriogonum* and protected from foot and off-road vehicle traffic.

The recorded presence of *E. latifolium* and *E. parvifolium* on the former Phillips' Petroleum property (now part of Monterey State Beach), and *E. parvifolium* on the property of the Naval Postgraduate School confirms the existence of small-to-moderate areas of suitable habitat for Smith's blue butterflies in the LCP area. The documentation of the study areas within the species' range and the suitability of the habitat indicate a high probability that the Smith's blue butterfly may be found in this area. A systematic field survey of the Naval Postgraduate School property for rare and endangered species of plants and animals confirmed its use by the Smith's blue butterfly. Surveys on Monterey State Beach property in 2000 and 2001 failed to document the presence of Smith's blue butterfly.

An additional animal species of concern known to occur in the Monterey area is the black legless lizard (*Anniella pulchra nigra*). This black subspecies is not designated on either state or federal endangered, rare, or threatened lists and receives no legal protection, but it is of concern to California Department of Fish and Wildlife because of its limited distribution. This species is known to occur in stabilized coastal sand dunes. Bush lupine (which occurs in the study area) is often an indicator of suitable conditions. Individuals of the subspecies have been sighted within the Del Monte Beach LCP area. There are no known documented occurrences of the black legless lizard on Monterey State Beach.

The western snowy plover is federally listed as threatened and is a California Species of Special Concern. In Monterey County there are both permanent plover populations and winter migrants. Snowy plovers typically nest on beaches in debris located above the tide line. In Monterey, the breeding season spans mid-March to mid-September.

- h. **Habitat Disturbance and Restoration Activity.** Recent construction within the dunes habitat of the Del Monte Beach LCP area has resulted in the removal of dunes vegetation, which reduces wildlife habitat values, activates formerly stabilized dunes, and increases the erosion potential. For instance, the construction of the State Route 1 freeway required grading and sand removal in large areas of the eastern half of the LCP area. In early 1982, the installation of a regional sewer interceptor from the wastewater treatment plant through the LCP area to the east required excavation of dunes in a 220-foot-wide construction easement. A dune restoration program within the sewer excavation area was required through a condition of the coastal development permit granted by the State (April 1982). The following actions have been pursued regarding restoration of the dunes:
  - 1. The U.S. Navy has restored the dune habitat on the Navy property between the Recreational Trail and the beach through replanting with dune habitat plant species, and has limited pedestrian foot traffic through the dunes by constructing a boardwalk on the western end of the area, between the trail and the beach.
  - 2. The State undertook a dunes stabilization and habitat restoration and management program on the Monterey State Beach property west of the Monterey Beach Hotel. This program included rebuilding of dunes, use of jute matting and snow fencing for sand retention, and replanting with dune habitat plant species.

# Laguna Grande Land Use Plan (City of Seaside/City of Monterey 2000)

Existing habitat areas in the Coastal Zone planning area are described below. It should be noted that several plans have previously been prepared and adopted for the area. A Regional Park Master Plan has been prepared for Laguna Grande. This Master Plan has been developed jointly by the Cities of Monterey and Seaside and the Monterey Peninsula Regional Park District. Due to the recent receipt of grant funds to begin implementation of the Regional Park Master Plan, certain revisions have been made to said Plan. These changes recognize the existence of both valuable marsh and riparian vegetation. The City of Seaside has prepared improvement plans for Roberts Lake. The Association of Monterey Bay Area Governments (AMBAG) as part of the Water Quality Management Plan conducted a special study of Laguna Grande and Roberts Lake. The existing conditions of the natural habitat areas and the potential impacts upon them of the pre-existing plans and studies are described below.

a. **Freshwater Marshes.** Freshwater marshes exist around both Laguna Grande and Roberts Lake. Tule growth and cattails contribute to a wetland complex that is rich in wildlife. On the southwest side of Laguna Grande is a muck swamp consisting of dried-up tule growth and cattails. Freshwater marsh areas cover approximately 6.8 acres in Laguna Grande and 1.5 acres in Roberts Lake.

Tule growth provides nesting ground for many species of water fowl. However, tule growth also contributes nitrogen to the water, adding to pollution problems. The Water Quality Management Plan Case Study recommends removal from Laguna Grande of the majority of the nitrogen producing tule growth, and improving the quality of that portion to remain.

The Laguna Grande Regional Park Master Plan also calls for removal of most of the tule growth as recommended in the Case Study. The Park Master Plan shows the muck swamp at the southwest edge of Laguna Grande being dredged. Other changes to the marsh area include filling in the area of the peninsula near Virgin Avenue, on the northwest side of Laguna Grande. Also, a small peninsula of landfill would be provided to form a cove for protection of the boat docking facilities just off Canyon Del Rey Boulevard to the east.

The Park Master Plan provides for the retention of a portion of the freshwater marsh as a natural preserve area. This natural preserve area on the southwest side of Laguna Grande, off English Avenue south of Sequoia Avenue, would retain indigenous flora and fauna. Access to and through the preserve is provided, but is to be designed to minimize disturbance. One suggested form is a boardwalk which would serve as a nature walk. Adjoining uses shown in the Park Master Plan include a passive activities area to the north (turfed area for sitting, viewing, and picnicking), and a supervised activities area to the south (turfed area for day camping).

To address the loss of 6.2 acres of waterfowl habit with the removal of the tule growth from Laguna Grande, the Master Plan Environmental Impact Report calls for the addition of 2.8 acres of higher quality waterfowl habitat in Roberts Lake in the form of loafing islands and additional tule growth.

b. **Riparian Vegetation.** Riparian vegetation exists near the Laguna Grande shoreline in the areas. This riparian vegetation consists of deciduous trees such as cottonwood and sycamore, and has a thick understory of shrubs, herbaceous growth, and fallen limbs.

The Laguna Grande Regional Park Master Plan shows portions of this riparian vegetation remaining as part of the natural preserve area on the southwest side of Laguna Grande, off English Avenue south of Sequoia Avenue. The other riparian vegetation areas around Laguna Grande are indicated to be altered for park improvement, specifically the supervised activities area at the south end of Laguna Grande, and the passive activities and multi-use areas on the west side of Laguna Grande.

c. **Coastal Strand Vegetation.** Coastal strand vegetation consists of the vegetation of sandy beaches and dunes, and exists mainly in the Roberts Lake area and the beach area. This dune vegetation tends to have thick, fleshy leaves, extensive root systems, and prostrate growth. Grasses and low growing shrubs also exist with this dune vegetation. A

characteristic of this dune vegetation is that it is very fragile. The construction of Highway 1 has degraded much of the dune vegetation around Roberts Lake and heavy use of the beach area has degraded the habitat in that area. A serious problem created by these degraded habitat conditions is that the loss of vegetation allows dune movement by the wind, which in turn contributes to sedimentation and water quality problems in Roberts Lake and Laguna Grande.

- d. **Grassland.** Grassland consisting of annual grasses and herbaceous annuals is common around Laguna Grande, and serves as a transition area between the freshwater marsh and riparian areas and the wooded areas. The Laguna Grande Regional Park Master Plan indicates that most of this grassland would be developed as turfed play areas. The City of Monterey has received Coastal Commission approval for a multi-use play area covering the grassland area south of Montecito Avenue, and has proceeded with its development as part of the Laguna Grande Regional Park.
- e. **Coast Live Oaks.** The coast live oak area consists of broadleaf evergreen trees with an understory of herbaceous annuals. These coastal oak trees climb the steep slopes at the south end of Laguna Grande, primarily on the seaside, and serve as a habitat for area wildlife. The Laguna Grande Regional Park Master Plan retains these areas of coastal oaks in their existing natural state.
- f. Eucalyptus Woodlands. Eucalyptus woodlands exist mainly on the southeast side of Laguna Grande. Beneath the eucalyptus trees is a sparse understory of herbaceous annuals. Compared with native trees, these eucalyptus are of low habitat value to wildlife. A small church presently exists among the eucalyptus trees, and both the church and trees are shown to be retained in the Laguna Grande Regional Park Master Plan. The Park Master Plan also proposes the development of a tot lot and restrooms among these eucalyptus trees.
- g. **Disturbed Habitat.** Disturbed habitat makes up the remainder of the land habitat in this Coastal Zone planning area. Disturbed habitat includes areas which have been significantly disrupted by human activities, such as the construction of buildings, roadways, and parking areas, the movement of vehicles and foot traffic, the cultivation of gardens, and the placement of landfill.
- h. Laguna Grande. The Laguna Grande water surface covers approximately 12 acres. Laguna Grande is significantly polluted, but it does support some species of warm water fish. The Water Quality Management Plan contains a number of recommendations for improving the water quality of Laguna Grande, including dredging, sealing the bottom, and installing aeration equipment. The Laguna Grande Regional Park Master Plan calls for fishing and non-motorized boats in Laguna Grande.

i. **Roberts Lake.** Roberts Lake is also significantly polluted and the Water Quality Management Plan recommends improvements similar to those defined for Laguna Grande. Roberts Lake is a very popular location for model boat racing, and is also a popular habitat for a variety of aquatic birds.

## Skyline Land Use Plan (City of Monterey 1992)

Predominantly, the most important environmental element of the Skyline planning area is the forest itself. The forest supports significant wildlife populations. Habitat areas in the Coastal Zone planning area are described below.

Soils in the Skyline planning area support healthy stands of Monterey pine. Within the Presidio area, where steeper slopes occur, tree density and tree size increase, forming a heavily forested knoll on the upper Presidio. A few Bishop pines are found along the southern boundary of the Presidio property, intermixed with Monterey pines. This portion of the Presidio property is an environmentally sensitive habitat due to the presence of the stand of healthy Monterey pines intermixed with Bishop pines. This community is endemic to the forest and is part of the Huckleberry Hill natural habitat found throughout the upper reaches of the nearby Del Monte Forest. This habitat is environmentally sensitive because it shelters unique plant associations and endemic species. In addition, the mixed Bishop pine/Monterey pine habitat found on the Presidio knoll is environmentally sensitive because it is the largest contiguous block of undeveloped native forest land on the Monterey Peninsula. It offers the only substantial opportunity for this endemic forest's natural plant/animal associations to survive under relatively undisturbed conditions.

Monterey pines comprise the major tree cover in the Monterey/Carmel area. Some of the most significant stands of Monterey pines exist in the Skyline planning area. Besides the Monterey area, there are only two stands of this species on other portions of the California coast.

Adjacent to the mix of Monterey and Bishop pines on the Presidio property are the remains of an oak/grassland habitat. The completion of a major student housing project on this portion of the Presidio greatly diminished the size of the habitat. Although graded for polo fields in the early 1900s, this oak/grassland habitat has been considered unique to the Skyline planning area because it is a grassland "island" within the dominant Monterey pine forest. Known as "potreros" in Spanish days, this grassland habitat represents a habitat type that has disappeared on the rest of the Monterey Peninsula proper.

The forest environment in the Skyline planning area supports a broad range of birds and mammals. The importance of this forest environment is exemplified by the black-tailed deer, the largest mammal found on the Peninsula, which utilize the brush understory of the forest for cover and, in some cases, for food.

The open mature pine forests provide a year-round home for the gray squirrel, Stellar's jay, pygmy nuthatch, and chestnut-backed chickadee, as well as for a variety of other resident and seasonal (summer or winter) resident species. In the denser forest in a small area around the Presidio, where oak understory blends with shrubs and pine overstory, the composition of bird species changes to include the scrub jay, acorn woodpecker, and other bird species more commonly found in oak woodlands.

The oak/grassland habitat found on the Presidio property provides feeding areas for deer and bird species, although the grassy-covered fairways of the golf courses in the Del Monte Forest provide greater feeding areas, particularly in winter and spring. Thus, the Skyline planning area is not considered a prime or endangered feeding area.

While no resident rare or endangered animal species have been observed within the Skyline planning area, transient species which might be expected to visit the area include the Southern bald eagle and American peregrine falcon. Besides the disjunct Bishop pine mentioned earlier, other sensitive plant species which potentially could be found in a detailed site analysis include: Beargrass (*Xerophyllum tenax*) – disjunct; Monterey ceonothus (*Ceanothus rigidus*) – rare; Shaggy-barked manzanita (*Aretostaphylos tomentosa* var. *habeclada*) – endemic; Hutchinson's larkspur (*Delphinium hutchinsoniae*) -- may be extirpated; and Coast rhododendron (*Rhondodendron californicum*) -- probably extirpated.

# PLANT COMMUNITIES/WILDLIFE HABITATS

The previous section presented available detailed biological resource information for each LUP subarea; this section builds upon that foundation and updates the most relevant habitat descriptions. The following therefore summarizes current biological resource existing conditions as observed during the 2015 reconnaissance-level field survey of the entire City of Monterey Coastal Zone study area.

