

5.3 - Biological Resources

5.3.1 - Introduction

This section describes the existing biological resources setting and potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Marine Resource Assessment prepared on October 15, 2008 by Coastal Resources Management and the Terrestrial Biological Resource Assessment prepared on August 6, 2008 by Michael Brandman Associates, included in this EIR as Appendix D.

5.3.2 - Existing Conditions

Topographic Features

Topographically, the project site is located on the coast at the southern end of Newport Harbor. The site is relatively flat except where the public beach slopes to the water. The project site has an elevation range of 5 to 8 feet above mean sea level.

Plant Communities

The plant communities on the site include ornamental landscaping, turf, disturbed/developed areas, and sandy beach; no sensitive plant communities or suitable habitat for sensitive plants are present on the site (see Exhibit 5.3-1). Vegetation on the site is exclusively ornamental landscaping between structures, in parkways, and around public use areas. Table 5.3-1 below provides a summary of the plant community and land-use acreages.

Table 5.3-1: Plant Community/Land Use Acreage

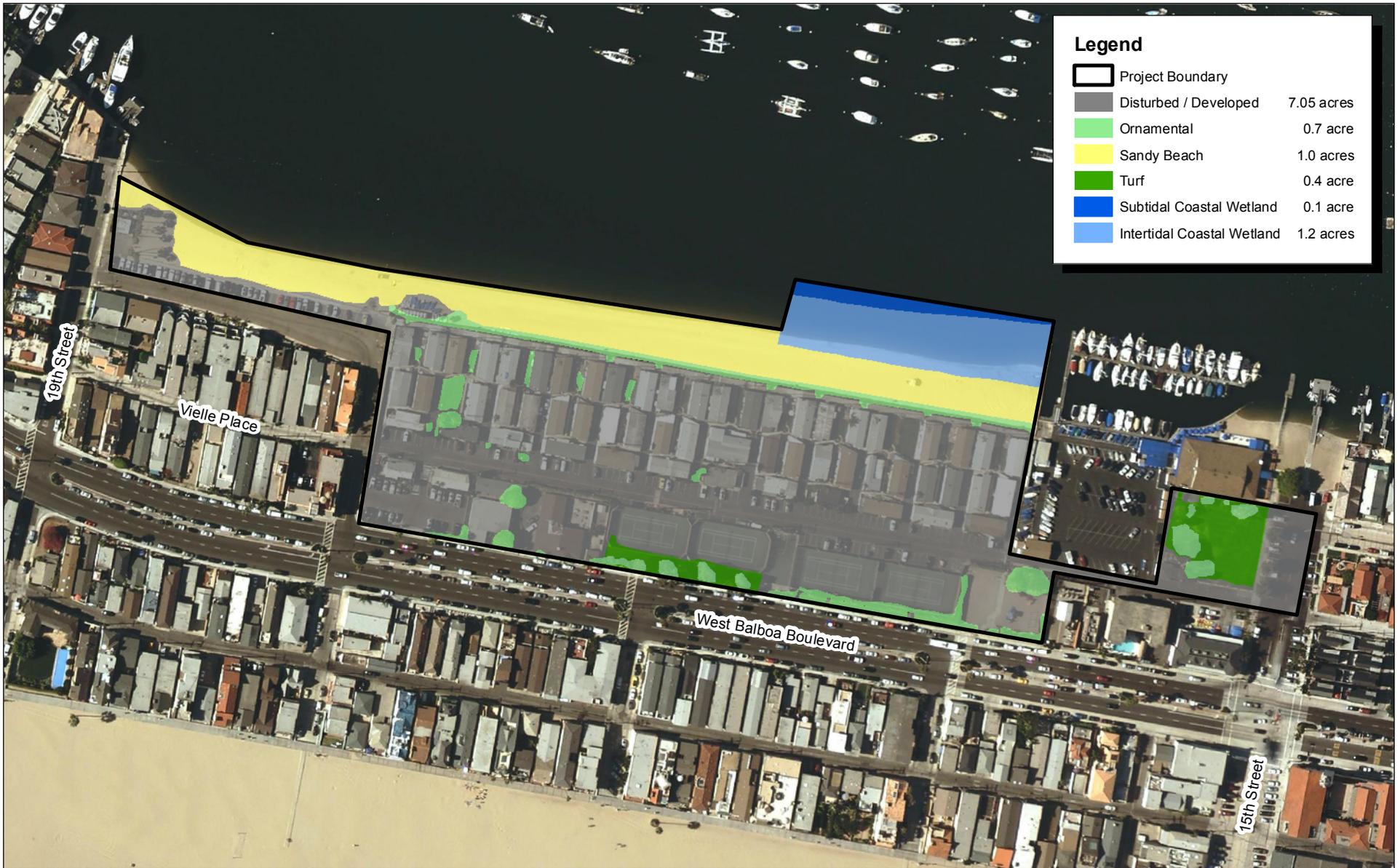
Plant Community	Approximate Area (acres)
Disturbed/Developed	7.05
Ornamental	0.70
Turf	0.40
Sandy Beach	1.00
Intertidal Coastal Wetland	1.20
Subtidal Coastal Wetland	0.10
Total	10.45

Source: Terrestrial Biological Resource Assessment, November 18, 2008.

- **Disturbed/Developed (7.05 Acres)**

Disturbed/developed land use includes any form of human disturbance, especially in cases of permanent impacts to natural communities, and comprises 7.05 acres of the property. By definition, disturbed areas include dirt roads, off-highway use, pavement, concrete, buildings and structures, bridges, agricultural activities, and permanent flood control measures.

