4.7 BIOLOGICAL RESOURCES

The purpose of this section is to identify existing biological resources on-site and in the vicinity, analyze potential Project-related impacts on these resources (including sensitive species), and recommend mitigation to avoid or substantially lessen the significance of impacts that are identified. Information in this Section is based on the *Biological Resource Reconnaissance Survey Report* prepared by the Chambers Group, Inc. (January 2004 [updated September 2005]), which is in Appendix B (Terrestrial Biological Resources Assessment); and the *Marine Oceanographic and Biological Assessment,* prepared by MBC Applied Environmental Sciences (March 2003 [updated September 2005]), which is in Appendix C (Marine Biological Resources Assessment).

This section describes the biological character of the Harbor in terms of vegetation, flora, wildlife, wildlife habitats, and marine resources, and analyzes the biological significance of the Harbor in view of Federal, State, and local laws and policies. Planning Areas 1 through 7 were surveyed for the *Terrestrial Biological Resources Assessment*, with separate surveys conducted for the off-site areas (the South Coast Water District (SCWD) Lot and the Selva Parking Lot). The Dana Point Harbor Revitalization Project (Project) area is identified below as the "Harbor," unless otherwise specified by Planning Area.

4.7.1 EXISTING CONDITIONS

4.7.1.1 GENERAL SITE CONDITIONS

ON-SITE CONDITIONS

The topography of Dana Point Harbor (Harbor) is generally flat, gently sloping towards the Pacific Ocean. The elevation of the Harbor ranges from approximately 0 feet to 50 feet above mean sea level (msl). It is located on the USGS Dana Point 7.5-minute topographic quadrangle in Sections 22 and 23 of T.8S, R.8W.

OFF-SITE CONDITIONS

The Selva Parking Lot is located west of I-5 along Pacific Coast Highway (just south of Niguel Road) and can be accessed via Selva Road. This Lot is used by the general public to access nearby Strand Beach Park and Salt Creek Beach Park. The SCWD Lot is located west of I-5 and north of Pacific Coast Highway (adjacent to San Juan Creek), and can be accessed via Stonehill Road. The SCWD Lot is typically used as a staging area for City construction and maintenance projects.

4.7.1.2 BIOLOGICAL SITE CONDITIONS

TERRESTRIAL BIOLOGICAL RESOURCES

Tree Survey

All of the trees within the Harbor and Off-Site areas, including the native trees, were planted as landscape, ornamental trees. In a tree survey conducted for the Project,

approximately 525 eucalyptus (*Eucalyptus* sp.) trees, a non-native species, were observed throughout the Harbor; refer to Exhibit 4.7-1 (Map of Native Trees and Sensitive Bird Areas). Approximately 175 of the eucalyptus trees were large and had good ecological or aesthetic value; the remaining trees were small or leggy, with little canopy cover. Approximately 40 native California sycamore (*Platanus racemosa*) trees were observed east of Island Way (Planning Areas 1 through 3). The sycamore trees throughout the Harbor were in their winter dormant stage, but were large and appeared healthy. There were approximately 25 pines (*Pinus* sp.) throughout the Harbor, which were generally less than 20 feet in height. Additionally, there are Norfolk Island Pines (*Araucaria heterophylla*) located near the Youth and Group Facility. Other common trees included coral trees (*Erythrina* sp.), bay fig (*Ficus macrophylla*), and various species of palm.

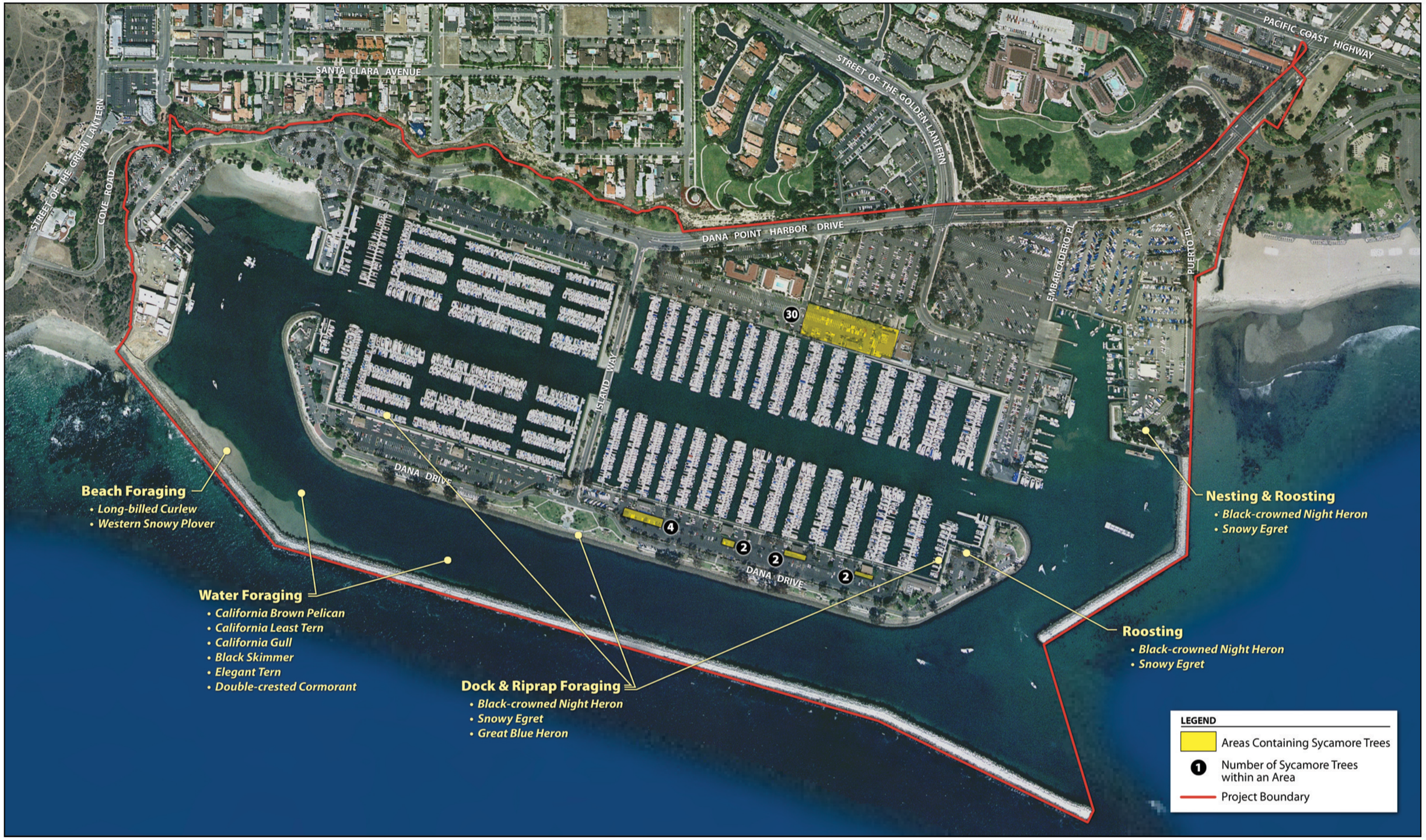
Trees in the Selva Parking lot consist mainly of non-native bay fig, myoporum (*Myoporum laetum*), acacia (*Acacia* sp.), and a few small native willows (*Salix* sp.).

Existing Vegetation

Most of the Harbor is covered with asphalt parking lots, commercial buildings, and scattered ornamental landscaping. The vegetation community subtypes in the developed areas is nonurban, commercial, and ornamental landscaping. Ornamental landscaping consists of planted and maintained trees, shrubs, flowers and turf grass. The Off-Site areas are developed (Selva Parking Lot) and disturbed (SCWD Lot). The SCWD Lot is characterized by a lack of vegetation or dominated by ruderal vegetation, such as black mustard (*Brassica nigra*). Very few native species were observed on any of the sites, with the exception of the native plants installed in the native plant garden at the Ocean Institute in Planning Area 6 and the coastal bluff scrub within Planning Area 7. The Harbor and Off-Site areas are dominated by non-native plant species that are typically used in ornamental landscaping.

Special-Status Plants

The literature review resulted in a list of 19 sensitive plant species that have the potential to occur on or within the vicinity of the Harbor or Off-Site areas. The current status of each of the sensitive species and their potential to occur on the Harbor or Off-Site areas are summarized in Table 4.7-1 (Sensitive Plant Species Potentially Occurring Within the Harbor or Off-Site Areas). Appendix B contains a summary of the 19 sensitive plant species identified in the literature review as having a potential to occur within the Harbor or Off-Site areas.



Source: Chambers Group, Biological Resources Reconnaissance Survey Report, January 2002.
MBC, Marine Oceanographic and Biological Assessment, March 2003.