Figure 2, Land Cover Map, displays the available City-wide mapping data for major habitat types and other land covers, and shows the Coastal Zone study area boundaries. The data was provided in the *Biological Assessment for the City of Monterey* (Denise Duffy & Associates 2003), which was prepared for the City of Monterey as part of its General Plan Update process. This land cover map was verified to the extent possible during the 2015 reconnaissance-level field survey, and though data is presented at a large scale and so not necessarily accurate on a parcellevel analysis, it is useful to show the overall vegetated and developed areas throughout the City and study area. However, the plant communities/wildlife habitats described below are based on the most recent field survey, and are similar to, but do not exactly match, the land cover type classification system used in Figure 2. Note that many ornamental landscaping areas that exist within the study area are included in the urban/non-vegetated habitat type on Figure 2, as ornamental landscaping areas were not mapped.

USFWS-designated critical habitat areas that exist for three species are shown in Figure 3, USFWS Critical Habitat Areas, and these species are identified in the following section of this report. Representative images of the study area are contained in Figures 4-6, Site Photographs.

3.0

# 3.1 CENTRAL DUNE SCRUB AND COASTAL FOREDUNE

Central dune scrub exists in the study area in sections disturbed by heavy human traffic and nonnative plants, and also in high quality habitat restoration sites. This diverse plant community is typically dominated by coastal sagewort (*Artemisia pycnocephala*), seacliff wild buckwheat (*Eriogonum parvifolium*), mock heather (*Ericameria ericoides*), and golden yarrow (*Eriophyllum confertiflorum*). Other commonly occurring species include pink sand verbena (*Abronia umbellata*), European sea rocket (*Cakile maritima*), seaside daisy (*Erigeron glaucus*), beach evening-primrose (*Camissoniopsis cheiranthifolia*), sea pink (*Armeria martima* ssp. *californica*), California sand-aster (*Corethrogyne filaginifolia*), and silver beach lupine (*Lupinus chamissonis*). Non-native iceplant that is commonly found (sometimes in dense patches) in the central dune scrub include sea fig (*Carpobrotus chilensis*) and hottentot fig (*Carpobrotus edulis*). The sandy beaches along the coastal foredunes are generally not vegetated.

Central dune scrub habitat occurs in the study area primarily from Del Monte Beach to Monterey Municipal Beach. Portions of this habitat area are undergoing dune restoration projects and are fenced off from public foot traffic. The Naval Postgraduate School also has a late successional restoration area supporting coastal sage scrub located further inland from the dune habitat. Note that portions of this restored habitat contain native species more characteristic of southern California sage scrub communities. Coastal foredunes/sandy beaches that are heavily used by the public are located in small pockets along the Cannery Row and Monterey Harbor subareas. Sandy beaches are contiguous from Fisherman's Wharf to the edge of the study area at Del Monte Beach and Monterey State (Roberts) Beach.

Central dune scrub provides important wildlife habitat for a variety of common species of wildlife including Nuttall's white-crowned sparrow (*Zonotrichia leucophrys nuttalli*), goldencrowned sparrow (*Zonotrichia atricapilla*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), American kestrel (*Falco sparverius*), blue-gray gnatcatcher (*Polioptila caerulea*), California mouse (*Peromyscus californicus*), brush rabbit (*Sylvilagus bachmani*), Heerman's kangaroo rat (*Dipodomys heermanni*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), and western diamondback (*Crotalus atrox*). Central dune scrub also provides habitat for a number of special-status species addressed in Section 4.1.



# Land Cover Map

City of Monterey Local Coastal Program Update: Existing Conditions and Issues Report





2,000 feet

—— City of Monterey

Study Area/City of Monterey Coastal Zone XX Monterey Spineflower Critical Habitat Western Snowy Plover Critical Habitat Yadon's Rein Orchid Critical Habitat



Source: California Coastal Commission GIS/Mapping Unit 2014, City of Monterey 2015, Google Earth 2015, USFWS 2015

Figure 3 USFWS Critical Habitat Areas

City of Monterey Local Coastal Program Update: Existing Conditions and Issues Report



(1) Shoreline at Cannery Row showing piers under Monterey Bay Aquarium



3 Monterey Harbor depicting important sea lion and harbor seal haul-out and rocky shore nesting habitat along jetty



2 San Carlos Beach Park showing representative beach and rocky shore habitat along Cannery Row



(4) Monterey Harbor showing nearshore harbor seal haul-out, gull roost, rocky shoreline, and Fisherman's Wharf in the background

Photos: EMC Planning Group November 2015

Figure 4 Site Photographs A



City of Monterey Local Coastal Program Update: Existing Conditions and Issues Report



(5) Fisherman's Shoreline Park showing the bike path and the Presidio of Monterey



(7) Del Monte Beach showing representative dune restoration and beach habitat



(6) Monterey State Beach dune restoration area



(8) Dune restoration and eroded beach at Monterey Municipal Beach

Photos: EMC Planning Group November 2015

Figure 5 Site Photographs B



City of Monterey Local Coastal Program Update: Existing Conditions and Issues Report


(9) Overview of habitat within the Naval Postgraduate School



(10) Grove of eucalyptus trees along Monterey Bay Coastal Trail in the Naval Postgraduate School



 $\underbrace{(11)}_{\text{Roberts Lake}}$  Freshwater marsh and lake habitat with willow riparian area at Laguna Grande and Roberts Lake



(12) Monterey pine forest habitat with coast live oaks

Photos: EMC Planning Group November and December 2015

Figure 6 Site Photographs C



City of Monterey Local Coastal Program Update: Existing Conditions and Issues Report

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### 3.2 MONTEREY PINE FOREST

This plant community includes both mixed Monterey pine forest and Monterey pine forest habitats, which in the study area is best represented at the Huckleberry Hill Nature Preserve on the Presidio of Monterey. It is dominated by a tall canopy of Monterey pine (*Pinus radiata*), a CNPS Rare Plant Rank 1B species. In many areas there is also a significant lower canopy dominated by coast live oak (*Quercus agrifolia*). The understory varies greatly in density and composition in different areas; however, common understory native vegetation includes California huckleberry (*Vaccinium ovatum*), California coffee berry (*Frangula californica*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), and California blackberry (*Rubus ursinus*). Non-native invasive French broom (*Genista monspessulana*) is also present, concentrated in disturbed areas such as along roads and trails.

Monterey pine forest is the primary habitat type in the Skyline LUP subarea, located along the ridge that follows Highway 68 near the junction of State Route 1, and covers a portion of the Presidio of Monterey.

Monterey pine forest provides habitat for a number of wildlife species including black-tailed deer (*Odocoileus hemionus columbianus*), western gray squirrel (*Sciurus griseus nigripes*), Merriam's chipmunk (*Tamias merriami*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*) Stellar's jay (*Cyanocitta stelleri*), Cooper's hawk (*Accipiter cooperii*), pygmy nuthatch (*Sitta pygmaea*), red-breasted nuthatch (*Sitta canadensis*), western wood pewee (*Contopus sordidulus*), chestnut-backed chickadee (*Poecile rufescens*), brown creeper (*Certhia americana*), golden-crowned kinglet (*Regulus satrapa*), Monterey salamander (*Ensatina e. eschscholtzii*), Pacific chorus frog (*Pseudacris [Hyla] regilla*), and Monterey ring-necked snake (*Diadophis punctatus vandenburghi*). In ecotones where Monterey pine forest overlaps with oak woodlands, additional species occur such as western scrub jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorus*), oak titmouse (*Baeolophus inornatus*), and arboreal salamander (*Aneides lugubris*).

### 3.3 OAK WOODLAND

This plant community is dominated by coast live oak. In the study area, it is typically found in remnant patches with no understory or with a non-native/ornamental understory, such as the grassy coastal portion of the Presidio of Monterey. It is quite common in association with the Monterey pine forest habitat discussed above. Along the Monterey Bay Coastal Trail, it is also found as a lower canopy in the ornamental landscaping discussed below. Where present in the study area, its natural understory varies greatly in density and composition; however, common understory vegetation includes western poison oak, toyon (*Heteromeles arbutifolia*), coyote brush (*Baccharis pilularis*), diverse assemblages of native herbaceous species, and dense stands of non-native grasses.

In the study area, this habitat is interspersed with Monterey pine forest habitat in the Skyline LUP subarea, forms a woodland plant community on the Presidio of Monterey near the Huckleberry Hill Nature Preserve, is found along the southern boundary of the Laguna Grande LUP subarea, and occurs in patches on the Naval Postgraduate School property.

Oak woodland provides important habitat for a wide variety of wildlife. Acorns are an important food source for black-tailed deer, western gray squirrel, California ground squirrel *(Otospermophilus beecheyi),* California quail *(Callipepla californica),* western scrub jay, and acorn woodpecker. Oak trees provide cavities that are important for nesting birds, bats, and amphibians such as violet-green swallow (*Tachycineta thalassina*), house wren (*Troglodytes aedon*), brown creeper (*Certhia americana*), white-breasted nuthatch (*Sitta carolinensis*), pygmy nuthatch (*Sitta pygmaea*), oak titmouse (*Baeolophus inornatus*), California myotis (*Myotis californicus),* arboreal salamander, and pacific chorus frog (*Pseudacris regilla*). Large woody debris and fallen logs are an important element of oak woodlands because they provide moist shelter for amphibians, reptiles, and small mammals.

### 3.4 **RIPARIAN AND WETLAND HABITATS**

Riparian habitat is comprised of a willow riparian forest plant community, found only in small scattered patches within the study area. It is generally dominated by arroyo willow (*Salix lasiolepis*), and its often dense understory typically includes western poison oak, California blackberry, and California wild grape (*Vitis californica*). Non-native and often invasive species that thrive in these riparian areas include French broom, Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), German ivy (*Delairea odorata*), greater periwinkle (*Vinca major*), and garden nasturtium (*Tropaeolum majus*). Wetland habitat is comprised of freshwater marsh vegetation patches positioned along the edges of ponded water; this habitat is typically dominated by California bulrush (*Schoenoplectus californicus*) and commonly also contains native cattails (*Typha* spp.).

Willow riparian forest and freshwater marsh patches are located along the Laguna Grande and Roberts Lake. A small patch of disturbed willow riparian vegetation borders the Presidio of Monterey.

Willow riparian habitat provides important habitat to more than 225 species of wildlife and comprises less than 0.5 percent of the land area in California (RHJV 2004). Song sparrow (*Melospiza melodia*), Swainson's thrush (*Catharus ustulatus*), tree swallow (*Tachycineta bicolor*), warbling vireo (*Vireo gilvus*), Wilson's warbler (*Wilsonia pusilla*), yellow-breasted chat (*Icteria virens*), spotted towhee (*Pipilo maculatus*), Anna's hummingbird (*Calypte anna*), common yellowthroat (*Geothlypis trichas*), and downy woodpecker (*Picoides pubescens*) are all associated

with riparian habitat. In addition, Monterey ring-necked snake (*Diadophis punctatus vandenburghi*), coast gartersnake (*Thamnophis elegans terrestris*), California newt (*Taricha torosa*), and a large number of mammals including bats such as western red bat (*Lasiurus blossevillii*) and little brown myotis (*Myotis lucifugus*) are associated with riparian habitat. Riparian and marsh areas provide important stopover habitat for migrating birds and bats, and movement corridors/breeding sites for mammals, amphibians, reptiles, and birds.

### **3.5 ORNAMENTAL LANDSCAPING**

In the study area, this plant community is found in public parks and on private military installations such as Laguna Grande Regional Park, the Naval Postgraduate School, the Presidio of Monterey, San Carlos Beach Park, Fisherman's Shoreline Park, Monterey Municipal Beach, and along the Monterey Bay Coastal Trail. The built environment including Cannery Row, residential and commercial zones in Monterey near Casa Verde Way, Del Monte Beach townhomes, Portola Plaza, and the Laguna Grande neighborhood also include ornamental landscaping. It is composed of a multitude of non-native ornamental shrubs and trees, along with planted turf grass fields and lawns. The predominant plant species in the study area is gum tree (*Eucalyptus* sp.), especially along the Monterey Bay Coastal Trail. Gum trees provide important overwintering sites for the Monarch butterfly (*Danaus plexippus*), a species of local concern; special-status species are addressed in Section 4.1.