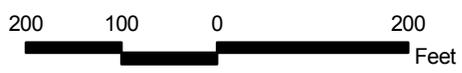
Disturbed/developed areas on the site include roads, a 56-space mobile home park and



Legend

	Project Boundary	
	Disturbed / Developed	7.05 acres
	Sandy Beach	1.0 acres
	Turf	0.4 acre
	Subtidal Coastal Wetland	0.1 acre
	Intertidal Coastal Wetland	1.2 acres

Source: Google Earth Pro.



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Exhibit 5.3-1 Plant Communities Map

CITY OF NEWPORT BEACH • MARINA PARK
ENVIRONMENTAL IMPACT REPORT

associated parking, a metered 21-stall surface parking lot, and Las Arenas Park, which includes the Balboa Community Center/Girl Scouts House, a children's play area, and four public tennis courts.

- **Ornamental (0.70 Acre)**

Several individual specimens of white bottlebrush (*Callistemon salignus*), weeping fig (*Ficus benjamina*), Peruvian pepper (*Schinus molle*), and ornamental palm trees are scattered throughout the property for landscaping purposes. A hedge of ornamental shrubs is also present between the public beach and the mobile home park, and a line of ornamental palm trees lines the sidewalk that borders the public beach. These individual trees and landscaped areas of ornamental vegetation are not associated with any native vegetation and provide only limited habitat value, primarily as cover and perching areas for birds and common terrestrial wildlife that are normally found in and associated with developed areas. The scattered ornamental landscaping covers a total of approximately 0.7 acre of non-native vegetation.

- **Turf (0.40 Acre)**

Turf includes any form of grass lawn and comprises approximately 0.4 acre of the project site. By definition, turf includes areas that are covered with grass, regularly mowed, and artificially irrigated. A long strip of turf extends between the sidewalk and the tennis courts along West Balboa Boulevard, and several patches of turf are scattered between the mobile homes.

- **Sandy Beach (1.00 Acre)**

Sandy beach habitat includes any unvegetated coastal area comprised exclusively of sand, and covers 1.00 acre of the property. Sandy beach can be subject to high-energy wave action or, as in this case, can be located in a sheltered location with low energy wave action. By definition, this area includes the sandy shore adjacent to Newport Harbor that is subject to wave action. The strand of beach is approximately 60 feet wide and runs along the northern portion of the property for approximately 1,400 linear feet.

- **Intertidal Coastal Wetland (1.20 Acres)**

Intertidal coastal wetlands are located immediately seaward of Sandy Beach habitat. Intertidal coastal wetlands are generally located in sheltered areas such as bays and estuaries, and form when mud and marine animal detritus are deposited by tides. Sediment in this habitat is subject to the ebb and flow of the tide, and is therefore submerged and exposed twice a day. Coastal wetland sediments may support algae, marine grasses, benthic invertebrates, and benthic fishes. Coastal wetland habitat covers 1.20 acres of the property. By definition, this area includes the intertidal shore between +7 feet MSL and -2 feet MSL adjacent to the sandy shore.

- **Subtidal Coastal Wetland (0.10 Acre)**

Subtidal coastal wetlands are located immediately seaward of Intertidal Coastal Wetland habitat and are constantly submerged. Subtidal coastal wetlands include 1) deepwater habitats dominated by plants that grow on or below the surface of the water, 2) areas where sediment

particles are generally smaller than stones and vegetative cover is less than 30-percent, and 3) areas with man-made or natural reef systems dominated by sessile invertebrates.

Approximately 0.10 acre of subtidal coastal wetland habitat is present within the site boundary.

Wildlife

The plant communities discussed above provide marginally suitable foraging habitat for a few local terrestrial wildlife species, all of which are urban adapted. No sensitive wildlife or suitable habitat for sensitive wildlife are present on the site.

Invertebrates observed within the project site include sand fleas (insects in the family *Ceratopogonidae*), beached moon jellies (*Aurelia aurita*), and sand crabs (*Emerita talpoida*). The project site contains a shallow marine habitat that provides a potentially suitable habitat for several marine fish. The Marine Resource Assessment includes a detailed description of marine invertebrate, fish, and marine mammal species on site. No amphibian or reptile species were observed during the field survey, and none is expected to occur due to lack of suitable habitat. The ornamental trees and shrubs on the project site provide suitable foraging and perching habitat for passerine birds, and the stretch of calm beach provides suitable foraging habitat for shore birds. Birds observed on the site are urban adapted and include house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), snowy egret (*Egretta thula*), brown pelican (*Pelecanus occidentalis*), and gull-billed tern (*Sterna nilotica*). No mammals were observed during the field survey; however, feral dogs and cats and opossums can be expected to occur on the site.

Special Status Species

The following federally or state-listed species are reported to occur within the vicinity of the site and were evaluated for their potential to occur on the site: light-footed clapper rail (*Rallus longirostris levipes*), California least tern (*Sternula antillarum browni*), coastal California gnatcatcher (*Poliopitila californica californica*), western snowy plover (*Charadrius alexandrinus nivosus*), brown pelican (*Pelecanus occidentalis*), southern tarplant (*Centromadia parryi ssp. australis*), Coulter's saltbush (*Atriplex coulteri*), Davidson's saltscale (*Atriplex serenana var. davidsonii*), estuary seablite (*Suaeda esteroa*), mud nama (*Nama stenocarpum*), and chaparral sand-verbena (*Abronia villosa var. aurita*).

No federally or state-listed species are present on the site, and no suitable terrestrial habitat for any federally or state-listed species is present on the site. However, the project site does provide resting habitat on the sandy beach and foraging habitat in the harbor for both the California least tern and brown pelican. These sensitive species are discussed below in the Endangered, Threatened, Rare or Sensitive Marine species section.