RBF CONSULTING PLANNING ■ DESIGN ■ CONSTRUCTION

MAP OF NATIVE TREES AND SENSITIVE BIRD AREAS

DANA POINT HARBOR REVITALIZATION PROJECT
PROGRAM ENVIRONMENTAL IMPACT REPORT

EXHIBIT 4.7-1

Table 4.7-1
SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING WITHIN THE HARBOR OR OFF-SITE AREAS

Species	Habitat and Distribution	Flower Season	Status Designation	Potential for Occurrence
Aphanisma blitoides Aphanisma	Annual herb. Occurs in coastal scrub, coastal dunes, and coastal bluff scrub in sandy or clay soils. Up to 1,000 feet in elevation.	March – June	Fed: None CA: None CNPS: 1B R-E-D: 2-2-2	Absent: Lack of suitable on-site habitat.
Atriplex coulteri Coulter's saltbush	Perennial herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland on alkaline or clay soils. From 10 to 1,510 feet in elevation.	March – October	Fed: None CA: None CNPS: 1B R-E-D: 2-2-2	Absent: Lack of suitable on-site habitat.
Atriplex pacifica South coast saltscale	Annual herb. Occurs in chenopod scrub, coastal dunes, coastal scrub, coastal bluff scrub, and playas, often in alkali soils. Up to 1,640 feet in elevation.	March – October	Fed: None CA: None CNPS: 1B R-E-D: 3-2-2	Absent: Lack of suitable on-site habitat.
Atriplex parishii Parish's brittlescale	Annual herb. Occurs in chenopod scrub, vernal pools, and playas, usually, on drying alkali flay with fine soils. From 10 to 6,230 feet in elevation.	June – October	Fed: None CA: None CNPS: 1B R-E-D: 3-3-2	Absent: Lack of suitable on-site habitat.
Atriplex serenana var. davidsonii Davidson's saltscale	Annual herb. Occurs in coastal bluff scrub and coastal scrub on alkaline soils. From 10 to 820 feet in elevation.	April – October	Fed: None CA: None CNPS: 1B R-E-D: 3-2-2	Absent: Lack of suitable on-site habitat.
Calochortus weedii var. intermedius Intermediate mariposa lily	Perennial bulbiferous herb occurring in chaparral, coastal scrub, and valley and foothill grassland. Often in rocky soils. From 400 to 2,805 feet in elevation.	May – July	Fed: None CA: None CNPS: 1B R-E-D: 2-2-3	Absent: Lack of suitable on-site habitat.
Chaenactis glabriuscula var. orcuttiana Orcutt's pincushion	Annual herb. Occurs in coastal bluff scrub and coastal dunes. From 10 to 330 feet in elevation.	January – August	Fed: None CA: None CNPS: 1B R-E-D: 2-3-2	Absent: Lack of suitable on-site habitat.
Comarostaphylis diversifolia ssp. diversifolia Summer holly	Evergreen shrub. Occurs in chaparral and mixed chaparral. Occasionally occurs in post-burn areas. From 100 to 1,800 feet in elevation.	April – June	Fed: None CA: None CNPS: 1B R-E-D: 2-2-2	Absent: Lack of suitable on-site habitat.
Dudleya blochmaniae ssp. blochmaniae Blochman's dudleya	Perennial herb. Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland, on rocky, often clay or serpentinite soils. Elevation 1 to 1,476 feet.	April – June	Fed: None CA: None CNPS: List 1B R-E-D: 2-3-2	Absent: Lack of suitable on-site habitat.

Table 4.7-1 [continued]
SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING WITHIN THE HARBOR OR OFF-SITE AREAS

Species	Habitat and Distribution	Flower Season	Status Designation	Potential for Occurrence
Dudleya multicaulis Many-stemmed dudleya	Perennial herb. Occurs in coastal scrub, chaparral, and valley and foothill grassland, usually on clay soils or grassy slopes. Up to 2,590 feet in elevation.	April – July	Fed: None CA: None CNPS: 1B R-E-D: 1-2-3	Absent: Lack of suitable on-site habitat.
Dudleya stolonifera Laguna Beach dudleya	Stoloniferous perennial herb. Occurs in coastal scrub, chaparral, cismontane woodland, and valley and foothill grassland on rocky soils. Endemic to Orange County. From 30 to 850 feet in elevation.	May – July	Fed: THR CA: THR CNPS: 1B R-E-D: 3-3-3	Absent: Lack of suitable on-site habitat.
Euphorbia misera Cliff spurge	Perennial shrub. Occurs in coastal bluff scrub and coastal scrub on rocky soils. From 30 to 1,640 feet in elevation.	December – August	Fed: None CA: None CNPS: 2 R-E-D: 2-2-1	Absent: Lack of suitable on-site habitat.
Hordeum intercedens Vernal barley	Annual herb. Occurs in coastal scrub, coastal dunes, vernal pools, and valley and foothill grasslands, often in saline flats or depressions. From 15 to 3,280 feet in elevation.	March – June	Fed: None CA: None CNPS: 3 R-E-D: ?-2-2	Absent: Lack of suitable on-site habitat.
Horkelia cuneata ssp. puberula Mesa horkelia	Perennial herb. Occurs in coastal scrub, chaparral and cismontane woodland on sandy or gravelly soils. From 230 to 2,660 feet in elevation.	February – September	Fed: None CA: None CNPS: 1B R-E-D: 2-3-3	Absent: Lack of suitable on-site habitat.
Isocoma menziesii var. decumbens Decumbent goldenbush	Shrub. Occurs in coastal scrub and chaparral on sandy, often disturbed soils. From 30 to 445 feet in elevation.	April – November	Fed: None CA: None CNPS: 1B R-E-D: 2-2-2	Absent: Lack of suitable on-site habitat.
Lasthenia glabrata ssp. coulteri Coulter's goldfields	Annual herb. Occurs in coastal saltmarshes and swamps, valley and foothill grasslands, playas, sinks, and vernal pools. Up to 4,600 feet in elevation.	February – June	Fed: None CA: None CNPS: 1B R-E-D: 2-3-2	Absent: Lack of suitable on-site habitat.
Nama stenocarpum Mud nama	Annual to perennial herb. Occurs in marshes and swamps, and along lake margins and riverbanks. From 15 to 1,640 feet in elevation.	January – July	Fed: None CA: None CNPS: 2 R-E-D: 3-2-1	Absent: Lack of suitable on-site habitat.
Quercus dumosa Nuttall's scrub oak	Evergreen shrub. Occurs in closed-cone coniferous forest, chaparral, and coastal scrub on sandy soils to clay loam. From 50 to 1,310 feet in elevation.	February – April	Fed: None CA: None CNPS: 1B R-E-D: 2-3-2	Absent: Lack of suitable on-site habitat.

Table 4.7-1 [continued]
SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING WITHIN THE HARBOR OR OFF-SITE AREAS

Species	Habitat and Distribution	Flower Season	Status Designation	Potential for Occurrence
Verbesina dissita Crownbeard	Perennial herb. Occurs in coastal scrub and chaparral on gravelly soils. From 150 to 690 feet in elevation.	April – July	Fed: THR CA: THR CNPS: 1B R-E-D: 3-3-2	Absent: Lack of suitable on-site habitat.

Federal designations: (Federal Endangered Species Act, [U.S. Fish and Wildlife Service]).
END: Federally listed, endangered.
CAN: Proposed federal listed, endangered.
THR: Federally listed, threatened.
State designations: (California Endangered Species Act, California Department of Fish and Game [CDFG])
END: State-listed, endangered.
THR: State-listed, threatened.
RARE: State-listed as rare.
California Native Plant Society (CNPS) designations:
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list.
CNPS R-E-D Code:
Rarity
1: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2: Occurrence confined to several populations or one extended population.
3: Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.
Endangerment
1: Not endangered.
2: Endangered in a portion of its range.
3: Endangered throughout its range.
Distribution
1: More or less widespread outside California.
2: Rare outside California.
3: Endemic to California (i.e., does not occur outside California).

Source: General references: Hickman (ed.) 1993; Munz 1974; CNPS 2004; CNDDB 2004.

Within the Harbor, southern coastal bluff scrub occurs along the northern side of Dana Point Harbor Drive, along the bluffs within Planning Area 7. This area is not easily accessible to the public. The vegetation on the bluffs consists of coastal bluff scrub species, including coast cholla (*Opuntia prolifera*), California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), California bush sunflower (*Encelia californica*) and dudleya (*Dudleya* sp.). Sensitive plant species that have a potential to occur in this plant community, include aphanisma, Coulter's saltbush, south coast saltscale, Blochman's dudleya, and cliff spurge. Implementation of the Dana Point Harbor Revitalization Project would designate Planning Area 7 as a conservation area; thus, no development would occur in this area. The nearest construction areas for the Project would include the Dana Point Harbor Drive realignment, the Youth and Group Facility expansion, and the Marina Inn expansion. Construction in these areas would not encroach into the native habitat in Planning Area 7 and would not impact potentially present sensitive species within Planning Area 7.