Ornamental landscaping provides food, water, shelter, cover, and nesting and denning sites to wildlife species that are tolerant to the presence of humans. Urban environments can provide important sources of food and water during droughts, and during seasons when food is scarce in native habitats. The following species are likely to occur or were observed in the study area in ornamental landscaping areas: raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), California vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), western fence lizard (*Sceloporus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), black phoebe (*Sayornis nigricans*), house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), western scrub jay, northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), bushtit (*Psaltriparus minimus*), barn owl (*Tyto alba*), common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), western gull (*Larus occidentalis*), barn swallow (*Hirundo rustica*), Townsend's warbler (*Setophaga townsendi*), yellow-rumped warbler (*Setophaga coronata*), and white-throated swift (*Aeronautes saxatalis*).

### 3.6 URBAN/NON-VEGETATED AREAS

Urban/non-vegetated areas in the study area include commercial, industrial, military, and residential areas with buildings and paved surfaces including Cannery Row, residential and commercial zones in Monterey, and along the coastline: the Laguna Grande neighborhood, the Naval Postgraduate School, the Presidio of Monterey, the Monterey Bay Coastal Trail, Fisherman's Wharf, the Coast Guard jetty, and Monterey Harbor. In the Skyline area, urban/non-vegetated areas include the Community Hospital of the Monterey Peninsula, additional medical facilities, and limited residential and recreational development.

These developed areas can provide important habitat for wildlife including marine mammals and birds. There are large nesting colonies of pelagic cormorant (*Phalacrocorax pelagicus*) and pigeon guillemot (*Cepphus columba*) under the buildings along Cannery Row where the piers form caves. The Coast Guard jetty provides nesting habitat for a large colony of Brandt's cormorant (*Phalacrocorax penicillatus*), and haul-out habitat for California sea lion (*Zalophus californianus*) and harbor seal (*Phoca vitulina*). Perching sites for a number of seabirds are found along Cannery Row and the Monterey Harbor. Birds such as black phoebe, house sparrow, house finch, European starling, barn owl, peregrine falcon (*Falco peregrinus*), western gull (*Larus occidentalis*), barn swallow, and white-throated swift all nest on or in man-made structures.

### 3.7 SHORELINE AND MARINE HABITATS

The Monterey Bay shoreline within the study area has a number of near-shore habitats including fine to medium-grained sand beaches, coarse-grained sand beaches, mixed sand and gravel beaches located between Del Monte Beach and Monterey Municipal Beach. It also contains exposed rocky shores, exposed solid man-made structures, exposed wave-cut platforms in bedrock, sheltered riprap, sheltered rocky shores, and intertidal pools from Fisherman's Wharf to the end of Cannery Row. The beaches and rocky shoreline provide important foraging areas for migratory shorebirds, waterbirds, and landbirds such as whimbrel (*Numenius phaeopus*), willet (*Tringa semipalmata*), least sandpiper (*Calidris minutilla*), western sandpiper (*Calidris mauri*), sanderling (*Calidris alba*), black turnstone (*Arenaria melanocephala*), wandering tattler (*Tringa incana*), red-breasted merganser (*Mergus serrator*), common loon (*Gavia immer*), and turkey vulture (*Cathartes aura*). In addition, the developed near-shore environment provides habitat for wildlife species that are able to use man-made structures as described above in Section 3.6 (Developed Areas).

The near-shore marine environment includes kelp beds along the entire coastline, and an intertidal zone along Cannery Row and the Monterey Harbor. The Cannery Row and Monterey Harbor LUPs in Section 2.2 provide detailed information about the near-shore marine

environment. The kelp beds and intertidal zone support a large diversity of species groups including starfish, abalones, limpets, barnacles, sea urchins, sand dollars, squids, octopi, anemones, crab, snails, barnacles, mussels, and fish such as rockfish, surfperch, blacksmith, senorita, and surfperch.

Notably, the offshore marine environment is part of the Monterey Bay National Marine Sanctuary, a world-renowned area for its abundant and diverse marine life. Monterey Bay supports a great diversity of marine mammals during a portion of their life cycles including killer whale (Orcinus orca), humpback whale (Megaptera novaeangliae), blue whale (Balaenoptera musculus), fin whale (Balaenoptera physalus), minke whale (Balaenoptera acutorostrata), pacific white-sided dolphin (Lagenorhynchus obliquidens), Risso's dolphin (Grampus griseus), harbor seal, and California sea lion amongst many other species, some of which are noted in the Section 4.1 special-status species discussion below. Monterey Bay is also an important wintering and migratory stopover area for seabirds and waterbirds including surf scoter (Melanitta perspicillata), sooty shearwater (Puffinus griseus), Forster's tern (Sterna forsteri), horned grebe (Podiceps auritus), western grebe (Aechmophorus occidentalis), Pacific loon (Gavia pacifica), Rhinoceros auklet (Cerorhinca monocerata), common murre (Uria aalge), brown pelican (Pelecanus occidentalis), and black-footed albatross (Phoebastria nigripes).

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## 4.0 SENSITIVE ISSUES CONSIDERED

### 4.1 SPECIAL-STATUS SPECIES

The study area was evaluated for the potential presence of a variety of special-status species. Occurrence data from the U.S. Fish and Wildlife Service (USFWS) *Endangered Species Program* Monterey County-wide list (USFWS 2015), the California Department of Fish and Wildlife (CDFW) *California Natural Diversity Database* (CDFW 2015), and the California Native Plant Society (CNPS) *Rare and Endangered Plant Inventory* (CNPS 2015) were reviewed to determine the potential for special-status species to occur. For the CDFW and CNPS databases, records were reviewed for the Monterey and Seaside U.S. Geological Survey (USGS) quadrangle maps (on which the study area is located), and for the surrounding USGS quadrangle maps (Marina, Spreckels, Salinas, Soberanes Point, Mount Carmel, and Carmel Valley). In addition, local scientists were contacted for information regarding important habitat areas for marine mammals, and for nesting distribution data for various birds.

Special-status species in this report are those listed as Endangered, Threatened, or Rare, or as Candidates for listing by the USFWS and/or CDFW; or as Rare Plant Rank 1B or 2B species by the CNPS. The special-status designation also includes CDFW Species of Special Concern and Fully Protected species. Special-status species are generally rare, restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring. Maps showing potential occurrence areas for special-status species are not currently available for inclusion in this report.

### **Special-Status Plant Species**

For special-status plant species known to occur in the vicinity, Table 1, Special-Status Plants Potentially Occurring in the Study Area Vicinity, presents the listing status, suitable habitat requirements, and potential to occur in the study area. Note that USFWS-designated critical habitat for federally listed Threatened Monterey spineflower (*Chorizanthe pungens* var. *pungens*) is present in and immediately east of the Del Monte Beach LUP portion of the study area. Also, critical habitat for federally listed Endangered Yadon's rein orchid (*Piperia yadonii*) is present immediately west of the Skyline LUP portion of the study area. These critical habitat areas are shown on Figure 3.

### Special-Status Wildlife Species

For special-status wildlife species known to occur in the vicinity, Table 2, Special-Status Wildlife Potentially Occurring in the Study Area Vicinity, presents the listing status, suitable habitat requirements, and potential to occur in the study area. Note that USFWS-designated critical habitat for federally listed Threatened western snowy plover (*Charadrius alexandrinus nivosus*) is present in and immediately east of the Del Monte Beach LUP portion of the study area. This critical habitat area is shown on Figure 3.

### 4.2 SENSITIVE HABITATS

### **Environmentally Sensitive Habitat Areas (ESHAs)**

California Coastal Act Section 30107.5 defines an ESHA as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activities and developments.

For ESHAs, Section 30240 further states that (a) environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas; and (b) development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Plant communities and wildlife habitats located within the study area that support the specialstatus species identified in Tables 1 and 2, USFWS-designated critical habitat areas shown in Figure 3, and possibly additional sensitive habitats described below have potential to be considered ESHAs according to the California Coastal Act definition.

Table 1	Special-Status Plants Potentially Occurring in the Study Area Vicinity
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Species	Status (Federal/ State/CNPS)	Habitat Description	Potential to Occur in the Study Area
Alkali milk-vetch (Astragalus tener var. tener)	//1B.2	Alkaline sites in playas, valley and foothill grassland (on adobe clay), and vernal pools; elevation 1-60 meters (m).	Not expected to occur in the study area; no suitable habitat present.
Angel's hair lichen (Ramalina thrausta)	//2B.1	North coast coniferous forest, on dead twigs and other lichens; elevation 75-430m.	May occur in the study area; suitable habitat present.
Beach layia (Layia carnosa)	FE/SE/1B.1	Coastal dunes, on sparsely vegetated semi- stabilized dunes, usually behind foredunes; elevation 0-75m.	May occur in the study area; suitable habitat present.
California screw moss (Tortula californica)	//1B.2	Chenopod scrub, and valley and foothill grassland. Grows on sandy soil; elevation 10-1,460m.	Not expected to occur in the study area; no suitable habitat present.
Carmel Valley bush- mallow (Malacothamnus palmeri var. involucratus)	//1B.2	Chaparral, cismontane woodland, and coastal scrub; elevation 30-1,100m.	Not expected to occur in the study area; no suitable habitat present.
Carmel Valley malacothrix (Malacothrix saxatilis var. arachnoidea)	//1B.2	Rocky sites in chaparral; elevation 25-335m.	Not expected to occur in the study area; no suitable habitat present.

Species	Status (Federal/ State/CNPS)	Habitat Description	Potential to Occur in the Study Area
Choris' popcornflower (Plagiobothrys chorisianus var. chorisianus)	//1B.2	Mesic sites in chaparral, coastal scrub, and coastal prairie; elevation 15-100m.	Not expected to occur in the study area; no suitable habitat present.
Coastal dunes milk-vetch (Astragalus tener var. titi)	FE/SE/1B.1	Coastal bluff scrub and coastal dunes. Prefers moist sandy depressions of bluffs or dunes along and near the ocean; elevation 1-50m.	May occur in the study area; suitable habitat present.
Congdon's tarplant (Centromadia parryi ssp. congdonii)	//1B.1	Alkaline sites in valley and foothill grassland; elevation 1-230m. Also known to occur on various substrates, and in disturbed and ruderal (weedy) areas.	May occur in the study area; suitable habitat present.
Contra Costa goldfields (Lasthenia conjugens)	FE//1B.1	Wet areas in cismontane woodland, playas (alkaline sites), valley and foothill grassland, and vernal pools; elevation 0-470m.	Not expected to occur in the study area; no suitable habitat present.
Eastwood's goldenbush (Ericameria fasciculata)	//1B.1	Closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub/sand.	May occur in the study area; suitable habitat present.
Fragrant fritillary (Fritillaria liliacea)	//1B.2	Coastal scrub, valley and foothill grassland, and coastal prairie. Often on serpentine substrates; various soils reported though usually clay in grassland; elevation 3-410m.	Not expected to occur in the study area; no suitable habitat present.

Species	Status (Federal/	Habitat Description	Potential to Occur in the Study Area
	State/CNPS)		
Gowen cypress (Hesperocyparis goveniana)	FT//1B.2	Closed-cone coniferous forest. Narrowly endemic to Monterey County. Coastal terraces, usually in sandy soils, sometimes with Monterey pine or Bishop pine; elevation 100-125m.	May occur in the study area; suitable habitat present.
Hickman's cinquefoil (Potentilla hickmanii)	FE/SE/1B.1	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps, and small streams in open or forested areas along the coast; elevation 5-125m.	May occur in the study area; suitable habitat present.
Hickman's onion (Allium hickmanii)	//1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland, and coastal prairie; prefers sandy loam, damp ground, and vernal swales; elevation 20-200m.	May occur in the study area; suitable habitat present.
Hooked popcornflower (Plagiobothrys uncinatus)	//1B.2	Chaparral (sandy sites), cismontane woodland, and valley and foothill grassland; elevation 300- 730m.	Not expected to occur in the study area; no suitable habitat present.
Hooker's manzanita (Arctostaphylos hookeri ssp. hookeri)	//1B.2	Sandy soils in coastal scrub, chaparral, and closed- cone forest habitats; evergreen shrub; elevation 45- 215m.	May occur in the study area; suitable habitat present.
Hospital Canyon larkspur (Delphinium californicum ssp. interius)	//1B.2	Cismontane woodland and chaparral, in wet, boggy meadows, openings in chaparral, and in canyons; elevation 225-1,060m.	Not expected to occur in the study area; no suitable habitat present.