No species or terrestrial habitat protected under the Orange County Coastal-Central NCCP/HCP are present on the site; therefore, no further action is required pursuant to the NCCP/HCP.

Implementation of the proposed project will not have significant impacts on any special-status or sensitive plant communities, plants, or species.

Nesting Birds

The project site contains several ornamental trees and shrubs that provide marginally suitable nesting habitat for migratory birds. Therefore, pursuant to the MBTA and CFG Code, removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from early February through August but can vary slightly from year to year based upon seasonal weather conditions. Any activity that may potentially cause a nest failure requires a biological monitor; therefore, a pre-construction nesting bird survey would be required prior to any vegetation removal or ground disturbance activities to determine if nesting activity occurs on the site.

If active nests are observed, construction activity must be prohibited within a buffer around the nest, as determined by a biologist, until the nestlings have fledged. Construction activity may encroach within the designated buffer at the discretion of the biological monitor. Once the nestlings have fledged, construction activity may proceed.

Wildlife Movement Corridors

The project site does not provide wildlife movement corridors. Opossums and feral cats and dogs can be expected to travel through the site and surrounding developed areas, but the site does not provide narrow connectivity between large areas of open space on a local or regional scale.

Marine Habitats

Marine habitat types in the Marina Park project site include a city-maintained sandy beach, intertidal sand/mudflats, subtidal bay bottom (benthos), a cement groin that separates the sand beach from the American Legion Post 291 marina, and open-water bay habitat.

The project site intertidal zone extends from Extreme Low Water [-2.0 ft. Mean Lower Low Water (MLLW)], to Extreme High Water [+7 ft. MLLW]. Subtidally, water depths in the project area range from -2.0 ft to approximately -12 ft MLLW. Depths at the offshore edges of the boat docks located to the east of the project site are approximately -8 ft to -10 ft MLLW.

Sand Beach

While most of the Newport Bay shoreline is dredged for boat slips and lined with bulkheads, open sand beaches are scattered throughout the bay. Most of Newport Harbor's sandy beaches are located around Balboa Island, although some sand beach habitat is found on Bay Isle, Lido Isle, and Balboa Peninsula.

On the Balboa Peninsula, public swimming beaches are located between 9th Street and 10th Street and between 15th Street and 19th Street. These beaches provide the public with recreational opportunities, but they are also habitat for marine-associated wildlife.

The high intertidal portion of the city-maintained public beach supports few, if any, marine organisms in the sediments because of the infrequent tidal exposure and periodic cleaning and grooming. This higher elevation, however, is resting habitat for seabirds (gulls and pelicans). The middle and low intertidal zones provide more consistent tidal inundation and supports burrowing species of invertebrates (primarily clams, crustaceans, and polychaete worms). These organisms attract shorebirds to the mid- and low-intertidal elevations of the beach that utilize these invertebrates as their food source.

Subtidal Soft-Bottom Benthos

Beyond the shoreline, the sediments support algae and bottom-dwelling organisms (benthic invertebrates), some of which crawl over the surface of Newport Bay sediments, while others lead a sessile existence and protrude above the sediments from within a tube. While the majority of benthic invertebrates of bays and estuaries obtain their nutrition by consuming organic detritus, some graze on diatoms and algae or actively prey on other invertebrates. In turn, bottom-feeding fishes and resident soft bottom-dwelling fishes (gobies, juvenile flatfish, and sand bass) rely upon these benthic organisms as food sources.

Marine Animals and Plants

Benthic Invertebrates. Over 300 species of benthic invertebrates that live in the sediments (benthic infauna) have been identified from Newport Bay mudflats and subtidal channel sediments. The dominant types are annelid worms (polychaetes and oligochaetes), arthropods (gammarid and caprellid amphipods, isopods, ostracods, and cumaceans), and mollusks (gastropods and pelecypods). Most are not endemic to Newport Bay nor do they necessarily reflect polluted bottom conditions. Rather, they are widely distributed and highly adaptable, and they survive well under stress conditions that occur naturally in many California coastal bays and estuaries.

The numbers of benthic infaunal species decrease between the harbor entrance and the regions where water circulation is restricted in Newport Harbor and Upper Newport Bay. These community changes occur because of increasing environmental stresses due to extremes in salinity, temperature, and dissolved oxygen, as well as decreasing grain sizes within the sediments they inhabit. Other influences related to the concentrations of contaminants in the sediments will also affect the types and abundances of organisms inhabiting Newport Bay sediments.

Many larger types of benthic invertebrates live on the sediment surface (epifauna). Several species of epifauna were observed at the site of the proposed Marina Park marina in October 2003. These included the hydroid (*Corymorpha palma*), tube anemone (*Pachycerianthus fimbriatus*), tube-

dwelling polychaete annelid worms, tube-dwelling amphipods (*Grandidierella japonica*), and the predatory sea slug (*Chelidonera [Navanax] inermis*).

Historically, the benthic infaunal community in the general vicinity of the proposed Marina Park marina is characterized by low numbers of species and high abundances of a few species of invertebrates that reproduce well and out-compete other species under stressed environmental conditions. The number of benthic species identified at stations between 10th Street and the Rhine Channel during the SWRCB, et al. 1994 survey varied between 14 (10th Street) to 32 (Lido Peninsula). Comparatively, cleaner sediments near the Newport Harbor Entrance Channel support as many as 207 species.