Wildlife

Butterflies

Butterfly species were not observed within the Harbor or Off-Site areas during the survey. Some common butterfly species that are expected to occur within the Harbor or Off-Site areas include cabbage white (*Artogeia rapae*) and painted lady *(Vanessa cardui).*

Amphibians

No amphibian species were heard or observed within the Harbor or Off-Site areas during the survey. Amphibians are not expected to occur within the Harbor or Off-Site areas because of the lack of suitable habitat.

Reptiles

Two reptile species, the western fence lizard *(Sceloporus occidentalis*) and the side-blotched lizard *(Uta stansburiana*), were observed within the Harbor and Off-Site areas during the survey. However, because of the developed nature of the Harbor and Off-Site areas and surrounding areas, very few reptile species are expected to occur within these areas.

Birds

A total of 30 different avian species were observed during the survey. Birds observed within the Harbor include the lesser goldfinch *(Carduelis psaltria)*, yellow-rumped warbler *(Dendroica coronata*), house sparrow *(Passer domesticus)*, western gull *(Larus occidentalis),* red-tailed hawk *(Buteo jamaicensis*), black-crowned night heron *(Nycticorax nycticorax),* Common loon (*Gavia immer*), California brown pelican (*Pelecanus occidentalis californicus*), Double-crested cormorant (*Phalacrocorax auritus*), California gull (*Larus californicus*), and snowy egret *(Egretta thula)*.

Species observed within the Selva Parking Lot include the mourning dove *(Zenaida macroura)*, house finch *(Carpodacus mexicanus)*, California towhee *(Pipilo crissalis)*, and dark-eyed junco *(Junco hyemalis*). Species observed within the SCWD Lot include the American crow *(Corvus brachyrhynchos)*, white-crowned sparrow *(Zonotrichia leucophrys),* and Anna's hummingbird *(Calypte anna*).

Mammals

Three mammal species were observed or detected during the surveys. The species observed within the Harbor and Off-Site areas include the California ground squirrel (*Spermophilus beecheyi*) and domestic cat *(Felis catus)*.

A Virginia opossum (*Didelphis virginiana)* carcass was observed within the Selva Parking Lot. No mammals were identified at the SCWD Lot.

SENSITIVE TERRESTRIAL BIOLOGICAL RESOURCES

The literature review and assessment of the various habitat types within the Harbor and Off-Site areas identified 69 sensitive wildlife species that could potentially occur in the vicinity of the Harbor or Off-Site areas. Fifteen of these species are listed as Federal- and/or State-endangered or threatened, or proposed endangered or threatened. Of the 69 sensitive wildlife species, 6 were present (5 of which are listed species), 2 have a high potential to occur, 10 have a moderate potential to occur, and 53 have a low potential to occur. Table 4.7-2 (Sensitive Wildlife Species Potentially Occurring Within the Harbor or Off-Site Areas), provides a list of the sensitive wildlife species that either occur or have a moderate to high potential to occur within the Harbor or Off-Site areas. Refer to Appendix B for a complete table of all the sensitive wildlife species that have a potential to occur in the Harbor or Off-Site areas.

Table 4.7-2
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING WITHIN THE HARBOR OR OFF-SITE AREAS

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat	Comments
DANAIDAE	MILKWEED BUTTERFLIES				
Danaus plexippus	Monarch butterfly	*	H	Winter roost sites extend along the coast from northern Mendocino to Baja California among wind-protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Suitable habitat (eucalyptus trees) is present within the Harbor. Closest known occurrence located approximately 0.5-1 mile east of the Harbor at Doheny State Beach.
CLASS AVES	*BIRDS*				
GAVIIDAE	LOONS				
Gavia immer	Common loon (nesting)	(FSC), CSC	P	Nests on wooded lakes. Occurs regularly in winter offshore and in coastal estuaries of southern California. Designated a CSC because of a decline in the availability of breeding habitats in California.	Observed during the biological survey within the western portion of the Harbor. Suitable nesting habitat is not present. However, the Harbor is within the species winter range and there is suitable foraging habitat present.
PELECANIDAE	PELICANS				
Pelecanus erythrorhynchos	American white pelican (nesting colony)	CSC	H	Inhabits inland lakes as well as salt ponds and marine habitats. They require flat or gently sloping nest-sites with loose soil, which lack shrubs or other obstructions that would impede flight take-off.	Nesting colonies are not present. However, the Harbor is within the species range and there is suitable roosting and foraging habitat present within the Harbor.

Table 4.7-2 [continued]
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING WITHIN THE HARBOR OR OFF-SITE AREAS

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat	Comments
Pelecanus occidentalis californicus	California brown pelican (nesting colony)	FE, SE	P	Found in estuarine, marine, subtidal and marine pelagic waters along the California coast.	Observed within the Harbor during the biological survey. Nesting colonies are not present. However, the Harbor is within the species range and there is suitable roosting and foraging habitat present on the jetty's throughout the Harbor.
PHALACROCORACIDAE	CORMORANTS				
Phalacrocorax auritus	Double-crested cormorant (rookery site)	CSC	P	Frequently found along the coast on rocky cliffs, and beaches. Also inhabits inland lakes and rivers. Their nests are a large mass of sticks in tress, bushes, or marsh on lake margins, or of sticks or seaweed on island or sea cliffs.	Observed throughout the Harbor during the biological survey Rookery sites are not present. However, the Harbor is within the species range and there is suitable roosting and foraging habitat present.
ARDEIDAE	HERONS, EGRETS AND BITTERNS				
Egretta thula	Snowy egret (rookery)	(FSC)	P	Widespread in California along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields.	Observed within the Harbor during the biological survey Rookery sites are present. However, the Harbor is within the species range and there is suitable foraging and nesting habitat present in the eastern portion of the Harbor.
Nycticorax nycticorax	Black-crowned night heron	*	P	Typically the colonies are located near water, but they are known to occur some distance from water if other conditions are suitable.	Black-crowned herons are year round residents in Dana Point Harbor. Although they are resident throughout southern California, large rookeries, as the one located at Doheny State Beach, are considered a rare resource.
ACCIPITRIDAE	HAWKS, KITES, AND EAGLES				
Accipiter cooperii	Cooper's hawk (nesting)	CSC	M	Prefers open grasslands and woodland margins with riparian vegetation and trees for nesting.	The Harbor is within the species range and there is suitable nesting and foraging habitat present in the trees on the Harbor.
Accipiter striatus	Sharp-shinned hawk (nesting)	CSC	M	Breeds in dense, mid-elevation forested habitats such as ponderosa pine, black oak, riparian deciduous, and mixed conifer. Requires north facing slopes and plucking perches.	The Harbor is within the species range and although there is no suitable nesting habitat, there is limited suitable foraging habitat present on the Harbor.

Table 4.7-2 [continued]
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING WITHIN THE HARBOR AND OFF-SITE AREAS

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat	Comments
Circus cyaneus	Northern harrier (nesting)	CSC	M	Forages in open areas, fields, saltmarshes. Prefers to nest on or near the ground, sometimes over shallow water.	The Harbor is within the species range and although there is no suitable nesting habitat, there is limited suitable foraging habitat present on the Harbor.
Pandion haliaetus	Osprey (nesting)	CSC	M	Forages over open water habitats. Nests in bare trees, human structures, or cliffs.	The Harbor is within the species range and there is suitable nesting and foraging habitat present within the Harbor.
FALCONIDAE	FALCONS				
Falcon peregrinus anatum	American peregrine falcon (nesting)	SE	M	Found in riparian areas and coastal and inland wetlands. Known to frequent bodies of water in open areas with cliffs and canyons nearby for cover. Nests and forages near or over water.	The Harbor is within the species range and although there is no suitable nesting habitat, there is suitable foraging habitat present within the Harbor.
CHARADRIIDAE	PLOVERS AND RELATIVES				
Charadrus alexandrinus nivosus	Western snowy plover (coastal nesting population)	FT, CSC	M	Found on sandy beaches on marine and estuarine shores. It can also be found on salt pond levees and the shores of large alkali lakes. It requires sandy, gravelly, or friable substrate for nesting.	Suitable nesting habitat is not present. The Harbor is within the species range, and there is limited suitable wintering habitat present within the Harbor.
LARIDAE	SKUAS, GULLS, TERNS, SKIMMERS				
Larus californicus	California gull (nesting)	CSC	P (Absent as a nesting species)	Common visitor fall through spring. Occasional in summer, on mudflat habitats and open water.	Observed in the Harbor during the biological survey. The Harbor is within the species range and there is suitable habitat present.
Rynchops niger	Black skimmer (nesting)	CSC	M (Absent as a nesting species)	Forages in tidal channels, diked ponds, and generally undisturbed shallow waters. Nests on low islets, artificial sand flats, dry mudflats and dikes.	The Harbor is within the species range and there is water foraging habitat within the Harbor and Off-Site areas.
Sterna caspia	California least tern (nesting colony)	FE, SE	M (foraging only)	Migratory in California, arriving at breeding grounds in late April in Southern California. Breeding colonies are located along marine and estuarine shores.	Suitable nesting habitat is not present. The Harbor is within the species range and there is suitable foraging habitat present within the Harbor.