Species	Status (Federal/	Habitat Description	Potential to Occur in the Study Area
That also a set a la elegano	State/CNPS)	Dreadlourd unland forest sharemal sector	Not expected to econy in the study
(Delphinium hutchinsoniae)	//1B.2	prairie, and coastal scrub; elevation 0-400m.	area; no suitable habitat present.
Jolon clarkia (Clarkia jolonensis)	//1B.2	Cismontane woodland, chaparral, and coastal scrub; elevation 20-660m.	Not expected to occur in the study area; no suitable habitat present.
Kellogg's horkelia (Horkelia cuneata var. sericea)	//1B.1	Closed-cone coniferous forest, maritime chaparral, and coastal scrub; prefers sandy or gravelly openings; elevation 10-200m.	May occur in the study area; suitable habitat present.
Legenere (Legenere limosa)	//1B.1	In beds of vernal pools; elevation 1-880m.	Not expected to occur in the study area; no suitable habitat present.
Little Sur manzanita (Arctostaphylos edmundsii)	//1B.2	Coastal bluff scrub and chaparral; elevation 30- 105m.	Not expected to occur in the study area; no suitable habitat present.
Marsh microseris (Microseris paludosa)	//1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland; elevation 5-300m.	May occur in the study area; suitable habitat present.
Menzies' wallflower (Erysimum menziesii)	FE/SE/1B.1	Coastal dunes. Known only from Mendocino and Monterey Counties, localized on dunes and coastal strand; elevation 0-35m.	May occur in the study area; suitable habitat present.

Species	Status (Federal/ State/CNPS)	Habitat Description	Potential to Occur in the Study Area
Monterey clover (Trifolium trichocalyx)	FE/SE/1B.1	Closed-cone coniferous forest, endemic to Monterey County. Prefers poorly drained, low nutrient soil underlain with hardpan soils; also occurs in openings and burned areas; elevation 120-205m.	May occur in the study area; suitable habitat present.
Monterey cypress (Hesperocyparis macrocarpa)	//1B.2	Closed-cone coniferous forest. Narrowly endemic to Monterey County, on granitic soils; elevation 10-30m.	Planted individuals observed in the study area; suitable habitat present. Native range of species confined to two relict populations, at Cypress Point and Point Lobos.
Monterey gilia (Gilia tenuiflora ssp. arenaria)	FE/ST/1B.2	Maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub; prefers sandy openings; elevation 0-45m.	May occur in the study area; suitable habitat present.
Monterey pine (Pinus radiata)	//1B.1	Closed-cone coniferous forest and cismontane woodland; elevation 25-185m.	Observed in the study area; suitable habitat present. Dominant in pine forest habitats.
Monterey spineflower (Chorizanthe pungens var. pungens)	FT//1B.2	Sandy openings in maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland; elevation 3-450m.	May occur in the study area; suitable habitat present. Study area contains USFWS-designated critical habitat for this species.

Species	Status (Federal/ State/CNPS)	Habitat Description	Potential to Occur in the Study Area
Northern curly-leaved monardella <i>(Monardella sinuata</i> ssp. n <i>igrescens)</i>	//1B.2	Coastal dunes, coastal scrub, chaparral, and lower montane coniferous forest. Prefers sandy soils; elevation 0-300m.	May occur in the study area; suitable habitat present.
Pacific Grove clover (Trifolium polyodon)	/SR/1B.1	Mesic sites in closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland; elevation 5-120m.	May occur in the study area; suitable habitat present.
Pajaro manzanita (Arctostaphylos pajaroensis)	//1B.1	Sandy soils in chaparral habitat; evergreen shrub; elevation 30-760m.	Not expected to occur in the study area; no suitable habitat present.
Pine rose (Rosa pinetorum)	//1B.2	Closed-cone coniferous forest; elevation 2-300m.	May occur in the study area; suitable habitat present.
Pink Johnny-nip (Castilleja ambigua var. Insalutata)	//1B.1	Coastal bluff scrub and coastal prairie; elevation 0- 100m.	May occur in the study area; suitable habitat present.
Pinnacles buckwheat (Eriogonum nortonii)	//1B.3	Sandy sites in chaparral, and valley and foothill grassland; often on recent burns; elevation 300-975m.	Not expected to occur in the study area; no suitable habitat present.
Robust spineflower (Chorizanthe robusta var. robusta)	FE//1B.1	Sandy or gravelly openings in cismontane woodland, coastal dunes, and coastal scrub; prefers sandy terraces and bluffs or loose sand; elevation 3-300m.	May occur in the study area; suitable habitat present.

Species	Status (Federal/ State/CNPS)	Habitat Description	Potential to Occur in the Study Area
Saline clover (Trifolium hydrophilum)	//1B.2	Marshes and swamps, valley and foothill grassland, and vernal pools. Prefers wet, alkaline sites; elevation 0-300m.	May occur in the study area; suitable habitat present. However, occurrence in vicinity is based on a 1907 historical record.
San Francisco collinsia (Collinsia multicolor)	//1B.2	Serpentine sites in closed-cone coniferous forest and coastal scrub. Prefers decomposed shale (mudstone) mixed with humus; elevation 30- 250m.	May occur in the study area; suitable habitat present. However, occurrence in vicinity is based on a 1903 historical record.
Sand-loving wallflower (Erysimum ammophilum)	//1B.2	Maritime chaparral, coastal dunes, and coastal scrub. Prefers sandy openings; elevation 0–60m.	May occur in the study area; suitable habitat present.
Sandmat manzanita (Arctostaphylos pumila)	//1B.2	Closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub; prefers sandy openings; elevation 30-730m.	May occur in the study area; suitable habitat present.
Santa Cruz clover (Trifolium buckwestiorum)	//1B.1	Broadleaved upland forest, cismontane woodland, and coastal prairie; prefers moist grassland and gravelly margins; elevation 105-610m.	May occur in the study area; marginally suitable habitat present.

Species	Status (Federal/	Habitat Description	Potential to Occur in the Study Area
Santa Cruz microseris (Stebbinsoseris decipiens)	//1B.2	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland. Prefers open areas, sometimes serpentine substrates; elevation 10- 500m.	May occur in the study area; marginally suitable habitat present.
Santa Lucia bedstraw (Galium clementis)	//1B.3	Lower montane coniferous forest and upper montane coniferous forest. Forms soft mats in shady rocky patches, on granite or serpentine substrates, mostly on exposed peaks; elevation 1,130-1,780m.	Not expected to occur in the study area; no suitable habitat present.
Santa Lucia bush-mallow (Malacothamnus palmeri var. palmeri)	//1B.2	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea; elevation 60-365m.	Not expected to occur in the study area; no suitable habitat present.
Seaside bird's-beak (Cordylanthus rigidus ssp. littoralis)	/SE/1B.1	Closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub. Prefers sandy often disturbed sites; elevation 0-215m.	May occur in the study area; suitable habitat present.
Tidestrom's lupine (Lupinus tidestromii)	FE/SE/1B.1	Partially stabilized dunes, immediately near the ocean; elevation 0-3m.	May occur in the study area; suitable habitat present.
Toro manzanita (Arctostaphylos montereyensis)	//1B.2	Sandy sites in maritime chaparral, cismontane woodland, and coastal scrub; elevation 30-730m.	Not expected to occur in the study area; no suitable habitat present.

Species	Status (Federal/	Habitat Description	Potential to Occur in the Study Area
	State/CNPS)		
Twisted horsehair lichen	//1B.1	North coast coniferous forest. Usually on conifers.	May occur in the study area; suitable
(Bryoria spiralifera)		0-30 m.	habitat present.
Umbrella larkspur	//1B.3	Cismontane woodland. Prefers mesic sites;	Not expected to occur in the study
(Delphinium umbraculorum)		elevation 400-1,600m.	area; no suitable habitat present.
Vernal pool bent grass	//1B.1	Vernal pools (mima mounds); elevation 115-145m.	Not expected to occur in the study
(Agrostis lacuna-vernalis)			area; no suitable habitat present.
Woodland woollythreads	//1B.2	Serpentine, open sites in broadleaved upland	May occur in the study area; suitable
(Monolopia gracilens)		forest, chaparral, cismontane woodland, North	habitat present. However, occurrence
		Coast coniferous forest, and valley and foothill	in vicinity is based on an 1897
		grassland; elevation 100-1,200m.	historical record.
Yadon's rein orchid	FE//1B.1	Sandy sites in coastal bluff scrub, closed-cone	May occur in the study area; suitable
(Piperia yadonii)		coniferous forest, and maritime chaparral;	habitat present. Study area is adjacent
		elevation 10-510m.	to USFWS-designated critical habitat
			for this species.

Notes:

Listing Status Codes:

Federal (USFWS)

FE - Listed as Endangered under the Federal Endangered Species Act.

FT - Listed as Threatened under the Federal Endangered Species Act.

#### State (CDFW)

SE - Listed as Endangered under the California Endangered Species Act.

ST - Listed as Threatened under the California Endangered Species Act.

#### 4.0 SENSITIVE ISSUES CONSIDERED

SR - Listed as Rare under the California Endangered Species Act.

#### **CNPS** Rare Plant Ranks and Threat Code Extensions

1B: Plants that are considered Rare, Threatened, or Endangered in California and elsewhere.

- 2B: Plants that are considered Rare, Threatened, or Endangered in California, but more common elsewhere.
- .1: Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat).
- .2: Fairly endangered in California (20-80% occurrences threatened).
- .3: Not very endangered in California (<20% of occurrences threatened or no current threats known).

Source: CDFW 2015, CNPS 2015, USFWS 2015

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
American badger (Taxidea taxus)	/SSC	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats. Need sufficient food and open, uncultivated ground with friable soils to dig burrows. Prey on burrowing rodents.	Suitable habitat present in the Naval Postgraduate School, but habitat patch is small and isolated from known occupied habitat at the former Fort Ord. Low potential to occur.
Ashy storm-petrel (Oceanodroma homochroa)	/SSC	Colonial nester on off-shore islands. Usually nests on driest part of islands. Forages over open ocean. Nests on islands in crevices beneath loosely piled rocks or driftwood, or in caves.	Suitable foraging/roosting habitat present in the study area. High potential to occur. Large numbers congregate in Monterey Bay during the fall. No suitable nesting habitat present in the study area.
Bank swallow <i>(Riparia riparia)</i>	/ST	Colonial nester in lowland riverbank habitats and coastal bluffs. Require an earthen bank that is more or less vertical and composed of sandy silty-loamy soil suitable for excavation of nesting burrows.	Marginally suitable nesting habitat and suitable foraging habitat present in the study area. Low potential to occur. Nesting colony known from coastal beach cliffs north of study area.
Black legless lizard (Anniella pulchra nigra)	/SSC	Moist, warm habitats with loose soil for burrowing and prostrate plant cover in beaches, chaparral, pine-oak woodland, or riparian areas.	Suitable habitat present in the study area. High potential to occur. Occurrence details within the study area are suppressed by CDFW, but species is known to occur in Navy Postgraduate School lands.

### Table 2 Special-Status Wildlife Potentially Occurring in the Study Area Vicinity

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
Black oystercatcher (Haematopus bachmani)	/ (local concern)	Occurs along rocky shorelines and prefers areas with small offshore islands and few predators. Nests along high tide line in gravel, a grassy area, or a depression in rock in areas with adjacent mussel beds for feeding.	Nesting location at Hopkins Marine Lab immediately east of study area at end of Cannery Row; not known to nest along rocky shore at Cannery Row or in harbor, but forages in study area. High potential to occur.
Black swift (Cypseloides niger)	/SSC	Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons and sea bluffs above surf; forages widely.	No suitable nesting habitat present in the study area. Could use area for foraging and flyover habitat, but not expected to nest in study area. Closest record of occurrence is at Point Lobos.
Burrowing owl ( <i>Athene cunicularia</i> )	/SSC	Open, dry, annual or perennial grasslands, desert, or scrubland, with available small mammal burrows.	Suitable habitat present at Navy Postgraduate School and Del Monte Beach. Recorded overwintering within dune restoration area at Navy Postgraduate School in 1990. High potential to occur.
California brown pelican (Pelecanus occidentalis californicus)	/SFP	Colonial nester on coastal islands just outside the surf line; nests on coastal islands of small to moderate size which afford protection from attack by ground-dwelling predators.	Suitable foraging habitat present in the study area. Observed in study area foraging offshore, perched on wharfs, at shoreline, and on buildings. High potential to occur, but suitable nesting habitat not present in study area.

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
California condor (Gymnogyps californianus)	FE/SE&SFP	Requires vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Suitable foraging habitat present in study area; suitable nesting habitat not present. Individuals from local population in Big Sur known to fly north as far as Año Nuevo, but not yet observed in the City of Monterey. Low potential to occur.
California least tern (Sterna antillarum browni)	FE/SE&SFP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates (sand beaches, alkali flats, landfills, or paved areas).	Marginal nesting habitat present in study area due to human disturbance. Suitable foraging habitat also present. Low potential to occur.
California red-legged frog (Rana draytonii)	FT/SSC	Rivers, creeks, and stock ponds with pools and overhanging vegetation. Requires dense, shrubby or emergent riparian vegetation, and prefers short riffles and pools with slow-moving, well-oxygenated water. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter.	Suitable breeding habitat at Roberts Lake in and adjacent to study area, and in Laguna Del Rey, Del Monte Lake, and Lake El Estero on margins of study area. However, previous surveys have not detected species, likely due to presence of introduced fish (Anderson 2014). Not expected to occur.