The Rhine Channel and Lido Peninsula sites were classified as “Transitional” by the SWRCB, which indicates that the sediments have elevated chemical contamination and that some toxicity to marine organisms is present. However, the benthic community is not “Degraded” compared to other areas of Newport Bay and other water bodies within the region. In Newport Harbor, “Degraded” benthic conditions were noted in the channel near 10th Street beach, on the north side of Lido Island, on the south side of Harbor Island, and on the north side of Balboa Island.

Algae. Beyond the shoreline, the sediments also support algae. The shallow subtidal zone fronting the sand beach shoreline in the project site is occasionally vegetated by green algae (*Enteromorpha* sp). At deeper depths, red algae is more common.

Bulkhead- and Seawall-Associated Plants and Animals

Man-made substrates (bulkheads, seawalls, docks, pilings, jetties) in Newport Harbor are not biologically sensitive. However, hardscape provides surface area for sessile marine animals and plants that would not be present in the harbor in the absence of development. The hardscape of these structures support mussels, barnacles, sponges and other types of invertebrates, and plants that constitute the “biofouling community”. The undersides of boat floats and docks are commonly colonized by green algae, barnacles, mussels, limpets, polychaete worms, moss animals (ectoprocts), and sea squirts (tunicates). Bay fishes are attracted to the biofouling habitat because it is a constant source of food. The cement groin separating the American Legion Post 291 marina from the sand beach at 16th Street is colonized by few species on the beach side of the groin, primarily because most of its length is buried by sand. Where exposed, it supports a limited population of barnacles (*Balanus glandula*) in the high-tide zone and mussels (*Mytilus galloprovincialis*) in the mid- to low-tide zone.

Bay Fishes

Over 75 species of fish are known to inhabit Newport Bay. Along the peninsula between 9th Street and 13th Street, 19 species of fish were recorded during 18 months of sampling between 1974 and 1975. This sampling was conducted midchannel by otter trawl-net methods. The numerically dominant species were white croaker (*Genyonemus lineatus*), shiner surf perch (*Cymatogaster*

aggregata), white surf perch (*Phanerodon furcatus*), slough anchovy (*Anchoa delicatissima*), deepbody anchovy (*Anchoa compressa*), black surf perch (*Embiotoca jacksoni*), and queen fish (*Seriophus politus*). Bat ray (*Myliobatis californica*), white croaker, and queen fish contributed the most biomass. Other species, such as California halibut (*Paralichthys californicus*), diamond turbot (*Hypsopsetta guttulata*), and various bottom-dwelling blennies and gobies are also found in Newport Harbor environments.

Marinas, docks, bulkheads, and groins provide habitat that attract a variety of fishes, and these environments may exhibit a greater diversity of fishes than channel and mudflat habitats alone because both soft-bottom channel fishes and rock-associated fishes inhabit these environments. Hard substrate offers cover, protection, or new sources of food for fishes such as pile perch (*Damalichthys vacca*), pipefish (*Sygnathus* spp.), kelpfish (*Heterostichus* spp.), opaleye (*Girella nigricans*), halfmoon (*Medialuna californiensis*), sargo (*Anisotremus davidsoni*), and kelp bass (*Paralabrax clathratus*).

During two reconnaissance surveys conducted in depths between 0 and -12 ft MLLW in August 2008, round sting ray (*Urobatis halleri*) and mullet (*Mugil cephalus*) were observed. During the 2004 surveys, four species were observed by SCUBA diving biologists at the site of the proposed marina. These included topsmelt (*Atherinops affinis*), spotted sand bass (*Paralabrax maculatofasciatus*), bay goby (*Lepidogobius lepidus*), and round stingray (*Urolophus halleri*).

Other common species of fish that are known to inhabit Newport Harbor include the arrow goby (*Clevelandia ios*), California halibut, topsmelt (*Atherinops affinis*), black surfperch, white surfperch shiner surfperch, and walleye surfperch (*Hyperprosopon argenteum*). Several of these commonly occurring species may be present at the site but were not observed during the underwater surveys.

Sensitive Marine Habitats

Newport Harbor and Upper Newport Bay shorelines and waters are defined as wetland habitats under both the California Coastal Act and the National Environmental Policy Act. Consequently, this water body is considered sensitive habitat and is afforded protection to conserve and protect the resource. Upper Newport Bay is also a State of California Marine Protected Area and is designated as a State Marine Park.

Although no eelgrass occurs at the Marina Park project site, Newport Bay in general is estuarine and eelgrass habitat, both of which are considered habitat areas of particular concern (HAPC) for various federally managed fish species within the Pacific Groundfish Fisheries Management Plan (i.e., rockfishes). HAPC are described in the regulations as subsets of Essential Fish Habitat, which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPC are not afforded any additional regulatory protection under the Magnuson-Stevens Fishery Conservation and Management Act

(1997). However, federally permitted projects with potential adverse impacts to HAPC will be more carefully scrutinized during the consultation process.

Fish Management Plan Species

This assessment of Essential Fish Habitat (EFH) for the Marina Park project is being provided in conformance with the 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (FR 62, 244, December 19, 1997). The 1996 amendments to the Magnuson-Stevens Act set forth a number of new mandates for the National Marine Fisheries Service, eight regional fishery management councils, and other federal agencies to identify and protect important marine and anadromous fish habitat. The councils, with assistance from NMFS, are required to delineate EFH for all managed species. Federal action agencies that fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH and respond in writing to the NMFS recommendations.

EFH is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity”. An adverse effect is “any impact which reduces the quality and/or quantity of EFH”. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to benthic organisms, prey species, and their habitat, and other ecosystem components. Adverse effects may be site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions [50 CFR 600.910(a)].

Impacts to HAPC are described in the regulations as subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area, including eelgrass.