Table 4.7-2 [continued]
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING WITHIN THE HARBOR AND OFF-SITE AREAS

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat	Comments
Sterna elegans	Elegant tern	(FSC), CSC	M	Fairly common post-breeding summer and early fall visitor from Mexico. Prefers seacoast, estuaries, bays and harbors.	The Harbor is within the species range and there is suitable habitat present within the Harbor.
EMBERIZIDAE	SPARROWS				
Passerculus sandwichensis rostratus (wintering)	Large-billed savannah sparrow	CSC	M	Winters along the coast within saltmarshes, on beaches along the strand line, on reefs, and breakwaters. Breeds along the Colorado River delta.	The Harbor is within the species range and there is limited suitable habitat present within the Harbor.

Status Codes
Federal
FE = Federally listed; Endangered
FT = Federally listed; Threatened
(FSC) = Federal Species of Concern; not an active term, and is provided for informational purposes only.
FPD = Federally Proposed for Delisting
State
ST = State listed; Threatened
SE = State listed; Endangered
CSC = California Species of Special Concern

* – Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or at a critical stage in their life cycle when residing in California; population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California; and taxa closely associated with a habitat that is declining in California (e.g., wetlands, riparian, old growth forest).

Potential for Occurrence (PFO)
M = Moderate Potential for Occurrence – There is a recent or historical record of the species within the Harbor or its immediate vicinity and/or a limited amount of suitable habitat associated with the species occurs within the Harbor or its immediate vicinity.
H = High Potential for Occurrence – There is both a recent or historical record of the species occurring within the Harbor or its immediate vicinity and the diagnostic habitat requirements strongly associated with the species occur within the Harbor or its immediate vicinity.
P = Species Present – The species was observed in the Harbor and Off-Site areas at the time of the survey.

Source: California Natural Diversity Data Base (CNDDB), USGS Dana Point and Laguna Beach quadrangles, 2004.

In the Harbor, large ornamental trees and bushes, riprap boulders, sandy and mudflat beaches, calm shallow waterways, and low docks provide habitats for birds with a wide variety of preferences for feeding, resting, and nesting. The Harbor supports a population of year-round residents, as well as seasonal visitors that may utilize the area for resting and foraging during migrations; refer to Exhibit 4.7-1. A limited number of migratory nesters may also occur. The Harbor avifauna is characterized by a large seasonal fluctuation in number of species and individuals, with the greatest diversity and numbers generally occurring during spring and fall migrations.

The following is a brief description of the biology of the sensitive wildlife species that occur or have a moderate to high potential to occur on the Harbor or Off-Site areas.

Refer to Appendix B for a description of all of the sensitive wildlife species that have the potential to occur within the Harbor or Off-Site areas.

- *Monarch Butterfly*. Overwintering roost sites of the monarch butterfly (Danas plexippus) extend along the coast from northern Mendocino to Baja California among wind-protected tree groves (eucalyptus, monterey pine, cypress) with nectar and water sources nearby. Suitable roosting habitat is present in eucalyptus trees within the Project site. Additionally, the Project site is within this species' overwintering range. Although suitable habitat (eucalyptus trees) is present within the Project site, the closest known occurrence is approximately 0.5 to 1 mile east of the Project site, at Doheny State Beach.

- *Common Loon.* The common loon (nesting) occurs regularly in the winter offshore and in coastal estuaries of southern California. The common loon was designated a CSC because of a decline in the availability of breeding habitats in California. There is no suitable nesting habitat present within the Harbor or Off-Site areas. However, the Harbor and Off-Site areas are within this species' winter range, and there is suitable foraging habitat present within these areas. Additionally, this species was observed in the Harbor during the biological survey. The common loon is present and would be expected to overwinter and forage in the waters adjacent to the Harbor and Off-Site areas, but this species would not be expected to nest in the Harbor or Off-Site areas.

- *American White Pelican.* The American white pelican (nesting colony) inhabits inland lakes as well as salt ponds and marine habitats. They require flat or gently sloping nest sites with loose soil that lacks shrubs or other obstructions that would impede flight take-off. There is no suitable nesting habitat present. However, the Harbor and Off-Site areas are within this species range and there is suitable foraging habitat present within the Harbor and Off-Site areas. The American white pelican has a high potential to forage in the waters adjacent to the Harbor and Off-Site areas, but there are no nesting colonies in the Harbor or Off-Site areas.

- *California Brown Pelican.* The California brown pelican (nesting colony) is found in estuarine, marine, subtidal and marine pelagic waters along the California coast. There is no suitable nesting habitat present. However, the Harbor and Off-Site areas are within this species' range, and there is suitable foraging habitat present within these areas. Additionally, this species was observed in the Harbor during the biological survey. The California brown pelican is present and forages in the waters adjacent to the Harbor and Off-Site areas, but there are no nesting colonies in the Harbor or Off-Site areas.

- *Double-Crested Cormorant.* The double-crested cormorant (rookery site) is frequently found along the coast on rocky cliffs and beaches and also inhabits inland lakes and rivers. Their nests are a large mass of sticks in trees, bushes, or marsh on lake margins, or of sticks or seaweed on island or sea cliffs. There is no suitable nesting habitat present. However, the Harbor and Off-Site areas are within this species' range, and there is suitable foraging habitat present within these areas. Additionally, this species was observed in the Harbor during the biological survey. The double-crested cormorant is

present and forages in the waters adjacent to the Harbor and Off-Site areas, but there are no rookeries located within the Harbor or Off-Site areas.

- *Snowy Egret.* The snowy egret (rookery) is widespread in California along the shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. There is no suitable nesting habitat present in the Harbor or Off-Site areas. However, the Harbor and Off-Site areas are within this species' range, and there is suitable foraging habitat present within these areas. Additionally, this species was observed throughout the Harbor during the biological survey. The snowy egret is present and forages within the Harbor and Off-Site areas, but there are no rookeries located within the Harbor or Off-Site areas.

- *Black-Crowned Night Heron (Regionally rare resource).* Black-crowned night herons forage at dusk and at night and roost during the day in trees and other dense foliage. They feed on a variety of fish, crustaceans, amphibians, reptiles, and, rarely, young birds. They are extremely adaptable and nest in large colonies in trees or other dense vegetation, even in urban areas. Typically the colonies are located near water, but they are known to occur some distance from water if other conditions are suitable. Black-crowned night herons are year-round residents in the Harbor, roosting in trees throughout the area during the day. Black-crown night herons nest in several trees on the east side of the Harbor and at Doheny State Park, adjacent to the Harbor. Although they are resident throughout southern California, large rookeries, such as the one located at Doheny State Beach, are considered a rare resource.

- *Cooper's Hawk.* The Cooper's hawk nests mainly in riparian growths of deciduous trees in canyon bottoms or river flood plains or live oaks. The Harbor and Off-Site areas are within this species' range, and suitable nesting and foraging habitat is present throughout these areas. Additionally, there are recent records of this species nesting in the immediate area surrounding the Harbor and Off-Site areas (according to a local resident). Cooper's hawk has a moderate potential for occurrence.

- *Sharp-Shinned Hawk.* The sharp-shinned hawk nests and forages in mixed woodlands. This species is a fairly common migrant and winter resident in California. The Harbor and Off-Site areas are within this species range and although there is no suitable nesting habitat, there is limited suitable foraging habitat present within these areas. The sharp-shinned hawk has a moderate potential for foraging within the Harbor or Off-Site areas.

- *Northern Harrier.* The northern harrier frequents fresh water and saltwater emergent wetlands, grasslands, and meadows. There is no suitable nesting habitat present in the Harbor or Off-Site areas. However, the Harbor and Off-Site areas are within this species' range, and there is limited suitable foraging habitat present in these areas. The northern harrier has a moderate potential for foraging within the Harbor or Off-Site areas, but this species is not expected to nest in these areas.