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
California sea lion (Zalophus californianus)	/ (local concern)	Breeds mainly on offshore islands from southern California Channel Islands south to Mexico, but pupping has been observed at Año Nuevo, the Farallon Islands, and in Monterey Bay. Highly social species that rests in groups at haul-out sites on land, and floats in groups on surface of ocean.	Important haul-out site at Coast Guard jetty in study area; pupping has been observed here recently due to range shifts caused by El Niño events. Haul- out sites tracked by NOAA. Appendix A provides Environmental Sensitivity Index Map showing important haul-out locations.
California tiger salamander <i>(Ambystoma californiense)</i>	FT/ST	Grasslands and oak woodlands near seasonal pools and stock ponds in central and coastal California. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter. Requires seasonal wetlands for breeding.	No suitable habitat present in study area. Not expected to occur.
Coast horned lizard (Phrynosoma blainvillii)	/SSC	Arid grassland and scrubland habitats; prefers lowlands along sandy washes with scattered low bushes. Requires open areas for sunning, bushes for cover, patches of loose soil for burrowing, and abundant supply of ants and other insects for feeding.	Suitable habitat present in study area. Occurrences documented in former Fort Ord east of study area. High potential to occur.
Heerman's gull ( <i>Larus heermanni</i> )	/ (local concern)	Nests on islands located in lakes. Only known nesting location in the U.S. is near Roberts Lake.	Known to nest on outskirts of study area. Forages and roosts throughout study area. High potential to occur.