The proposed project is located within an area designated as EFH for species identified by the Coastal Pelagics Management and the Groundfish Management Plan. Four coastal pelagic species, the northern anchovy, Pacific sardine, jack mackerel, and Pacific mackerel, potentially occur in the waters offshore of Newport Beach. Six groundfish species also potentially occur within the local project area, including California scorpion fish (*Scorpaena guttata*), vermillion rockfish (*Sebastes miniatus*), calico rockfish (*Sebastes dallii*), California skate (*Raja inornata*), spiny dogfish shark (*Squalus acanthias*), and leopard shark (*Triakis semifasciata*). Of these species, only the northern anchovy comprises a significant portion of fish that occur, and it contributes moderate-to-heavy abundances to the nearshore fish, but much less so within Newport Bay. Northern anchovy comprise a portion of the commercial-bait fishery in San Pedro Bay, and a commercial-bait fishing operation that provides northern anchovy to sports fishermen operates in the Newport Harbor entrance channel. This species is a planktivore and is preyed upon by larger fish and seabirds. Larvae of northern anchovy are also part of the Newport Bay ichthyofauna and ichthyoplankton community.

Although several other coastal pelagic and groundfish FMP species are known from the project site, temporal data indicate that their presence in the project site is likely sporadic and their numbers in the project region would be extremely low.

Newport Harbor and Upper Newport Bay shorelines and waters are defined as wetland habitats under both the California Coastal Act and the National Environmental Policy Act. Consequently, this water body is considered sensitive habitat and is afforded protection to conserve and protect the resource.

Endangered, Threatened, Rare, or Sensitive Marine Species

Plants

Eelgrass (*Zostera marina*). Eelgrass is a marine angiosperm that forms meadows in mud-and-sand substrates of bays and wetlands channels. Although it is not a listed species, it is considered sensitive by resource agencies because it is an important biological habitat for invertebrates and fishes because of its value as a nursery habitat and the protective cover that it provides.

In Newport Bay, eelgrass grows in the lower intertidal and the shallow subtidal substrates at depths between 0.0 and -28 ft. MLLW, although more commonly, at depths shallower than -8 ft. MLLW. Surveys using GPS surveying methods of eelgrass in Newport Harbor and Upper Newport Bay indicate prolific growth of this seagrass along Corona del Mar, Balboa Island, Collins Isle, Beacon Bay, Harbor Island, Linda Isle, DeAnza Bayside Peninsula, Castaways, Bayshores Community, and Mariner's Mile extending from Bayshores to the Orange Coast College Rowing Facilities. Areas within the middle parts of the harbor and Upper Newport Bay experienced significant declines in eelgrass area cover and density between 2004 and 2008. There are no natural eelgrass beds along the shoreline between 15th Street and 19th Street. Eelgrass transplants conducted along the 15th Street to 19th Street shoreline in late summer 2004 as part of the U.S. Army Corps of Engineers Lower Newport Harbor Eelgrass Restoration Project, in coordination with the County of Orange and the City of Newport Beach, were unsuccessful, likely due to (1) the lateness of the transplant in the growing season and (2) significant rainfall in the months following the transplant.

Invertebrates

There are no sensitive species of marine invertebrates located in the project site.

Fishes

California grunion (*Leuresthes tenuis*). This species of fish uses the high intertidal sandy beach habitat of many southern California beaches as spawning habitat including Newport Beach. The grunion is a member of the silversides family, Atherinidae, along with the jacksmelt and topsmelt. They normally occur from Point Conception, California, to Point Abreojos, Baja California. Occasionally, they are found farther north to Monterey Bay, California and south to San Juanico Bay, Baja California. They inhabit the nearshore waters from the surf to a depth of 60 feet. Grunion are not expected to occur on the project site.

California halibut (*Paralichthys californicus*). Although the California halibut does not have formal special-species status, it is considered a sensitive species by resource agencies because of its commercial value and a continued region-wide reduction of its nursery habitat in bays and wetlands. California halibut spawn at sea and the larval stages are planktonic. After several months, the larval fish settle to the bottom and migrate into shallow coastal waters, including Newport Bay. California halibut are distributed throughout the waters of Newport Harbor and Upper Newport Bay, primarily as juveniles, although larger individuals are caught near the ocean entrance and in offshore waters. Young-Of-The-Year (YOTY) prefer shallow waters between about -1.5 ft and -3.5 ft MLLW, whereas juveniles prefer deeper channel bottoms to a maximum depth of approximately -15 ft MLLW. After spending nearly nine months in Newport Bay, juveniles will move out into the open coastal environment. This species has a low-to-moderate potential to occur in the shallow waters of the project site because of the nature of the sand shoreline and the relatively wide shelf of sandy silt sediments.

Marine Reptiles

Marine reptiles do not utilize the local marine waters as a permanent breeding or foraging habitat. However, the green turtle (*Chelonia mydas*) and hawksbill (*Eretmochelys imbricata*) will occasionally occur in the nearshore environment offshore Orange County. Green sea turtles have been reported in the San Gabriel River, where they encounter the warmer, discharged waters of the power-generating facilities located farther up the river and in Alamitos Bay. (Vivian Cook, Marine Bureau; Allen Powder, Long Beach Lifeguards pers. comm. with R. Ware, CRM, 27 July 2007). Their occurrence within Newport Bay, located 20 miles east of Long Beach, is expected to be rare. Although Newport Bay has a productive eelgrass system, green sea turtles may utilize the seagrass beds within the bay as one source nutrition. Sea turtles have a low potential for occurrence on the project site.