- *Osprey.* The osprey is associated strictly with large, fish-bearing waters, primarily in ponderosa pine and mixed conifer habitats. The Harbor and Off-Site areas are within this species' range, and there is suitable nesting and foraging habitat present within the Harbor and Off-Site areas. The osprey has a moderate potential for occurrence, but with the presence of so much human activity, it is unlikely this species would nest within the Harbor or Off-Site areas.

- *American Peregrine Falcon.* The American peregrine falcon nests on inaccessible mountain cliffs, prairie escarpments, and canyon walls. There is no suitable nesting habitat present within the Harbor or Off-Site areas. However, the Harbor and Off-Site areas are within this species' range, and there is limited suitable foraging habitat present within these areas. The American peregrine falcon has a moderate potential for foraging within the Harbor and Off-Site areas, but it is not expected to nest within these areas.

- *Western Snowy Plover.* The western snowy plover (coastal population) is found on sandy beaches, on marine and estuarine shores, and on the shores of large alkali lakes. The western snowy plover requires sandy, gravelly, or friable substrate for nesting. The Federal listing is reserved to the coastal population of this species. There is no suitable nesting habitat present within the Harbor or Off-Site areas. However, the Harbor and Off-Site areas are within this species' range, and there is limited suitable wintering habitat present within these areas. The western snowy plover has a moderate potential for wintering within the Harbor and Off-Site areas.

- *Long-billed Curlew*. The long-billed curlew nest in northern California and migrate through and winter in coastal wetlands and along shorelines of southern California. Few birds have been observed in the Harbor because of the lack of suitable habitat. They are unlikely to occur in the Harbor area.

- *California Gull.* The California gull is a common visitor from fall through spring in the Project area. It is an occasional summer visitor on mudflat habitats and open water. The Harbor and Off-Site areas are within this species' range, and there is suitable habitat present within these areas. Additionally, this species was observed in the Harbor during the biological survey. The California gull is present within the Harbor and Off-Site areas.

- *Black Skimmer (California State species of special concern).* Black skimmers are increasing in southern California, as nesting colonies have been reestablished at Bolsa Chica and Upper Newport Bay. Their occurrence in the Harbor will probably continue to increase as their populations grow, and they may occasionally visit the Harbor, but it is unlikely that they would nest in the Harbor or Off-Site areas.

- *California Least Tern.* The California least tern (nesting colony) is a colonial breeder that nests on bare or sparsely vegetated, flat substrates such as sand beaches and alkali flats. The California least tern is known to occur along the coast from San Francisco Bay to northern Baja California. There is no suitable nesting habitat present. However, the Harbor and Off-Site areas are within this species' range, and there is suitable foraging habitat present

within these areas. The California least tern has a moderate potential for foraging within the Harbor and Off-Site areas, but this species would not be expected to nest within these areas.

- *Elegant Tern.* The elegant tern is a fairly common post-breeding summer and early fall visitor from Mexico. It prefers seacoast, estuaries, bays, and harbors. The Harbor and Off-Site areas are within this species range and there is suitable foraging habitat present in the waters adjacent to the Harbor and Off-Site areas. The elegant tern has a moderate potential for occurrence.

- *Large-Billed Savannah Sparrow.* The large-billed savannah sparrow winters along the coast within saltmarshes, on beaches along the strand line, on reefs, and on breakwaters. This species breeds along the Colorado River delta. The Harbor and Off-Site areas are within this species range. However, there is limited suitable habitat present within the Harbor and Off-Site areas. The large-billed savannah sparrow has a moderate potential for occurrence.

MARINE BIOLOGICAL RESOURCES

General Harbor Conditions

Originally, the Harbor was an open coast, mixed sand and rocky beach located between the Dana Point Headlands and San Juan Creek. The area provided favorable habitat for fish and invertebrates, and the sand beach served as roosting and nesting habitat for shorebirds. In 1971, a breakwater was constructed and the Harbor was dredged and completed. The bottom topography and composition within the Harbor are relatively uniform. The bottom is generally covered by silt, which exhibits variable chemical properties. The channels of the Harbor are maintained to design depth of 12 feet by periodic dredging by the ACOE and County, so that the bottom profile does not vary greatly. Development of the Harbor has altered the local physiography to that of an embayment.

The Harbor modifications have changed the type of habitat available for marine organisms. These modifications have created artificial habitats, which support a wide diversity of biological communities. Because of dredging and filling, very little sandy-beach and shallow-water habitats remain. Benthic (at the bottom of a body of water) habitat has also been altered. However, the deep-water habitat for fish has expanded because of the emplacement of bulkheads, riprap for shoreline breakwaters, and pier pilings. The riprap provides refuge and foraging habitat for fish and birds, and the protected, open waters of the Harbor maintain a diverse fish community, which in turn provides food for several species of birds.

Marine Mammals

Cetaceans

Cetaceans are often seen in the outer waters beyond the breakwaters and California gray whales (*Eschrichtius robustus*), which have only recently been removed from the Endangered category, pass by the Harbor on their migration from the Bering Sea to Baja California and back. However, these visitors only infrequently enter into the nearshore area of the Harbor. Although they could possibly enter the Harbor, it is unlikely. There is no evidence that the Harbor has been or is critical to either breeding or as a feeding area. Other marine mammals seen near the Harbor on an infrequent basis are the bottlenose dolphin (*Tursiops truncatus*), the common dolphin (*Delphinus delphis*), and the Pacific white-sided dolphin (*Lagenorhynchus obliquidens*).

Pinnipeds

Two pinnipeds, the California sea lion (*Zalophus californianus*) and the harbor seal (*Phoca vitulina*), are frequent visitors inside the Harbor. Harbor seal populations were estimated to be 330,000 along the Pacific coast, with approximately 40,000 in California, while the California sea lion population was estimated to be 200,000. California sea lion populations are at or beyond carrying capacity, whereas harbor seal populations in California, although apparently increasing, are thought to be below optimum levels. Harbor seal levels elsewhere also appear to be below optimum and may be decreasing. Both harbor seals and California sea lions are found occasionally within the Harbor, but the California sea lions tend to play and eat within the Harbor, whereas the harbor seal prefers the area around the breakwaters.

Reptiles

Sea Turtles

Sea turtles are infrequently seen offshore of the Harbor or in the Harbor confines. Most sightings off southern California have been of the green sea turtle (*Chelonia mydas*), but occasionally loggerhead (*Caretta*) or leatherback (*Dermochelys coriacea*) turtles are seen. At least one isolated, very small population of green sea turtles is known to exist in southern California. Most nearshore sightings appear to be associated with the warm water discharges from electric generating stations.

Fish

The Harbor provides several habitat types for a large diversity of fish species. Embayments, due to their physiography and biological assemblages, are commonly considered nursery areas for several fish species. The Harbor also provides an abundant food supply of infaunal and epibenthic invertebrates in addition to prey species of fish such as northern anchovy. Within the Harbor are shallow-water, open water, soft bottom, and rocky shoreline (riprap) habitats. Pier pilings also provide areas where certain fish species dwell.

Several species within southern California harbors are common throughout nearshore, harbor and estuarine habitats. White croaker *(Genyonemus lineatus*), queenfish (*Seriphus politus*), northern anchovy (*Engraulis mordax*), jacksmelt (*Atherinopsis californiensis*), and topsmelt (*Atherinops affinis*) are some of the common schooling fish that occur in large numbers in harbors and embayments. Bottom-dwelling species common in harbor environments include California halibut (*Paralichthys californicus*), specklefin midshipman (*Porichthys myriaster*), spotted turbot *(Pleuronichthys ritteri)*, and diamond turbot (*Hypsopsetta guttulata*). The riprap outlining the Harbor provides a habitat for several fish species, including barred sand bass (*Paralabrax nebulifer*), perches, and cryptic species such as blennies and sculpins.

Rocky Intertidal Epibiota

Marine plant and animal assemblages on the rocky substrate are collectively known as epibiota. The rocky substrate of the Harbor consists of riprap, bulkheads, and piers, which provide suitable habitat for a diverse intertidal–subtidal epibiotic assemblage. The Harbor shoreline consists of intertidal and shallow subtidal riprap of medium to large boulders and concrete bulkheads. This hard substrate, as well as pier pilings, provides intertidal and subtidal habitats for both attached and motile (mobile) invertebrates. These habitats, in turn, provide food and shelter for rocky shore fishes.