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
Least Bell's vireo		Summer resident of southern and central	Suitable habitat at Roberts Lake and
	FE/SE	California in riparian habitats below 2,000	Laguna Grande subarea, but not
(Vireo bellii nusillus)		feet in elevation. Often nests in large	expected to occur because study area is
()		shrubs, along margins of bushes. or on	outside of the current breeding range of
		twigs projecting into pathways.	this species.
		Feeds near the shore; nests inland along	No suitable nesting habitat (old-growth
Marbled murrelet	FT/SE	coast from Eureka to Oregon border and	forest) present in study area; not
		from Half Moon Bay to Santa Cruz. Nests	expected to nest in study area. Suitable
(Brachyramphus		in old-growth redwood-dominated forests,	marine foraging habitat present in study
marmoratus)		up to six miles inland, often in Douglas fir	area.
		trees.	
Monarch butterfly	/	Winter roost sites include wind-protected	Suitable habitat present in the study
(Danaus plexippus)	(local concern)	tree groves (typically eucalyptus, Monterey	area. Overwintering population present
	`````	pine, and cypress) with nectar and water	at Naval Postgraduate School in large
		sources nearby.	grove of eucalyptus trees along bike
			path. Known to occur in study area.
Monterey dusky-footed	/SSC	Forest habitats of moderate canopy and	Suitable habitat on Naval Postgraduate
woodrat		moderate to dense understory. Also in chaparral	School property and the Skyline LUP.
(Neotoma fuscipes luciana)		habitats. Nests constructed of grass, leaves,	High potential to occur.
		sticks, feathers, etc. Population may be limited	
		by availability of nest materials.	

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
Pacific harbor seal ( <i>Phoca vitulina richardii</i> )	/ (local concern)	Common widespread species found north of the equator in both the Atlantic and Pacific Oceans. In the northeast Pacific, they range from Alaska to Baja California, Mexico. Prefers near-shore coastal waters where it uses rocky islands, sandy beaches, mudflats, bays, and estuaries. Social species that breeds in colonies.	Important pupping beach is located immediately adjacent to the study area at Hopkins Marine Lab. Observed foraging and hauling out within study area. Pupping areas not known from study area.
Pelagic cormorant (Phalacrocorax pelagicus)	/ (local concern)	Occurs in coastal waters. Breeding and roost sites include rocky habitat along outer coast, bays, inlets, estuaries, rapids, coves, surge narrows, harbors, lagoons, and coastal log- storage sites.	Known to nest in study area under buildings at Cannery Row. Forages in Monterey Bay. High potential to occur.
Pigeon guillemot (Cepphus columba)	/ (local concern)	Forages in near-shore waters and nests along rocky coastlines in cavity, crevice, or burrow sites in cliffs or boulder fields.	Known to nest in study area under buildings at Cannery Row. Forages in Monterey Bay. High potential to occur.
Silvery legless lizard (Anniella pulchra pulchra)	/SSC	Sandy or loose loamy soils under sparse vegetation; prefers moist soils.	Suitable habitat present in study area. High potential to occur. Occurrences reported from former Fort Ord east of study area.

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
Smith's blue butterfly (Euphilotes enoptes smithi)	FE/	Coastal dunes and coastal sage scrub plant communities. Host plants include <i>Eriogonum latifolium</i> and <i>Eriogonum</i> <i>parvifolium</i> for larval and adult stages.	Suitable coastal dune habitat present in study area from Del Monte Beach to Monterey Beach. High potential to occur. Known occurrences in the study area located from Naval Postgraduate School to Monterey Beach.
Southern sea otter ( <i>Enhydra lutris nereis)</i>	FT/FP	Inhabits near-shore marine habitats from the littoral zone to depths of less than 100 meters. Prefers rocky shoreline with kelp beds.	Suitable habitat present in the study area. High potential to occur. Records of occurrence in the kelp beds along the shoreline in the study area including in the harbor. Observed in study area during survey.
Southwestern willow flycatcher <i>(Empidonax trailii</i> <i>extimus)</i>	FE/SE	Summer resident of southern and central California. Riparian obligate species restricted to dense stream-side vegetation.	Suitable habitat is present in study area at Roberts Lake, but City of Monterey is outside of the breeding range of this species. Not expected to occur.
Steelhead (south-central California coast Distinct Population Segment) (Oncorhynchus mykiss irideus)	FT/	Coastal streams with clean spawning gravel. Requires cool water and pools. Needs migratory access between natal stream and ocean.	Suitable marine habitat present in study area along coastline. Known to occur in Monterey Bay. No suitable stream habitat or migratory corridors present in study area. High potential to occur offshore, but not expected to occur in study area.

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
Tidewater goby (Eucyclogobius newberryi)	FE/SSC	Brackish water habitats; found in shallow lagoons and lower stream reaches, in still but not stagnant water with high oxygen levels.	No suitable habitat present in study area. Not expected to occur.
Townsend's big-eared bat (Corynorhinus townsendii)	/SC&SSC	Inhabits a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting factor in site occupancy. Extremely sensitive to human disturbance.	Suitable habitat present in study area, but no known occurrences reported. Sensitive to disturbance. Low potential to occur.
Tricolored blackbird (Agelaius tricolor)	/SSC	Areas adjacent to open water with protected nesting substrate, which typically consists of dense, emergent freshwater marsh vegetation.	Suitable habitat present in and adjacent to study area at Roberts Lake. Colony recorded from Locke Padden Pond and Laguna Seca Pond north of study area. Moderate potential to occur.
Two-striped garter snake (Thamnophis hammondii)	/SSC	Coastal California from sea level to about 7,000 feet in elevation. Highly aquatic, found in or near permanent fresh water; often along streams with rocky beds and riparian vegetation.	No suitable habitat present in study area. Not expected to occur.

Species	Status (Federal/ State)	Habitat Description	Potential to Occur in the Study Area
Vernal pool fairy shrimp <i>(Branchinecta lynchi)</i>	FT/	Endemic to the grasslands of the Central Valley, Central Coast Mountains, and South Coast Mountains in rain-filled pools. Inhabits small, clear-water sandstone depression pools and grass swale, earth slump, or basalt-flow depression pools.	No suitable habitat present in study area. Not expected to occur.
Western pond turtle (Emys marmorata)	/SSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites (such as rocks or partially submerged logs) and suitable upland habitat for egg-laying (sandy banks or grassy open fields).	Suitable habitat present in study area at Roberts Lake. Occurrence reported in study area vicinity from City of Marina pond restoration site. Low potential to occur.
Western snowy plover (Charadrius alexandrinus nivosus)	FT/SSC	Sandy beaches, salt pond levees, and shores of large alkali lakes; requires sandy, gravelly, or friable soils for nesting.	Suitable habitat present in the study area. Known to occur. Nest occurrences recorded from the Del Monte Beach area in the study area. Suitable nesting habitat present from the Del Monte Beach section of the study area up to the beach area just south of the Naval Postgraduate School.

Notes:

Listing Status Codes:

Federal (USFWS)

FE – Listed as Endangered under the Federal Endangered Species Act.

 $\mathrm{FT}-\mathrm{Listed}$  as Threatened under the Federal Endangered Species Act.

#### 4.0 SENSITIVE ISSUES CONSIDERED

#### State (CDFW)

- SE Listed as Endangered under the California Endangered Species Act.
- ST Listed as Threatened under the California Endangered Species Act.
- SC Candidate for listing as Endangered or Threatened under the California Endangered Species Act.
- SSC Species of Special Concern.
- SFP Fully Protected species under the California Fish and Game Code.

*Source:* CDFW 2015, USFWS 2015, NOAA 2015

### **NOAA-Designated Environmentally Sensitive Areas**

Data was obtained from the National Oceanic and Atmospheric Administration (NOAA) for Environmentally Sensitive Areas and other important biological resources within the USGS Monterey and Seaside quadrangles that encompass the study area (NOAA 2015). NOAA produces these habitat maps and associated species information to identify vulnerable coastal resources that could be impacted by oil spills. They provide a valuable overview of sensitive biological resources along the California coastline. NOAA-designated Environmentally Sensitive Area information for the study area vicinity is presented in Appendix A.

### Wetlands and Waterways

California Coastal Act Section 30121 defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." In further defining jurisdictional state waters under the Coastal Act, the California Coastal Commission establishes a "one parameter" wetland definition that requires the presence of only a single wetland parameter (i.e., soils, vegetation, and/or hydrology) to meet the jurisdictional wetland criteria. Any alteration of existing wetlands must comply with the regulations of the California Coastal Act, including implementation of mitigation measures as appropriate.

In addition, California Coastal Act Section 30231 states that "the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams."

Though a focused wetland and waterway survey was not conducted for the survey area, biologically important freshwater marsh vegetation is present immediately adjacent to the study area (and to a small degree within the study area) associated with El Estero, Del Monte Lake, Roberts Lake, and Laguna del Rey.

### 4.3 WILDLIFE MOVEMENT

Wildlife movement corridors provide connectivity between habitat areas, enhancing species richness and diversity, and usually also provide cover, water, food, and breeding sites. Wildlife

movement includes migration (i.e., usually movement one way per season), inter-population movement (i.e., long-term dispersal and genetic flow), and small travel pathways (i.e., daily movement within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities, such as foraging or escape from predators, they also provide connection between outlying populations and the main populations, permitting an increase in gene flow among populations.

These habitat linkages can occur on a large scale throughout the greater region. Habitat linkages/corridors facilitate wildlife movement between populations located in discrete locales. Habitat fragmentation due to development and the creation of man-made impassable barriers can impede wildlife movement.

The study area includes important wildlife movement corridors. The rocky shore and beach habitats are important for migrating shorebirds. The near-shore environment is important for migratory fish such as steelhead and salmon. Monterey pine forests provide both stopover habitat for wildlife and connectivity with forests further inland. Central dune scrub habitats provide connectivity for Smith's blue butterfly, legless lizards, and other species that specialize on this habitat niche.

In particular, federally listed Threatened and California Species of Special Concern western snowy plover utilizes the beaches in the study area for nesting and foraging. Western snowy plovers have been documented to have limited movement in areas where the beach is restricted by development near the shoreline, and to only traverse these areas at night (Eyster 2015).

### 4.4 **REGULATED TREES**

The City's tree protection ordinance was adopted in 1991 and amended in 2003; it regulates the trimming and removal of City trees and requires a permit to remove private trees larger than six inches in trunk diameter. The ordinance incorporates the monetary value of trees that are proposed for removal and the type and size of required replacement plantings, and prohibits excessive pruning that would damage trees. There is no tree removal permit fee if the tree is dead, dying, or hazardous. Detailed definitions and regulations are contained in Chapter 37: Preservation of Trees and Shrubs of the City municipal code (City of Monterey 2015).

In addition, the City currently contains 15 trees that are designated as a "Local Landmark Tree", which means they are trees of such unusual size, prominence or health that they are of significant value to the community. The ordinance establishes a process for reviewing and recommending trees that should be protected and preserved because of their outstanding size, prominence, and/or health.