Birds

California least tern (*Sterna antillarum browni*). The state- and federally listed California least tern is a spring-and-summer resident in southern California during the breeding and nesting season. The California least tern does not breed or nest near the project site but will forage in Newport Bay and nearshore coastal waters during its March through September breeding season. The nearest California least tern nesting sites are located approximately 2.5 miles west (upcoast) at the mouth of the Santa Ana River and 4.2 miles northeast in Upper Newport Bay near the Jamboree Bridge.

Brown pelican (*Pelecanus occidentalis*). The state- and federally listed endangered brown pelican is found in Newport Bay year round but does not breed locally. Currently, the Brown pelican is proposed for delisting due to a population resurgence along the Southern California coastline. Brown pelicans utilize Newport Harbor waters for foraging on baitfish and use the shoreline as resting habitat.

Marine Mammals

California sea lions (*Zalophus californicus*). In recent years, California sea lions have taken up seasonal residence in the harbor. While initially concentrated in the southeast section of the harbor between the pavilion and the entrance channel, they now extend their seasonal distribution to the northwest (West Newport) waters and Mooring Areas J and H, seaward of the Marina Park site. Their abundance in the bay is the result of abundant food resources. They are able to utilize boats in the harbor as haul outs because many of the boats have low stern platforms (i.e., dive platforms). Countermeasures have been implemented by the City and boat owners to reduce the ability of sea lions to use vessels as haul-out areas and to reduce the direct and indirect feeding of sea lions through the implementation of ordinances and public education brochures. Their presence is a concern for vessel owners who have experienced damaged or sunken vessels, most recently in August 2008. Their distribution in the West Newport waters may also be related to observed increases in the population of mullet that have been particularly abundant in this section of the harbor in 2008. California sea lions have a moderate potential to occur in the project site.

The presence of bottlenose dolphin, gray whales, or other cetaceans would be an extremely rare event in the western section of Newport Harbor.

Invasive Species

Caulerpa taxifolia. *Caulerpa taxifolia* has a characteristic bright green color; flat, leafy, fern-like fronds (branches); and a below-ground root system. This noxious algae was found within shallow, enclosed lagoons located at the northeast section of Huntington Harbor and in Agua Hedionda Lagoon in San Diego County in 2001. Although efforts are believed to have eradicated this species over the last two years, this tropical marine algae can be extremely harmful to marine ecosystems because it invades, out-competes, and eliminates native algae, seagrasses, kelp forests, and reef systems by forming a dense blanket of growth on mud, sand, or rock surfaces. It can grow in shallow coastal lagoons as well as in deeper ocean waters and reach up to nine feet in length.

Caulerpa has not been found within Newport Bay despite intensive underwater searches. Newport Bay has been designated as a *Caulerpa*-free system (National Marine Fisheries Service 2001 revised 2003). This species was not observed at the project site in October 2003, March 2004, October 2007, or August 2008.

Jurisdictional Waters and Wetlands

Based on MBA's jurisdictional assessment during the field survey, the project site overlaps with Newport Harbor, a traditionally navigable water that is considered jurisdictional by regulatory agencies. A Delineation of Jurisdictional Waters and Wetlands is required in order to document potential impacts to any waters or wetlands that may require a permit. Based on this assessment for the proposed project site, the shallow marine habitat within Newport Harbor that overlaps with the project site boundary falls under the jurisdiction of the USACE pursuant to Section 10 of the Rivers and Harbors Act, RWQCB pursuant to Section 401 of the CWA, and the City of Newport Beach

CLUP pursuant to the CCA. Based on a review of the preliminary design for the proposed marina and existing topographic elevations, the project site includes approximately 1.20 acres of intertidal coastal wetland and approximately 0.10 acres of subtidal coastal wetland.

5.3.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, the following questions are analyzed and evaluated to determine whether impacts to biological resources are significant environmental effects. Would the project:

- a.) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b.) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c.) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d.) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of wildlife nursery sites?
- e.) Conflict with any local policies or ordinances protecting biological resources, such as a tree-preservation policy or ordinance?
- f.) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.3.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Effect on Sensitive Species

Impact 5.3-A:	The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
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Project-Specific Analysis

No federally or state-listed terrestrial species are present on the site, and no suitable habitat for any federally or state-listed species is present on the site. Therefore, no impacts are expected to occur to any terrestrial sensitive species.

Marine biological habitats and resources (plants, invertebrates, fishes, marine mammals, seabirds, state- and federally listed marine species and sensitive habitats) have a potential to be affected by marina-construction-related activities. These activities are required to deepen portions of the shoreline that will be connected to part of the marina project that will be land-excavated.

Demolition and construction tasks for the project have aspects that could potentially affect Newport Harbor marine resources. Particular aspects of this project that have a potential to degrade water quality and the quality of local marine resources include hydrology and site runoff, visitor use, and construction and operation of a marina. Implementation of the proposed project may alter the existing drainage pattern of the site. In the short term, construction activities may result in siltation and erosion as well as potential fuel-oil spills. These could result in a decrease in water quality and an increase in turbidity and sedimentation as it relates to the amount of pollution flowing to Newport Bay and the ocean.

Turbidity may also increase as a result of demolition, grading, and construction of the marina, as these activities will produce dust from the operation of construction equipment and vehicles on the site. During high-velocity wind conditions, this dust might be transported into Newport Harbor with prevailing northwest winds, or offshore across the peninsula and to the ocean environment during Santa Ana wind conditions. The addition of dust would result in a short-term, less-than-significant impact that would form a light coating of sediment on the water depending on the velocity and duration of the wind event. The deposition of fine dust in the project site could potentially result in a short-term increase of water turbidity and a reduction in photosynthetic processes. Such a reduction would result in a slight decrease in photosynthetic activity of bay and ocean phytoplankton. However, there would be no long-term impacts to benthic resources resulting from an increase of dust settling on the water.