The intertidal community on the riprap and pilings, as on most rocky shores, exhibits vertical zonation. The upper splash zone, from mean high water to above extreme high water, is inhabited sparsely by species that are especially well adapted to environmental extremes of temperature and drought, such as the periwinkle *(Littorina keenae)* and the small brown acorn barnacle *(Chthamalus spp.)*. The high tide zone, extending down to mean higher low water, supports a more abundant and diverse group of species, which includes both the brown acorn barnacle and the white acorn barnacle (*Balanus glandula*), several limpets (*Collisella* spp.), and turban snails (*Tegula* spp.), which are motile grazers. In the middle tide zone, down to mean lower low tide, the brown acorn barnacle is replaced by the red acorn barnacle (*Tetraclita rubescens*) and bay mussels (*Mytilus galloprovencialis*), and additional grazers appear. Encrusting algae (such as *Ralfsia* sp.) and bryozoans (*Watersipora arcuata*), coralline (*Corallina* spp.), other algae (*Gelidium pusillum* and *Colpomenia sinuosa*), and colonial anemones (*Anthopleura elegantissima*) may also occur as major constituents of the community. The organisms in the midtidal zone may be so abundant as to completely cover all available substrate. In the low intertidal zone, down to extreme low water, the dominant species are less adapted to environmental extremes, as they are seldom exposed to air. However, the community can be extremely diverse, with considerable algal cover (*Egregia menziesii*, *Sargassum muticum*), tunicates, sea urchins (*Strongylocentrotus* spp.), sea stars (*Pisaster* spp.), nudibranchs *(Octopus* spp.*)*, and predatory snails (*Roperia poulsoni*, *Acanthina spirata*, and *Pteropurpura festiva*).

The communities on the breakwaters are typically abundant and diverse, resembling those on exposed outer rocky coasts, because of the relatively clean water and almost continual water movement. The total community abundance at a still-water site (resembling Dana Point Harbor) may reach only 3,000 individuals per square meter (m^2) at the mid-tide level, and a little over twice that at the low-tide level.

A site visit to the Harbor site was conducted near the Ocean Institute to evaluate the intertidal community on the riprap. The community was highly degraded, with few species and low abundances. At approximately three feet above the mean sea level, only a few slipper shells and limpets were noted. In the high intertidal (above 5 feet of mean lower low water), abundance was low, with white acorn barnacles most abundant and bay mussels in crevices. Below that, brown acorn barnacles were more prominent and the overall coverage was greater. Below the two-foot level, barnacles, limpets, and slipper shells were dominant. At the 0 foot level, some low-lying algae was present, and in the subtidal zone, brown alga *(Sargassum muticum)* was noted. In general, the community composition in the Harbor closely resembles those communities found in other southern harbors. Intertidal communities on the pier pilings were also briefly examined and were found to be typical for embayments.

Rocky Subtidal Epibiota

Although, no site-specific studies have been made of assemblages along the Harbor shoreline, several studies have been conducted at areas subject to similar conditions. Those studies provide a basis for comparison that may allow an assessment of the degree of the impact on the various subtidal assemblages within the affected portions of the Harbor.

From studies conducted in the Port of Long Beach and in the Port of Los Angeles, relatively accurate predictions can be made of the probable composition of the assemblages on the riprap, pier pilings, and other hard substrate in the Harbor. These studies have shown that there is vertical zonation of species on the hard substrate and that these assemblages vary within the Harbor and are a combination of those assemblages seen in a typical estuary and a natural coastal rocky subtidal substrate. The apparent reason for this variation is the degree of water movement to which the environment is subjected, with a decreasing gradient of diversity in the inner recesses of the Harbor.

The shallow subtidal riprap at the Harbor was briefly surveyed on November 29, 1999, by BlueWater Engineering. At two locations, approximately 50 meters apart, the amount of cover of dominant organisms was estimated. Results from that survey indicated that the epibiota of the riprap of the shallow subtidal was relatively depauperate (falling short of natural development or size), compared with that seen in Long Beach Harbor. The probable cause is the decrease in tidal strength and increasing shallowness progressing into the inner portion of the basin, resulting in less water movement for filter feeders and increasing siltation, which potentially smothers settling epibiota. The upper subtidal zone at the innermost site was dominated by algae *(Mytilus* spp*.)* and coralline algae, whereas at the other location, the upper subtidal zone was dominated by large brown algae, particularly *Sargassum muticum*.

Benthic Infauna

The benthic infauna is composed of a community of macroscopic animals that live in the top layers of sediment of the ocean floor. Infaunal communities are strongly influenced by the characteristics of the sediments in which they live. Sediment grain size is important, as it affects features such as ease of burrowing, availability of

suitable particles for constructing burrows and tubes, and the amount of organic food available. In harbors, reduced water movement allows accumulation and deposition of fine grain sediment particles and organic detritus. Typically, in shallow subtidal locations, sediments with increased amounts of fine particles, such as those usually found in harbors, support communities with higher abundance and species richness. Other environmental factors that may influence infaunal communities in harbors include fresh water input, wake turbulence, and contamination sources.

Benthic surveys in the Harbor found that the infauna community is dominated by small polychaete annelid and arthropod species, with fewer numbers of clams and nemerteans.[1] Infaunal species composition and dominance has been similar among surveys in the Harbor, with the dominant species (those that contribute 10 percent or more to the total abundance) consisting of a group of recurring species, including the amphipods *(Grandidierella japonica* and *Corophium* sp.*)* and the annelids *(Pseudopolydora paucibranchiata* and *Euchone limnicola)*; refer to Table 4.7-3 (Infaunal Species in Dana Point Harbor [1994]) and Table 4.7-4 (Infaunal Species in Dana Point Harbor [1998]). High abundances at some stations of species tolerant of variable salinities, such as *P. paucibranchiata and G. japonica*, suggest that fresh-water input from urban runoff may be considerable in some areas of the Harbor. Density of infaunal organisms in the Harbor in 1994 ranged from approximately 3,000 organisms/m^2 in sediments from the south side of the Harbor to almost 20,000 organisms/m^2 in the storm drain (Baby Beach) area; refer to Table 4.7-3. During regional surveys conducted in 1998, infaunal density in the Harbor ranged from approximately 1,250 to nearly 7,000 organisms/m^2, with the highest densities found in the Baby Beach area; refer to Table 4.7-4. As is typical in southern California harbors, species found during infauna sampling include both native and well-established introduced species. The infaunal community in the Harbor is similar to communities found in other southern California embayments.

Plankton

Plankton are small, free-floating organisms in the marine environment. Their small size and limited mobility put them at the mercy of prevailing water currents. Phytoplankton exist unicellularly or in aggregate colonies and are capable of photosynthesis. Zooplankton are invertebrate adult or larval stages that generally prey on phytoplankton and other organic material. Ichthyoplankton refers to the planktonic egg and larval stages of bony fish.

Phytoplankton are primary producers, composing the first trophic level of the marine food chain. Ultimately, all marine life depends on the photosynthesis of phytoplankton. Any variation in phytoplankton population affects successive parts of the food chain. Populations of phytoplankton were sampled numerous times in the Los Angeles–Long Beach Harbor since 1970, with population estimates ranging from several hundred to several million phytoplankton organisms/m^3. Monthly samples taken from 1974 to 1978 were composed primarily of diatoms and dinoflagellates. Densities of phytoplankton in a harbor are predictably lower in the winter (due to limited light and lower temperatures) and peak in mid-spring and early autumn.

[1] State Water Resources Control Board (1994) and Southern California Coastal Water Research Project (1998).

Table 4.7-3
INFAUNAL SPECIES IN DANA POINT HARBOR (1994)

Phylum	Species	Station				Total	Percent Total
		DP Harbor North	DP Harbor South	Commercial Basin	Storm-drain		
AR	*Mayerella banksias*	1,643	577	0	6,394	8,614	20.4
AR	*Grandidierella japonica*	3,818	0	266	3,019	7,104	16.8
AN	*Pseudopolydora paucibranchiata*	2,975	266	1,687	1,288	6,216	14.7
AN	*Prionospio heterobranchia*	311	89	977	1,421	2,797	6.6
AN	*Exogone lourei*	844	0	44	1,732	2,620	6.2
AN	*Leitoscoloplos pugettensis*	1,687	266	266	178	2,398	5.7
AR	*Corophium acherusicum/insidiosum*	888	0	0	1,288	2,176	5.2
AN	*Scoletoma zonata*	133	1,199	488	133	1,954	4.6
AN	*Euchone limnicola*	1,288	533	44	89	1,954	4.6
AR	*Rudilemboides stenopropodus*	0	0	222	1,732	1,954	4.6
AR	*Leptognathia* sp B	266	0	0	533	799	1.9
NE	*Nemertea*	22	0	178	89	488	1. 2
AR	*Bathyleberis = Cylinrolebridae*	0	0	0	488	488	1.2
Number of Individuals per m^2		14,386	3,064	4,928	19,802		
Number of Species		16	9	15	32	41	

AN = Annelid; AR = Arthropod; NE = Nemertea; MO = Mollusca
Source: State Water Resources Control Board, 1997.