# 5.0 References

- Anderson, Rachel. Report for Monterey Peninsula Regional Park District Amphibian Management and Monitoring at Palo Corona Regional Park, Garland Ranch Regional Park, and Frog Pond Wetland Preserve, Monterey County, CA 2014. Davis, California, 2014. <u>http://www.mprpd.org/wp-</u> <u>content/uploads/2015/08/AmphibiamMgmtMonitoring\_PCRP.2014.pdf</u>
- California Department of Fish and Wildlife (CDFW). *California Natural Diversity Database*. Records of Occurrence for the Monterey, Seaside, Marina, Spreckels, Salinas, Soberanes Point, Mount Carmel, and Carmel Valley USGS quadrangles. Sacramento, California, November 2015. <u>http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp</u>
- California Native Plant Society (CNPS). *Inventory of Rare and Endangered Plants*. Records of Occurrence for the Monterey, Seaside, Marina, Spreckels, Salinas, Soberanes Point, Mount Carmel, and Carmel Valley USGS quadrangles. Sacramento, California, November 2015. <u>http://www.cnps.org/inventory</u>
- City of Monterey. *Cannery Row Land Use Plan*. Monterey, California, February 2004. <u>http://monterey.org/Portals/1/peec/workprogram/LCP/Cannery Row LUP.pdf?ver</u> =2015-06-24-155459-240
- City of Monterey. *Del Monte Beach Local Coastal Program Land Use Plan*. Monterey, California, October 2003a. <u>http://monterey.org/Portals/1/peec/workprogram/LCP/Del\_Monte\_Beach%20LUP.</u> <u>pdf?ver=2015-06-22-162031-627</u>
- City of Monterey. *General Plan*. Monterey, California, November 2010. <u>http://monterey.org/Portals/1/peec/genplan/13\_0806%20General%20Plan.pdf</u>

- City of Monterey. *Monterey Harbor Land Use Plan*. Monterey, California, October 2003b. <u>http://monterey.org/Portals/1/peec/workprogram/LCP/Monterey Harbor LUP.pdf?</u> <u>ver=2015-06-22-162031-727</u>
- City of Monterey. *Municipal Code Chapter 37: Preservation of Trees and Shrubs*. Monterey, California, November 2015. <u>http://www.codepublishing.com/ca/Monterey/?Monterey37.html</u>
- City of Monterey. *Skyline Land Use Plan.* Monterey, California, October 1992. <u>http://monterey.org/Portals/1/peec/workprogram/LCP/Skyline\_LUP.pdf?ver=2015-06-24-155140-647</u>
- City of Seaside/City of Monterey. Land Use Plan for the Laguna Grande/Roberts Lake Local Coastal Program. Seaside and Monterey, California, November 2000. <u>http://monterey.org/Portals/1/peec/landuse/26.Laguna.Grande.LUP.pdf</u>
- Denise Duffy & Associates. *Biological Assessment for the City of Monterey*. Monterey, California, 2003.
- Eyster, Carleton. Telephone conversation with biologist, 2 December 2015.
- National Oceanic and Atmospheric Administration (NOAA). Office of Spill and Response Environmentally Sensitive Index Maps. December 2015. <u>http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html</u>
- Riparian Habitat Joint Venture (RHJV). *The riparian bird conservation plan: a strategy for reversing the decline of riparian associated birds in California: Version 2.0.* California Partners in Flight. Petaluma, California, 2004. <u>http://www.prbo.org/calpif/pdfs/riparian.v-2.pdf</u>
- U.S. Fish and Wildlife Service (USFWS). *Endangered Species Program*. Species list for Monterey County. Washington, D.C., November 2015. <u>http://www.fws.gov/endangered/</u>

## **APPENDIX A**

NOAA Environmental Sensitivity Index Maps
# ENVIRONMENTAL SENSITIVITY INDEX MAP





121°55'00"



# Central California: ESIMAP 24

## BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	SF	Conc.	JFMAMJJ	ASOND	Nesting	Migrating	Molting	·	
1	Western snowy ployer	 T		* * * * * * * * *	- <b></b>	MAR-SED			-	
105	Brown pelican	ים ש	2-410 INDIX		 	MAR-SEP		-		
112	Shorebirds		2 110 11010.	X X X X X X X X X X X X X X X X X X X	 	_	-	-		
122	Western snowy ployer	т		XXXXX XX		_	_	_		
124	Brown pelican	ΕĒ	95-235 INDIV.	XXXXXXXXX	x x x x x	_	JUL-NOV	_		
125	Brown pelican	ΕЕ	20-67 INDIV.	X X X X X X X X X	κχχχχ	-	JUL-NOV	-		
126	Brown pelican	ΕЕ	74-266 INDIV.	* * * * * * * * * *	κχχχχ	-	JUL-NOV	_		
127	Brown pelican	ΕE	204-630 INDIV.	* * * * * * * * * *	κχχχχ	_	JUL-NOV	-		
128	Brown pelican	ΕЕ	172-348 INDIV.	* * * * * * * * * *	κχχχχ	-	JUL-NOV	_		
129	Brown pelican	ΕΕ	11-160 INDIV.	X X X X X X X X X X X X X X X X X X X	κχχχχ	-	JUL-NOV	-		
130	Brown pelican	ΕΕ	52-371 INDIV.	X X X X X X X X X	кхххх	-	JUL-NOV	-		
131	Brown pelican	ΕΕ	461-2519 INDIV.	X X X X X X X X X X X X X X X X X X X	кхххх	-	JUL-NOV	-		
416	Diving birds		15000 INDIV.	XXXXX	ζ	APR-AUG	-	-		
	Gulls		200 INDIV.	XXXXX	ζ	APR-AUG	-	-		
455	Black oystercatcher		2 INDIV.	X X X X X X X X	кхххх	MAR-SEP	-	-		
	Brandt's cormorant		6151 INDIV.	X X X X X X X X	кхххх	FEB-AUG	-	-		
	Pelagic cormorant		4 INDIV.	X X X X X X X X X	кхххх	MAR-SEP	-	-		
	Pigeon guillemot		5 INDIV.	X X X X X X X X X	кхххх	FEB-AUG	-	-		
	Western gull		90 INDIV.	XXXXXXXX	кхххх	MAR-AUG	-	-		
457	Black oystercatcher		2 INDIV.	X X X X X X X X X	хххх	MAR-SEP	-	-		
	Brandt's cormorant		2651 INDIV.	X X X X X X X X X	кхххх	FEB-AUG	-	-		
	Western gull		16 INDIV.	X X X X X X X X X	кхххх	MAR-AUG	-	-		
468	Pelagic cormorant		198 INDIV.	X X X X X X X X X	кхххх	MAR-SEP	-	-		
	Pigeon guillemot		88 INDIV.	X X X X X X X X X	кхххх	FEB-AUG	-	-		
	Western gull		86 INDIV.	X X X X X X X X X	хххх	MAR-AUG	-	-		
510	Black oystercatcher		10 INDIV.	X X X X X X X X X	хххх	MAR-SEP	-	-		
	Brandt's cormorant		554 INDIV.	X X X X X X X X X X X X X X X X X X X	кхххх	FEB-AUG	-	-		
	Pelagic cormorant		20 INDIV.	X X X X X X X X X	хххх	MAR-SEP	-	-		
	Pigeon guillemot		18 INDIV.	X X X X X X X X X X X X X X X X X X X	хххх	FEB-AUG	-	-		
	Western gull		30 INDIV.	X X X X X X X X X	кхххх	MAR-AUG	-	-		
542	Pigeon guillemot		35 INDIV.	XXXXXXXX	кхххх	FEB-AUG	-	-		
	Western gull		24 INDIV.	XXXXXXXXX	κχχχχ	MAR-AUG	-	-		
550	Pelagic cormorant		9 INDIV.	XXXXXXXX	кхххх	MAR-SEP	-	-		
	Western gull		6 INDIV.	XXXXXXXXX	кхххх	MAR-AUG	-	-		
562	Black oystercatcher		2 INDIV.	XXXXXXXXX	κχχχχ	MAR-SEP	-	-		
	Pigeon guillemot		22 INDIV.	XXXXXXXXX	κχχχχ	FEB-AUG	-	-		
	Western gull		20 INDIV.	X X X X X X X X X X X X X X X X X X X	x x x x x	MAR-AUG	-	-		
568	Black oystercatcher		3 INDIV.	X X X X X X X X X X X X X X X X X X X	<	MAR-SEP	-	-		
	Pelagic cormorant		33 INDIV.	X X X X X X X X X X X X X X X X X X X	<	MAR-SEP	-	-		
600	Western gull		IU INDIV.	X X X X X X X X X X X X X X X X X X X	<	MAR-AUG	-	-		
607	Black oystercatcher		1 INDIV.	X X X X X X X X X X X X X X X X X X X	<	MAR-SEP	-	-		
	Pelagic cormorant		18 INDIV.	X X X X X X X X X X X X X X X X X X X	<	MAR-SEP	-	-		
C 0 0	Western gull		4 INDIV.	X X X X X X X X X X X X X X X X X X X		MAR-AUG	-	-		
688	Classin's aukiet		MODERALE			-	- 	-		
	Clark's grebe		MODERALE	хххх		-	MAR-APR	-		
	G			<u> </u>	7 37 37 37 37 37		SEP-NOV			
	Common murre		MODERATE	X X X X X X X X X X X X X X X X X X X	(	-	-	JOL-SEP		
	Fored grobe		MODERALE LOW		 	-		-		
	Eared grebe		TOM	ΑΑΑΑ	~ ~ ~ ~ ~	-	MAR-APR	-		
	G.,]]=		MODEDARE	<u> </u>	7 37 37 37 37		SEP-OCI			
	Guils Normad graba		NODERALE		 	-		-		
	Loopa		LOW	A A A A V V V V V		-	OCT-APR	-		
	Loons Marbled murrelet	τr	TOW	~ ~ ^ ^ ^ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	 	-	OCI-MAI	-		
	Dagifig loop	<u>с</u> т	LOW MODERATE	~ ~ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^	A A A A A A A A A A A A A A A A A A A			_		
	Paliana		MODERATE	~ ~ ^ ^ ^ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	 / V V V V		THI NOV			
	Phalaropes		LOW			_	-	-		
	Pigeon guillemot		MODERATE		X X X X X	_	_	_		
	Rhinoceros auklet		MODERATE	XXXXXXXXX	 < x x x v	_	_	_		
	Shearwaters		LOW	X X X X X X X X X X X X X X X X X X X		_	_	_		
	Sooty shearwater		MODERATE	X X X X X X	<pre>x x x</pre>	_	_	APR-00T	1	
	Surf scoter		MODERATE	XXXX	^ ^ ^	_	MAR-APR			
							SEP-DEC			
	Western grebe		MODERATE	хххх	хххх	-	MAR-APR	_		
	-						SEP-NOV			
	White-winged scoter		MODERATE	хххх	ххх	-	MAR-APR	_		
							OCT-NOV			
693	Black-footed albatross		MODERATE	X X X X X X X X	ζ X	-	_	-		
	Common murre		LOW-MODERATE	XXXXXXXX	XXXX	_	_	JUL-SEF	)	
	Gulls		LOW	X X X X X X X X X	кхххх	-	-	-		
	Phalaropes		MODERATE	* * * * * * * * * *		-	-	-		
	Rhinoceros auklet		LOW	* * * * * * * * * *	кхххх	_	_	_		
	Shearwaters		LOW	* * * * * * * * * *	кхххх	_	_	_		
	Sooty shearwater		LOW	X X X X X X	хххх	-	-	APR-OCT		
	Xantus' murrelet	Т	MODERATE	X	ххх	-	-	-		
695	Cassin's auklet		HIGH	ХХХ		-	-	-		
696	Ashy storm-petrel		MODERATE	* * * * * * * * *	кхххх	-	-	-		
	Storm-petrels		MODERATE	X X X X X X	хххх	-	-	-		
<b>n</b> = <i>c</i>										
FISH	:									
RAR#	Species	SF	Conc.	JFMAMJJ	азоид	Spawning	Eggs	Larvae	Juveniles	Adults
76	Steelhead	Т		X X X X X X X X X	хххх	-	-	-	JUN-OCT	OCT-JUN
123	Coho salmon	ΕE		* * * * * * * * *	хххх	-	-	-	JUN-OCT	OCT-JUN
	Pacific Lamprey			X X X X X X X X X X X X X X X X X X X	( X X X X	-	-	-	JUN-OCT	OCT-JUN
	Steelhead	Т		X X X X X X X X X X X X X X X X X X X	( X X X X	-	-	-	JUN-OCT	OCT-JUN
149	Leopara snark		нтен	X X X X X X X X X	• × × X X	MAR-JUN	-	-	JAN-DEC	-

149	Leopard shark	HIGH	X X X X X X X X X X X X X X	MAR-JUN	-	-	JAN-DEC	-
152	Barred surfperch		X X X X X X X X X X X X X X	APR-AUG	-	-	JAN-DEC	MAR-NOV
	Calico surfperch		X X X X X X X X X X X X X X	APR-AUG	-	-	JAN-DEC	MAR-NOV
	California grunion		X X X X X X X	MAR-AUG	MAR-SEP	-	-	MAR-AUG
	Striped bass		XXXXX	-	-	-	MAY-SEP	MAY-SEP
	Walleye surfperch		X X X X X X X X X X X X X X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	White seabass		X X X X X X X X X X	APR-AUG	-	-	-	MAR-NOV
421	Black rockfish		X X X X X X X X X X X X X X	JAN-MAY	-	-	APR-JUL	JAN-DEC
	Black-and-yellow rockfish		X X X X X X X X X X X X X X	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Blue rockfish		X X X X X X X X X X X X X X	NOV-MAR	-	-	APR-JUL	JAN-DEC
	Bocaccio		X X X X X X X X X X X X X X	-	-	-	JAN-DEC	-
	Canary rockfish (orange)		X X X X X X X X X X X X X X	-	-	-	JAN-DEC	-
	China rockfish		X X X X X X X X X X X X X X	JAN-JUL	-	-	MAY-JUL	JAN-DEC
	Copper rockfish		X X X X X X X X X X X X X X	FEB-APR	-	-	APR-JUL	JAN-DEC
	Gopher rockfish		X X X X X X X X X X X X X X	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Grass rockfish		X X X X X X X X X X X X X X	JAN-MAR	-	-	MAY-JUL	JAN-DEC
	Kelp rockfish		X X X X X X X X X X X X X X	FEB-APR	-	-	APR-AUG	JAN-DEC
	Olive rockfish		X X X X X X X X X X X X X X	JAN-MAR	-	-	APR-JUL	JAN-DEC
	Vermilion rockfish		X X X X X X X X X X X X X X	SEP-NOV	-	-	FEB-JUL	JAN-DEC
	Widow rockfish		X X X X X X X X X X X X X X	-	-	-	JAN-DEC	-
	Yellowtail rockfish		X X X X X X X X X X X X X X	-	-	-	JAN-DEC	-
427	California halibut		X X X X X X X X X X X X X X	FEB-JUN	-	FEB-SEP	JAN-DEC	FEB-NOV
	Salmon		X X X X X X	-	-	-	-	APR-SEP
428	Bat ray		X X X X X X X	MAR-AUG	-	-	-	MAR-SEP

# Central California: ESIMAP 24 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH: (cont.)

<b>D3D</b> #	Geographica -			0 N D	<b>G</b> max	Beer	T	<b>T</b>	34.164
RAR#	Species	S F Conc.	JFMAMJJAS	OND	Spawning	Eggs	Larvae	Juveniles	Adults
400	T accord where he							TAN DEG	TAN DEG
428	Leopard snark		* * * * * * * * * *	ххх	MAR-JUN	-	-	JAN-DEC	JAN-DEC
	Northern anchovy		X X X X X		-	-	-	MAY-SEP	MAY-SEP
	Pacific sardine		X X X X		-	-	-	-	JUN-SEP
илрт	መ እ መ 🖕								
HADI	IAI:								
RAR#	Species	S F Conc.	JFMAMJJAS	OND					
151	Eelgrass		* * * * * * * * * *	ХХХ					
INVE	RTEBRATE:								
RAR#	Species	S F Conc.	JFMAMJJAS	OND	Spawning	Eggs	Larvae	Juveniles	Adults
74	Black abalone		* * * * * * * * * *	ххх	-	-	-	JAN-DEC	JAN-DEC
121	Black abalone	HIGH	* * * * * * * * * *	ххх	-	-	-	JAN-DEC	JAN-DEC
148	Squid		ххх	Х	MAY-JUN	-	-	-	MAY-JUN
	-								NOV-NOV
150	Squid		x x x	x	MAY-JUN	_	_	_	MAY-JUN
100	bdara		21 21 21	21	1111 0 010				NOV-NOV
									100 100
MART	NE MAMMAT.								
RAR#	Species	S F Conc.	JFMAMJJAS	OND	Mating	Calving	Pupping	Molting	
72	Harbor seal	4 INDIV.	* * * * * * * * * *	ХХХ	-	-	MAR-MAY	-	
85	Pinnipeds	HIGH	* * * * * * * * * *	ХХХ	-	-	-	-	
120	Harbor seal	15 INDIV.	* * * * * * * * * *	ХХХ	-	-	MAR-MAY	-	
124	California sea lion	1-1124 INDIV.	* * * * * * * * * *	ХХХ	-	-	-	-	
	Harbor seal	28 INDIV.	* * * * * * * * * *	ХХХ	-	-	MAR-MAY	-	
126	California sea lion	243-685 INDIV.	* * * * * * * * * *	ХХХ	-	-	MAY-JUL	-	
	Harbor seal	111 INDIV.	* * * * * * * * * *	ХХХ	-	-	MAR-MAY	-	
128	Harbor seal	55-67 INDIV.	* * * * * * * * * *	ххх	-	-	MAR-MAY	-	
132	Harbor seal	74-80 INDIV.	* * * * * * * * * *	ххх	-	-	MAR-MAY	-	
133	Harbor seal	131-193 INDIV.	* * * * * * * * * *	ххх	-	-	MAR-MAY	-	
134	Harbor seal	68 INDIV.	* * * * * * * * * *	ххх	-	-	MAR-MAY	-	
135	Harbor seal	17 INDIV.	* * * * * * * * * *	ххх	-	-	MAR-MAY	-	
136	Harbor seal	6 INDIV.	* * * * * * * * * *	ххх	-	-	MAR-MAY	-	
137	Harbor seal	116 INDIV.	* * * * * * * * * *	ххх	-	-	MAR-MAY	-	
138	California sea lion	4-103 INDIV.	* * * * * * * * * *	ххх	-	-	-	-	
	Harbor seal	96-392 INDIV.	* * * * * * * * * * *	ххх	-	-	MAR-MAY	_	
140	Harbor seal	42-253 INDIV.	* * * * * * * * * * *	ххх	-	-	MAR-MAY	_	
141	Harbor seal	89 INDIV	* * * * * * * * * *	ххх	_	_	MAR-MAY	_	