Typical pollutants generated during demolition and marina-construction-related activities could include heavy metals, toxic chemicals, waste materials and debris, fuel, lubricants, and other toxins related to construction equipment and its maintenance. If these pollutants enter the bay through airborne or water-borne transport methods, then water quality degradation and potential adverse impacts to marine life could occur, including reduced viability, tissue contamination, and a short-term and/or long-term effect on plankton, fish, and benthic resources.

Long-term water quality within the proposed marina will be governed by its flushing capacity (Everest International Consultants, Inc. 2008). Water quality analyses conducted by Everest indicated that tidal flushing rates would be poor and that the flushing capacities are well below the EPA

guidelines, which suggest adequate tidal flushing to maintain water quality of marina basins requires flushing reductions (the amount of a conservative substance that is flushed from the basin) ranging from 70 percent to 90 percent over a 24-hour period.

Inadequate tidal flushing in the marina basin would result in lowered dissolved oxygen levels, higher water temperatures, poor water transparency, potential eutrophication (a process where water bodies receive excess nutrients that stimulate excessive plant growth), and increased sedimentation. Poor tidal flushing would also exacerbate water quality issues in this region of the bay since the tidal flushing rate in this part of the harbor is already poor (30 days) outside the proposed marina in front of the swimming beach and the American Legion Post 291 Marina.

Poor tidal flushing within the marina would result in a significant, long-term impact on Newport Harbor water quality and would severely limit the colonization of marina habitats by plants, invertebrates, and fish.

Marine Birds. Brown pelicans and California least terns may occasionally forage in Newport Harbor waters in the general vicinity of marina excavation between March and late September. Turbidity plumes that would spread away from the dredge area could potentially affect their foraging behavior by limiting their ability to see their prey (juvenile bait fish), which could result in a locally significant impact to endangered species. Brown pelicans and California least terns may also react to marina-construction noise. These individuals will respond to construction disturbances by altering their normal foraging behaviors to find their prey and will avoid the immediate areas of dredging and excavation. No direct mortality of endangered seabirds will result from the dredging or excavation.

Marine Mammals. California sea lions have a potential to be present during the dredging period. Dredging is expected to have a less-than-significant impact on individuals that may be in the general dredging vicinity. In all likelihood, individuals would avoid the dredging operation, and although individuals may be curious, there is a low potential for harm to an individual or the population within Newport Bay. To date, there are no records of sea lions being harmed by the Upper Newport Bay dredging operation or the transport of dredge material by barges and tugs through Newport Harbor. Although sea lions may occasionally swim into the marina, they are not expected to haul out if measures are taken to deter their presence.

Neither Bottlenose dolphin nor California gray whales are expected to be within the dredge project area, precluding impacts to these species. No marine mammals will be impacted by any construction activity for the marina.

Cumulative

The proposed project could affect marine biological habitats and resources due to construction activities. These potential effects could result from turbidity impacts and could contribute to significant cumulative impacts to marine biological habitats and resources.

Mitigation Measures*Project Specific*

Implementation of Mitigation Measures MM 5.7-A.1 and MM 5.7-A.2 is required, in addition the following mitigation measures will reduce or eliminate pollutants that would affect water quality and marine resources.

MM 5.3-A.1 A construction and post-construction marine biological mitigation monitoring plan will be prepared that will include pre-construction, construction, and post-construction monitoring of the health of marine life at the project site and a final determination of areas impacted by the project. These monitoring programs shall be implemented to ensure that Newport Harbor water quality and marine resources are being protected through the implementation of a Marina Management Plan. This monitoring program shall include monitoring of the marina basin and the channel waters in front of the sand beach prior to, during, and following marina construction for a one year period. If there are no observable, adverse impacts during the first year, then all monitoring will be deemed complete. If adverse impacts are observed, the mitigation measures will be re-evaluated and implemented. Monitoring will occur and cease once there are no observable impacts, up to a period of five years. If it is determined that Newport Harbor water quality or marine life have been degraded as a result of the operation of the marina, then adaptive management techniques shall be implemented to protect the bay's water quality and marine resources.

Cumulative

Implementation of Mitigation Measures MM 5.7-A.1, MM 5.7-A.2, MM 5.3-A.1 and MM 5.3-A.2 are required.

Level of Significance After Mitigation*Project-specific*

Less than significant.

Cumulative

Less than significant

Soft-Bottom or Estuarine Habitat

Impact 5.3-B: The project would have a substantial adverse effect on estuarine habitat or other sensitive natural community identified in local or regional plans, policies, and

regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Project-Specific Analysis

Soft-bottom habitat or estuaries are considered Habitats of Particular Concern (HAPC) for various federally managed fish species within the Pacific Groundfish Fisheries Management Plan of the Magnuson-Stevens Fishery Conservation and Management Act (1997). Excavation and dredging activities for the proposed marina will result in the onsite loss of 0.9 acres of supra-tidal (terrestrial), non-marine habitat and 0.66 acres of sandy intertidal habitat for the onsite creation of 1.56 acres of shallow water habitat. The proposed marina will be enclosed by a cement groin wall and include 18 pilings that will create a substantial amount of hard bottom habitat that could support species of marine algae and invertebrates typical of Newport Bay.

The onsite loss of 0.66 acres of sandy intertidal habitat would change from intertidal seabird and shorebird roosting and foraging habitat and Habitat Area of Particular Concern (HAPC) to shallow water habitat for benthic invertebrates, fishes, water birds, and HAPC. The loss of intertidal habitat is considered significant.