Zooplankton are the primary grazers of phytoplankton. They include tiny crustaceans called copepods, plus the eggs, larvae, and some juveniles of other crustaceans, mollusks, polychaetes, ectoprocts, and hydroids. Forms of zooplankton in the nearby Los Angeles–Long Beach Harbor complex include copepods, cladocerans, and larvaceans. Also present are the reproductive products from rocky intertidal, subtidal, and benthic communities, which include larvae of barnacles, or nauplii and brittlestars.

Harbors are generally considered nurseries for ichthyoplankton. Although various fish spend their larval stages within the confines of harbors, not all of these fish use harbors and embayments as breeding habitat. Croakers, blennies, and gobies are fish normally associated with near-shore habitat, and these fish probably live and reproduce within the Harbor. However, anchovies, rockfish, and flatfish most likely spawn in areas outside the Harbor, and large numbers of larvae subsequently end up within the Harbor, either by active or passive transport.

Table 4.7-4
INFAUNAL SPECIES IN DANA POINT HARBOR (1998)

Phylum	Species	Station			Total	Percent Total
		2149	2150	2151		
AN	*Pseudopolydora paucibranchiata*	2,000	190	100	2,290	22.7
AR	*Grandidierella japonica*	370	450	240	1,060	10.5
AR	*Corophium* sp	530	250	90	870	8.6
AR	*Synaptotanais notabilis*	760	10	40	810	8.0
AN	*Euchone limnicola*	650	0	140	790	7.8
AN	*Leitoscoloplos pugettensis*	200	190	80	470	4.7
AN	*Lumbrineridae*	180	220	0	400	4.0
MO	*Caecum californicum*	380	10	0	390	3.9
AR	*Euphilomedes carcharadonta*	210	120	0	330	3.3
MO	*Tagelus subteres*	280	40	0	320	3.2
AN	*Lumbrineris* sp	20	0	230	250	2.5
MO	*Lyonsia californica*	150	0	0	150	1.5
AN	*Euchone incolor*	0	130	0	130	1.3
AN	*Euclymeninae* sp A	60	70	0	130	1.3
AR	*Leptochelia dubia*	110	10	0	120	1.2
AR	*Podocerus cristatus*	110	0	0	110	1.0
AN	*Scoletoma* sp C	10	10	80	100	1.0
Number of Individuals per m^2		6,690	2,120	1,280		
Number of Species		51	39	22	77	

AN = Annelid; AR = Arthropod; NE = Nemertea; MO = Mollusca
Source: Southern California Coastal Water Research Project, 2003.

SENSITIVE MARINE RESOURCES

In 1997, the State of California Resources Agency released an analysis that found that California's array of ocean and coastal managed area designations (such as Reserves, State Reserves, Refuges, State Parks, and Natural Reserves) is complex and often confusing. The 18 marine or estuarine and 6 terrestrial classifications and subclassifications for State-managed areas along the coast have evolved over the last 50 years on a case-by-case basis through legislative and administrative actions and by public referendum. The analysis recommended that the State evaluate the array of designations to develop a more effective and less complicated Statewide system of ocean and coastal managed areas. It further recommended developing a comprehensive program, with clear criteria for creating, administering, and enforcing management measures in these areas. As a result of the Resources Agency's efforts, Assembly Bill 933, the Marine Life Protection Act, was adopted, which required the CDFG to adopt a master plan for guiding the adoption and implementation of a Marine Life Protection Program.

The Marine Management Areas (MMAs) offer many benefits, including protecting habitat, species, cultural resources, and water quality; enhancing recreational opportunities; and contributing to the economy through such things as increased tourism and property values. In addition, MMAs may benefit fisheries management. There is mounting evidence to suggest that certain types of marine managed areas allow exploited, resident species to recover within their borders and may enhance productivity of some species outside their borders. As part of the final report on Marine Managed Areas, the Old Cove Marine Preserve was classified as a "Refuge" subclassification area, thereby receiving protection of living marine resources and their habitats, where the extraction of biotic organisms is prohibited or restricted in some fashion.[2]

Several marine species within the Harbor area are listed by the Federal and State governments as endangered or threatened. Additional species are listed by government agencies and other entities as being of concern, for various reasons. All marine mammals are covered under the Marine Mammal Protection Act; birds, by the Migratory Bird Conservation Act; and endangered plants and animals, by the Federal and California Endangered Species Acts. Marine mammals are fully protected under the Marine Mammal Protection Act; many are also listed as threatened or endangered and are protected by the Endangered Species Act. Efficacy of the protection afforded by these various acts has been seen in the Eastern Pacific gray whale (*Eschrichtius robustus*), which attained sufficient population size to warrant its recent removal from Federal endangered status. The following sensitive marine resources have the potential to exist in the vicinity of the Harbor:

- *Cetaceans.* Cetaceans (whales and dolphins) are common offshore of the Harbor, but do not regularly inhabit any region of the Harbor. These are commonly sighted just outside the breakwater, but occasionally individuals or groups enter the Harbor for a brief visit, including the common dolphin (*Delphinus delphis*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*) and Eastern Pacific gray whale. All of these species are extremely mobile.

- *Pinnipeds.* Two species of pinnipeds, the California sea lion (*Zalophus californianus*) and harbor seal (*Phoca vitulina*), have also been observed in the Harbor. The harbor seal is sighted only sporadically, but California sea lions frequently haul-out on the breakwater. Although they have been seen swimming in the Harbor and could forage there, the Harbor would not be considered an important feeding or birthing habitat.

- *Green Sea Turtle (Federal Threatened).* The green sea turtle, Federally listed as endangered, has been sighted offshore of the Harbor; however, the nearest place they are frequently seen is in and near the mouth of the San Gabriel River and Alamitos Bay. This species would be considered uncommon to rare even offshore, as it is more common in tropical and subtropical waters.

[2] Resources Agency of California, *Improving California's System of Marine Managed Areas – Final Report of the State Interagency Marine Managed Workgroup*, January 15, 2000.

- *Other Sea Turtles (Federal endangered or threatened).* Leatherback, loggerhead, and Pacific Ridley's sea turtles (the first is Federal threatened; the other two are Federal endangered) although they are known to be infrequently in the offshore area, are unlikely to be found in the Harbor.

- *Tidewater Goby (Federal endangered and California State species of special concern).* The tidewater goby inhabits coastal lagoons at the mouths of freshwater streams. Its restricted habitat and short lifespan have led to its elimination by human activities at almost all of its former locations. It is unlikely to occur in the Harbor, as the type of habitat required is not found in the Harbor.

- *Steelhead Trout (Federal endangered and California State species of special concern).* The steelhead trout is an anadromous sea-going rainbow trout that lives approximately two to four years of its life (but this period varies greatly) in the open ocean prior to returning to the stream where it was spawned. It is dependent on small, clear-flowing but not rapid, streams with gravel beds to complete its spawning cycle. The area must also have protective cover and an adequate food source. Steelhead populations are declining because of impacts on habitat such as dams, turbidity, and other habitat incursions. Although steelhead probably once existed in most of the California rivers and creeks with outlets to the ocean, none is known to have survived in southern California until recently, when some fry were discovered in San Mateo Creek. Subsequent sampling failed to produce any fry. Historically, a few fish were known to enter most of the waterways south of the Los Angeles Basin; however, spawning success may have been sporadic. The last published data indicated that anglers caught large numbers of juvenile rainbow fish in coastal lagoons in the 1930s. Although a steelhead trout was caught in the Harbor as recently as December 30, 2002, there is no likelihood that this specie would naturally occur in the Harbor.

- *White Abalone (Federal endangered).* Abalone are marine mollusks characterized by a flattened spiral shell that live on subtidal rocks. There are eight species that live in the California waters. White abalone occur relatively deep compared to other abalone, and are found from 20 to 60 m deep (with the majority occurring at depths of 25 to 30 m). Although this species undoubtedly occurred well offshore of the Harbor in water depths of 20 m, it is no longer known to exist in the immediate area. A listing of the white abalone as having previously occurred at Doheny Marine Life Refuge is probably in error. None of the marine life refuge's area is deeper than 6 to 8 m, which is well outside of the white abalones' habitat range. It is endangered because of the reduction in numbers due to overfishing. It is unlikely to occur anywhere in the Harbor because of the shallow depth and otherwise lack of suitable habitat.

- *Saltmarsh Bird's Beak (Federal and California State endangered).* This low-growing, gray-green plant, whose flowers resemble birds' beaks, lives in only a few saltmarshes in southern California and Baja California. It is endangered because of the reduction in saltmarsh habitat. It is unlikely to occur anywhere in the Harbor because of the lack of suitable habitat.