142	Harbor seal	12-44 INDIV.	* * * * * * * * * * *	XXX	_	_	MAR-MAY	_	
144	California sea lion	30-2110 INDIV.	* * * * * * * * * * *	XXX	_	-	_	_	
	Steller sea lion	T 1 INDIV	* * * * * * * * * *	XXX	_	_	_	_	
146	Harbor seal	20-25 INDIV	* * * * * * * * * *	XXX	_	_	MAR-MAY	_	
147	Harbor seal	20 25 10010.	* * * * * * * * * * *	v v v	_	_	MAR_MAY	_	
126	Cray whale		X X X X X X X X X X X X X X X X X X X	x x x		DEC FED	MAIX-MAI		
420	Gray whate		A A A A A A V V V V V V V V V V V V V V		-	DEC-FED	- 	-	
000	Sea Oller	1 207 INDEP / 9 POPS	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	ΛΛΛ	-	-	JAN-MAR	-	
660							SEP-NOV		
669	Sea otter	T 254 INDEP / 40 POPS	* * * * * * * * * *	ΑΑΑ	-	-	JAN-MAR	-	
							SEP-NOV		
670	Sea otter	T 91 INDEP / 11 PUPS	* * * * * * * * * *	ххх	-	-	JAN-MAR	-	
							SEP-NOV		
688	Bottlenose dolphin	MODERATE	* * * * * * * * * *	ХХХ	-	-	-	-	
	Fin whale	E LOW	* * * * * * * * * *	ХХХ	-	-	-	-	
	Harbor porpoise	MODERATE	* * * * * * * * * *	ХХХ	JUL-SEP	JUN-AUG	-	-	
	Killer whale	LOW	X X X X X X X X X X	ххх	-	-	-	-	
	Long-beaked common dolphin	LOW	* * * * * * * * * *	ХХХ	-	-	-	-	
	Minke whale	MODERATE	X X X X X X X X X	ххх	-	MAR-MAY	-	-	
	Northern right whale	E LOW	ХХХ		-	-	-	-	
	Northern right-whale dolphin	LOW	* * * * * * * * * *	ХХХ	-	-	-	-	
	Pacific white-sided dolphin	LOW	* * * * * * * * * *	ххх	-	-	-	-	
	Risso's dolphin	MODERATE	* * * * * * * * * *	ххх	-	-	-	-	
	Seals	LOW-MODERATE	* * * * * * * * * *	ХХХ	-	-	-	-	
	Short-beaked common dolphin	LOW	* * * * * * * * * *	ХХХ	-	-	-	-	
	Short-finned pilot whale	LOW	* * * * * * * * * *	ххх	-	-	-	-	
689	Blue whale	E LOW	хххх	ХХ	-	-	-	-	
	Dall's porpoise	LOW	* * * * * * * * * *	ххх	-	-	-	-	
	Dolphins	LOW	* * * * * * * * * *	ххх	-	-	-	-	
	Humpback whale	E MODERATE	X X X X X X X	ХХ	-	-	-	-	
	Sea lions	MODERATE	* * * * * * * * * *	ххх	-	-	-	-	
690	Blue whale	E HIGH	X X X X	ХХ	-	-	-	-	
-	Dall's porpoise	HIGH	********	ххх	-	-	-	-	
	Dolphins	HIGH	* * * * * * * * * *	XXX	-	-	-	-	
	Humpback whale	E HIGH	X X X X X X X X	XX	-	-	-	-	
	Sealions	HIGH	X X X X X X X X X X X X X X X X X X X	XXX	_	_	_	_	
693	Baird's beaked whale	LOW	X X X X X X	X X	_	_	_	_	
525	California sea lion	LOW	X X X X X X X X X X X X X X X X X X X	xxx	_	-	_	-	
	Cuvier's heated whale	LOW		x v v	_	_	_	_	
	Dwarf sperm whale	LOW		XXX	_	_	_	_	
	Fin whale		X X X X X X X X X X X X X X X X X X X	x x v	_	_	_	-	
	Guadalupe fur ceal	T T LOW	^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^	A A A V V V	_	_	_	-	
	Harbor seal	T.OM	^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^	A A A V V V	_	_	_	-	
	Killer whale		^ _ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^	A A A V V V	_	_	_	_	
	Long-bested common dolphin			A A A V V V	_	-	_	-	
	Mogonlodont booked wholes	TOM	^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^	A A A V V V	-	-	-	-	
	Minke whale	T.OM		^ ^ ^ ^	_	- MAR-MAV	_	-	

	Northern elephant seal	MODERATE	ххх	x x x	ххх	x x x	xxx	-	-	_	-	
	Northern fur seal	MODERATE	XXX	(X)	x x x	x x x	XXX	_	-	-	-	
	Northern right whale	E LOW	Σ	K X X	Х			_	-	-	-	
	Northern right-whale dolphin	MODERATE	ххх	 x x	ххх	x x x	XXX	_	-	-	-	
	Pacific white-sided dolphin	MODERATE	XXX	K X X	XXX	X X X	XXX	_	-	-	-	
	Pyqmy sperm whale	LOW	ххх	x x x	ххх	ххх	xxx	_	-	-	-	
	Risso's dolphin	MODERATE	ххх	K X X	ххх	ххх	XXX	-	-	-	-	
	Sei whale	E LOW	ххх	x x x	ххх	ххх	xxx	-	SEP-MAR	-	-	
	Short-beaked common dolphin	MODERATE	ххх	x x x	ххх	ххх	ххх	-	-	-	-	
	Short-finned pilot whale	LOW	ххх	x x x	ххх	ххх	ххх	-	-	-	-	
	Sperm whale	E LOW	ххх	x x x	ххх	ххх	xxx	MAR-JUN	JUN-OCT	-	-	
	Steller sea lion	T LOW	ххх	x x x	ххх	ххх	ххх	-	_	-	-	
REPT	ILE:											
RAR#	Species	S F Conc.	JFM	( A 1	илс	TAS	OND	Nesting	Hatching	Internesting	Juveniles	Adults
29	California red-legged frog	Т	ххх	x x x	ххх	ххх	ххх	NOV-APR	-	-	JAN-DEC	JAN-DEC
76	California red-legged frog	Т			ΧΣ	ххх	Х	-	-	-	JUN-OCT	-
123	California red-legged frog	Т			ΧΣ	ххх	Х	-	-	-	JUN-OCT	-

x x x x x x x

 $\tt X X X X X X X$ 

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\_

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MAY-NOV

MAY-NOV

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Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

E MODERATE

E LOW

688 Leatherback sea turtle

693 Leatherback sea turtle

## Central California: ESIMAP 24 (cont.)

### HUMAN USE RESOURCES:

### ALERT:

#### ID# Description

- ---\_\_\_\_\_
- 1 Keep out of kelp when transiting. Note potential presence of sea otters if operating outboard motor.

Contact

Contact

Contact

Contact

Contact

COMMANDING OFFICER

- 2 Keep aircraft away from March-July.
- Threatened/endangered or rare terrestrial plants potentially in the area. 3

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### AQUACULTURE:

HUN# Name

---------MONTEREY ABALONE CO

17

### BEACH:

HUN# Name

- ---------27 ASILOMAR STATE BEACH
- CARMEL BEACH CITY PARK 31
- 43 LOVER'S POINT PARK AND BEACH
- MCABEE BEACH 44
- 46 MONTEREY BEACH PARK
- SEVENTEEN MILE DRIVE 71

### BOAT RAMP:

HUN# Name

- -----
- 82 MONTEREY HARBOR

COAST GUARD:

### UIIN# Name

HON#	Name

-----MONTEREY COAST GUARD STATION 88

### DIVING:

#### HUN# Name

- CARMEL RIVER STATE BEACH 106
- LOVER'S POINT PARK AND BEACH 110
- 111 MONTEREY COAST GUARD PIER/BREAKWATER
- STILLWATER COVE 113
- 114 WHALERS COVE

### SAMPLING SITE:

### HUN# Name

- ---------PISCO:HOPKINS 133
- PISCO:POINT LOBOS 140
- PISCO:QUANTITATIVE 144
- 152 PISCO:STILLWATER COVE

### HOIST:

- HUN# Name ---------MONTEREY MUNICIPAL WHARF #1 161
- 162 MONTEREY MUNICIPAL WHARF #2

### MANAGEMENT AREA:

hun#	Name
168	CARMEL BAY - SMCA
180	HOPKINS - SMR
191	PACIFIC GROVE - SMCA
195	POINT LOBOS - SMR

### MARINA:

HUN#	Name	Contact	Phone
209	BREAKWATER COVER MARINA		
212	MONTEREY HARBOR		

### MARINE SANCTUARY:

- HUN# Name
- 219 MONTEREY BAY NATIONAL MARINE SANCTUARY

### PARK:

- HUN# Name
- --------231 ASILOMAR SB CARMEL RIVER SB 236 243 HATTON CANYON MONTEREY SB 254 255 MONTEREY SHP 267 POINT LOBOS RANCH POINT LOBOS SR 268

# WATER INTAKE:

HUN# Name

Contact

-----

-----

Phone

Phone

Phone ------

Phone 831/647-7303

Phone ------

Contact -----PETE RAIMONDI PETE RAIMONDI STEVE LONHART PETE RAIMONDI

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\_\_\_\_\_

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-----831/459-5674 831/459-5674 831/647-4222 831/459-5674

Phone

Phone -----

Phone -----

-----

Phone 831/647-4201

Phone ------

Contact

-----SUPERINTENDENT

Contact

CA DEPT OF PARKS AND RECREATION CA DEPT OF PARKS AND RECREATION

Contact -----CDF&G CDF&G CDF&G

CDF&G

Contact

339	HOPKINS MARINE LABORATORY		
342	MONTEREY BAY AQUARIUM		
343	MONTEREY BAY AQUARIUM RESEARCH INSTITUTE		
WILDL	IFE REFUGE:		
HUN#	Name	Contact	Phone
351	CALIFORNIA SEA OTTER GAME REFUGE	CDF&G	

# ENVIRONMENTAL SENSITIVITY INDEX MAP



121°45'00"



121°50'00"

# Central California: ESIMAP 25

## BIOLOGICAL RESOURCES:

RAR#	Species	S F Conc.	JFMAMJJASOND	Nesting	Migrating	Molting
153	Shorebirds				_	
100	Western snowy ployer	T HIGH	* * * * * * * * * * * * * * * *	MAR-SEP	-	-
688	Cassin's auklet	MODERATE	x x x x x x x x x x x x x x x x x x x	_	_	_
	Clark's grebe	MODERATE	X X X X X X X X X X	-	MAR-APR SEP-NOV	-
	Common murre	MODERATE	* * * * * * * * * * * * *	-	-	JUL-SEP
	Cormorants	MODERATE	* * * * * * * * * * * * *	-	-	-
	Eared grebe	LOW	X X X X X X X X X X X X X X X X X X X	-	MAR-APR SEP-OCT	-
	Gulls	MODERATE	* * * * * * * * * * * * *	-	-	-
	Horned grebe	LOW	X X X X X X X X X X X X X X X X X X X	-	OCT-APR	-
	Loons	MODERATE	X X X X X X X X X X X X X X X X X X X	-	OCT-MAY	-
	Marbled murrelet	E T LOW	* * * * * * * * * * * * *	-	-	-
	Pacific loon	MODERATE	X X X X X X X X X X X X	-	OCT-MAY	-
	Pelicans	MODERATE	* * * * * * * * * * *	-	JUL-NOV	-
	Phalaropes	LOW	* * * * * * * * * * * * * *	-	-	-
	Pigeon guillemot	MODERATE	хххххххх	-	-	-
	Rhinoceros auklet	MODERATE	* * * * * * * * * * * * * *	-	-	-
	Shearwaters	LOW	* * * * * * * * * * * * *	-	-	-
	Sooty shearwater	MODERATE	X X X X X X X X X	-	-	APR-OCT
	Surf scoter	MODERATE	X X X X X X X X X X X X X X X X X X X	-	MAR-APR SEP-DEC	-
	Western grebe	MODERATE	X X X X X X X X X X	-	MAR-APR SEP-NOV	-
	White-winged scoter	MODERATE	X X X X X X X X	-	MAR-APR OCT-NOV	-

### FISH:

RAR#	Species	S F Conc.	JFMAMJJASOND	Spawning	Eggs	Larvae	Juveniles	Adults
152	Barred surfperch		* * * * * * * * * * * * * *	APR-AUG	_	_	JAN-DEC	MAR-NOV
	Calico surfperch		* * * * * * * * * * * * * * * *	APR-AUG	_	-	JAN-DEC	MAR-NOV
	California grunion		X X X X X X X	MAR-AUG	MAR-SEP	-	-	MAR-AUG
	Striped bass		ххххх	-	-	-	MAY-SEP	MAY-SEP
	Walleye surfperch		* * * * * * * * * * * * *	APR-AUG	-	-	JAN-DEC	JAN-DEC
	White seabass		* * * * * * * * * *	APR-AUG	-	-	-	MAR-NOV
154	Night smelt		ххххх	FEB-JUN	-	-	-	FEB-JUN
421	Black rockfish		* * * * * * * * * * * * *	JAN-MAY	-	-	APR-JUL	JAN-DEC
	Black-and-yellow rockfish		* * * * * * * * * * * * * *	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Blue rockfish		* * * * * * * * * * * * * *	NOV-MAR	-	-	APR-JUL	JAN-DEC
	Bocaccio		* * * * * * * * * * * * * *	-	-	-	JAN-DEC	-
	Canary rockfish (orange)		* * * * * * * * * * * * * *	-	-	-	JAN-DEC	-
	China rockfish		* * * * * * * * * * * * * *	JAN-JUL	-	-	MAY-JUL	JAN-DEC
	Copper rockfish		* * * * * * * * * * * * * *	FEB-APR	-	-	APR-JUL	JAN-DEC
	Gopher rockfish		* * * * * * * * * * * * * *	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Grass rockfish		* * * * * * * * * * * * * *	JAN-MAR	-	-	MAY-JUL	JAN-DEC
	Kelp rockfish		* * * * * * * * * * * * *	FEB-APR	-	-	APR-AUG	JAN-DEC
	Olive rockfish		* * * * * * * * * * * * * *	JAN-MAR	-	-	APR-JUL	JAN-DEC
	Vermilion rockfish		* * * * * * * * * * * * *	SEP-NOV	-	-	FEB-JUL	JAN-DEC
	Widow rockfish		* * * * * * * * * * * * * *	-	-	-	JAN-DEC	-
	Yellowtail rockfish		* * * * * * * * * * * * *	-	-	-	JAN-DEC	-
427	California halibut		* * * * * * * * * * * * * *	FEB-JUN	-	FEB-SEP	JAN-DEC	FEB-NOV
	Salmon		ххххх	-	-	-	-	APR-SEP
428	Bat ray		ххххххх	MAR-AUG	-	-	-	MAR-SEP
	Leopard shark		* * * * * * * * * * * * * *	MAR-JUN	-	-	JAN-DEC	JAN-DEC
	Northern anchovy		ххххх	-	-	-	MAY-SEP	MAY-SEP
	Pacific sardine		хххх	-	-	-	-	JUN-SEP
INVE	RTEBRATE:							
RAR#	Species	S F Conc.	J F M A M J J A S O N D 	Spawning	Eggs 	Larvae	Juveniles	Adults
148	Squid		X X X X	MAY-JUN	-	-	-	MAY-JUN NOV-NOV
155	Globose dune beetle		* * * * * * * * * * * * * * *	-	-	-	-	JAN-DEC
MARI	NE MAMMAL:							
RAR#	Species	S F Conc.	JFMAMJJASOND	Mating	Calving	Pupping	Molting	
668	Sea otter	T 287 INDEP / 9 PUPS	* * * * * * * * * * * * *	_	-	JAN-MAR SEP-NOV	-	
688	Bottlenose dolphin	MODERATE	* * * * * * * * * * * * * *	-	-	-	-	
	Fin whale	E LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Harbor porpoise	MODERATE	* * * * * * * * * * * * * *	JUL-SEP	JUN-AUG	-	-	
	Killer whale	LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Long-beaked common dolphin	LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Minke whale	MODERATE	* * * * * * * * * * * * * *	-	MAR-MAY	-	-	
	Northern right whale	E LOW	XXX	-	-	-	-	
	Northern right-whale dolphin	LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Pacific white-sided dolphin	LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Risso's dolphin	MODERATE	* * * * * * * * * * * * * *	-	-	-	-	
	Seals	LOW-MODERATE	* * * * * * * * * * * * * *	-	-	-	-	
	Short-beaked common dolphin	LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Short-finned pilot whale	LOW	* * * * * * * * * * * * * *	-	-	-	-	
689	Blue whale	E LOW	X X X X X X X	-	-	-	-	
	Dall's porpoise	LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Dolphins	LOW	* * * * * * * * * * * * * *	-	-	-	-	
	Humpback whale	E MODERATE	* * * * * * * * * *	-	-	-	-	

	Humpback whale	E MODERATE		ххх	ххх	хххх	-	-	-	-	
	Sea lions	MODERATE	ХХ	ххх	ххх	ххххх	-	-	-	-	
REPT	ILE:										
RAR#	Species	S F Conc.	JF	мам	JJZ	ASOND	Nesting	Hatching	Internesting	Juveniles	Adults
156	California legless lizard		х х	x x x	x x x			-	-	-	JAN-DEC
688	Leatherback sea turtle	E MODERATE		Х	ХХΣ	хххх	-	-	-	-	MAY-NOV
HUMA ALER	N USE RESOURCES: T:										
ID#	Description										
1	Snowy plovers nesting, March-Se	ptember.									
AIRP	ORT:										
HUN#	Name	c	ontact					Ph	ione		
7	MARINA MUNICIPAL AIRPORT										
9	MONTEREY PENINSULA AIRPORT										

# Central California: ESIMAP 25 (cont.)

HUMAN USE RESOURCES: (cont.)

### BEACH:

### HUN# Name

47	MONTEREY STATE BEACH	

# MONTEREY STATE BEACH

MANAGEMENT AREA:

### HUN# Name

171	DEL MONTE DUNES ER	

### MARINE SANCTUARY:

## HUN# Name

219	MONTEREY	BAY	NATIONAL	MARINE	SANCTUARY

### PARK:

### HUN# Name

---------251 MARINA SB

254 MONTEREY SB Contact \_\_\_\_\_ CA DEPT OF FISH AND GAME

\_\_\_\_\_

### Contact

Contact

### -----SUPERINTENDENT

### Contact

\_\_\_\_\_ CA DEPT OF PARKS AND RECREATION CA DEPT OF PARKS AND RECREATION

### Phone -----

Phone -----

### Phone

-----831/647-4201

### Phone

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