In addition, the proposed excavation and dredging activities for the proposed marina will result in the depth modification of 0.1 acre of onsite shallow water habitat and 0.72 acre of offsite shallow water habitat. This impact to shallow water habitat is considered less than significant

Cumulative

The proposed project would contribute to the cumulative loss of sandy intertidal habitat. This contribution to the cumulative impact to sandy intertidal habitat is considered significant.

Mitigation Measures

Project Specific

- 5.3-B.1** The loss of 0.66 acre of sandy intertidal habitat will be mitigated at an acceptable location within Newport Bay or another southern California embayment based upon a ratio determined by the project proponent and U.S. Army Corps of Engineers (ACOE), National Marine Fisheries Service (NMFS), and the California Department of Fish and Game (CDFG) during the project permitting phase with the knowledge that the project has an overall net gain 0.9 acre of wetland habitat (shallow water habitat).
- 5.3-B.2** In accordance with Public Resources Code 21081.6, a mitigation monitoring plan must be developed to monitor the success of the HAPC mitigation area. A five-year monitoring program is recommended.

Cumulative

Implementation of Mitigation Measures MM 5.3-B.1 and MM 5.3-B.2 is required.

Level of Significance After Mitigation

Less than significant.

Cumulative

Less than significant.

Open-Bay Environment

Impact 5.3-C: **The project would not have a substantial adverse effect on open-bay environment as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

Project-Specific Analysis

Demolition, grading, and construction of the marina will produce dust from the operation of construction equipment and vehicles on the site that may affect the open-bay environment. During high-velocity wind conditions, this dust might be transported into Newport Harbor with prevailing northwest winds or offshore across the peninsula and to the ocean environment during Santa Ana wind conditions. The addition of dust would result in a short-term, less-than-significant impact that would form a light coating of sediment on the water depending on the velocity and duration of the wind event. The deposition of fine dust in the project site could potentially result in a short-term increase of water turbidity and a reduction in photosynthetic processes. Such a reduction would result in a slight decrease in photosynthetic activity of bay and ocean phytoplankton. Because of the expected short duration of any wind events that might generate dust, the expected effect will be less than significant on water quality and marine resources.

Cumulative

The addition of dust due to wind conditions to the open-bay environment would result in short-term turbidity. There would be no long-term impacts to benthic resources resulting from an increase of dust settling on the water. Therefore, the proposed project's contribution to potential cumulative impacts to the open-bay environment is considered less than cumulatively considerable.

Mitigation Measures*Project Specific*

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation*Project-Specific*

Less than significant

Cumulative

Less than significant.

California Halibut Nursery Sites

Impact 5.3-D: **The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of California halibut nursery sites.**

Project-Specific Analysis

The California halibut is a sensitive marine fish but does not have official status as such. This species is an important commercial and sport fish resource that uses Newport Harbor as nursery habitat. The project site does not support a large population of California halibut, although some may be present. Dredging activity will temporarily degrade soft-bottom subtidal habitat where this species is present, but individuals will move to non-impacted areas, precluding any direct or indirect adverse impacts. Proposed project construction activities will not result in the mortality of any individuals. Once dredging and the marina basins are completed, 0.9 acres of additional soft-bottom and open-water habitat will be available for this species provided that tidal flushing and water quality within the marina basin is maintained to support marine life. Habitat degradation will be a short-term, less-than-significant impact on California halibut.

Cumulative

The proposed project would not contribute to potential cumulative impacts to the California halibut nursery sites.

Mitigation Measures

Project-Specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significant after Mitigation

Project Specific

Less than significant

Cumulative

Less than significant.

Local Policies or Ordinances Protecting Biological Resources

Impact 5.3-E: **The project could interfere substantially with the movement of any native resident or wildlife species or with established native resident or migratory wildlife corridors.**

Project-Specific Analysis

A number of common bird species have the potential to nest on the project site. Project construction activities have the potential to impact nests within the project site. This potential impact is considered significant.

The project site does not provide wildlife movement corridors because the site does not provide narrow connectivity between large areas of open space on a local or regional scale. Therefore, the project would result in no impacts to wildlife movement corridors.

Cumulative Analysis

Since the proposed project has the potential to impact nests on the project site, the project would contribute to potential significant cumulative impacts on nesting birds. The project would not contribute to cumulative impacts to wildlife movement corridors.

Mitigation Measures

Project-Specific

MM 5.3-E.1 Removal of vegetation or other potential nesting-bird habitat shall be conducted outside of the avian nesting season (February through August). If removal of vegetation occurs during the avian nesting season, a preconstruction nesting bird survey shall be conducted no more than 7 days prior to this activity. If birds are found to be nesting within or near the impact area, a buffer where no construction activities would occur would need to be established by a qualified biologist. This biologist would also determine when the nest is no longer active, at which time construction could resume.

Cumulative

Implementation of Mitigation Measure MM 5.3-E.1 is required.

Level of Significance After Mitigation

Project-Specific

Less than significant,

Cumulative

Less than significant.

Conservation Plans

Impact 5.3-F: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Project-Specific Analysis

The project site is not located in any Habitat Conservation Plan or any other approved local, regional, or state conservation plan. Therefore, the project will result in no impacts to a habitat conservation plan

Cumulative

The project site is not located in any Habitat Conservation Plan. Therefore, the proposed project would not contribute to potential cumulative impacts to any Habitat Conservation Plan.

Mitigation Measures

Project Specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance after mitigation

Project Specific

No impact.

Cumulative

No impact.