4.7.1.3 APPLICABLE REGULATIONS

UNITED STATES ARMY CORPS OF ENGINEERS (ACOE)

Pursuant to Section 404 of the Clean Water Act, the ACOE regulates the discharge of dredged and/or fill material into waters of the United States (U.S.). The term "waters of the U.S." is defined at 33 CFR Part 328 and includes *(1) all navigable waters (including all waters subject to the ebb and flow of the tide), (2) all interstate waters and wetlands, (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, (4) all impoundments of waters mentioned above, (5) all tributaries to waters mentioned above, (6) the territorial seas, and (7) all wetlands adjacent to waters mentioned above.*[3] Wetlands are defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions."

Pursuant to Section 10 of the Rivers and Harbors Act of 1899, ACOE jurisdiction over tidal waters of the Pacific Ocean extends to the line on the shore reached by the mean of the higher high waters (MHHW).[4]

UNITED STATES FISH AND WILDLIFE SERVICES (USFWS)

Pursuant to Section 7 of the Federal Endangered Species Act (ESA), any Federal agency undertaking a Federal action (including issuance of permits) that may affect a species listed as threatened or endangered under the ESA must consult with U.S. Fish and Wildlife Services (USFWS). Pursuant to Section 9 of the ESA, the "take" of a species listed as threatened or endangered is prohibited.

NATIONAL MARINE FISHERIES SERVICE

The National Oceanic and Atmospheric Administration Marine Fisheries Services (NOAA Fisheries) receives its ocean stewardship responsibilities under many Federal laws, including the Magnuson Stevens Fishery Conservation and Management Act. Most important are the ESA, which protects species determined to be threatened or endangered; the Marine Mammal Protection Act, which regulates interactions with marine mammals; the Lacey Act, which prohibits fish or wildlife transactions and activities that violate State, Federal, Native American tribal, or foreign laws; the Fish and Wildlife Coordination Act, which authorizes NOAA Fisheries to collect fisheries data on environmental decisions that affect living marine resources; and the Federal Power Act, which allows NOAA Fisheries to minimize effects of dam operations on anadromous fish, such as prescribing fish passageways

[3] On January 9, 2001 the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et. al.* (SWANCC). This ruling has been generally interpreted to say that isolated, intrastate waters are not subject to the provisions of Section 404(a) of the Clean Water Act.

[4] U.S. Army Corps of Engineers, Los Angeles District. November 29, 1972; Public Notice Relative to Navigable Waters Within the Los Angeles District.

that bypass dams. Many other statutes, international conventions, and treaties also guide NOAA Fisheries activities.

CALIFORNIA DEPARTMENT OF FISH AND GAME (CDFG)

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the California Department of Fish and Game (CDFG) regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation."

Thus, CDFG jurisdictional limits closely mirror those of the ACOE. Exceptions are CDFG's exclusion of wetlands that are not associated with a river, stream, or lake; addition of artificial stock ponds and irrigation ditches constructed on uplands; and addition of riparian habitat supported by a river, stream, or lake, regardless of the riparian area's Federal wetland status.

CALIFORNIA COASTAL COMMISSION (CCC)

The California Coastal Act (California Public Resources Code Division 20, Section 30240) restricts land uses within or adjacent to environmentally sensitive habitat areas (ESHAs). The 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.*

Included within this definition are wetlands, estuaries, streams, riparian habitats, lakes, and portions of open coastal waters that meet the rare or valuable habitat criteria. The California Coastal Commission (CCC) regulates the diking, filling, and dredging of wetlands within the coastal zone. The Coastal Act Section 30121 defines "wetlands" as land "*which may be covered periodically or permanently with shallow water.*" The CCC *Statewide Interpretive Guidelines* (adopted in 1981) state that hydric soils and hydrophytic vegetation:

> *. . . are useful indicators of wetland conditions, but the presence or absence of hydric soils and/or hydrophytes alone are not necessarily determinative when the Commission identifies wetlands under the Coastal Act. In the past, the Commission has considered all relevant information in making such determinations and relied upon the advice and judgment of experts before reaching its own independent conclusion as to whether a particular area will be considered wetland under the Coastal Act. The Commission intends to continue to follow this policy.*

REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

Waters subject to the provisions of Section 404 of the Clean Water Act also require Water Quality Certification from the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act. Waters that do not fall under the jurisdiction of the RWQCB pursuant to Section 401 of the Clean Water Act may require authorization through application for waste discharge requirements (WDRs) or through waiver of WDRs, pursuant to the Porter-Cologne Water Quality Control Act (California Water Code, Division 7).[5]

NATURAL COMMUNITY CONSERVATION PLANNING ACT[6]

California's Natural Community Conservation Planning (NCCP) program was established in 1991 through the adoption of the NCCP Act. The purpose of this Statewide program is to provide regional protection and long-term perpetuation of the State's native wildlife diversity, as well as allow compatible and appropriate land development and growth. The NCCP Act intends that these goals be achieved through the implementation of subregional NCCPs. These plans are designed to provide an alternative to the single-species, project-by-project conservation plans that have been met with little success. The regional and subregional programs to protect natural-community-based habitat protect the numerous species inhabiting the targeted natural communities and provide for their long-term conservation by establishing a permanent Habitat Reserve System.[7]

The *Conservation Guidelines* dictate that the NCCP regional planning is to be conducted, approved, and implemented on the basis of subregional planning areas that may proceed independently. Thus, habitat essential to the conservation of the coastal sage scrub species is to be addressed at the subregional and regional levels. Criteria specified by the USFWS in designating critical habitat for listed species are included inn Section 424.12 of the ESA regulations and include "those physical and biological features that are essential to the conservation of a given species and that may require special management considerations or protection" (50 Code of Federal Regulations [CFR] 424.12[b]). In Orange County, the Central/Coastal Orange County NCCP has been developed. The State of California,[8] the County of Orange, and the Federal government (through the USFWS) determined that the most appropriate and biologically valuable method for the long-term preservation of sensitive coastal resources is not achieved by mitigating project-by-project, but rather by analyzing specific development proposals on a collective and regional or subregional basis;

[5] Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum addressing the effects of the SWANCC decision on the Section 401 Water Quality Certification Program. The memorandum acknowledged that isolated waters not subject to Section 404 of the Clean Water Act would also not require 401 certification; however, the same waters were and would remain subject to the provisions of the State Porter-Cologne Water Quality Control Act.

[6] Information regarding the NCCP Act has been gathered from the *Headlands Development and Conservation Plan Final Environmental Impact Report*, which discusses the Headlands participatory role in the NCCP program. As discussed above, due to the lack of suitable habitat, Dana Point Harbor is not a participatory agent within the NCCP.

[7] United States Fish and Wildlife Service, *NCCP/HCP EIS/EIR Implementation Agreement*, 1996.

[8] Through the California Resources Agency, CDFG, California Department of Forestry, and California Department of Parks and Recreation.

then a comprehensive and synergistic conservation program to mitigate the biological impacts of these projects can be developed and implemented under applicable State and Federal statutes.

As illustrated by Exhibit 4.7-2 (Orange County Central/Coastal NCCP Map), Dana Point Harbor is not within the NCCP boundaries. The Project site proposes to implement a conservation area (Planning Area 7) at the base of the bluffs to preserve any potential sensitive habitat. The habitat that is west of the Ocean Institute has not been evaluated, as it is outside the Project boundaries. As the Project is not within the NCCP boundary, and does not encroach upon the NCCP boundary through the Off-Site areas, it will not be addressed further in this analysis.

4.7.2 METHODOLOGY

Prior to performing the field survey, existing documentation relevant to the Harbor and Off-Site areas was reviewed. The most recent records of the California Natural Diversity Database (CNDDB 2004) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2004) were reviewed for the quadrangles containing and surrounding the Harbor and Off-Site areas (i.e., Dana Point and Laguna Beach USGS 7.5 minute quadrangles). These databases contain records of reported occurrences of Federal- or State-listed endangered or threatened or proposed endangered or threatened species, former Federal Species of Concern (FSC), California Species of Special Concern (CSC), or otherwise sensitive species or habitat that may occur within or in the immediate vicinity of the Harbor and Off-Site areas.

A reconnaissance-level survey was conducted on January 29, 2003, by the Chambers Group to identify vegetation communities and the potential distribution and relative abundance of habitats in the Harbor and Off-Site areas. The survey was conducted by walking the Harbor and Off-Site areas and recording plant and wildlife observations on standardized field data sheets. Plant communities were identified and qualitatively described. Biological resources were inventoried and the potential for the presence of sensitive plant and wildlife species and sensitive habitats was assessed, focusing on those species listed as threatened or endangered by the State and Federal agencies. Notes were made of the general vegetation types, species observed and the potential for plant and wildlife habitat in the Harbor and Off-Site areas. Appendix B contains the field data sheets that list the plant and wildlife species observed in the Harbor and Off-Site areas.

TREE SURVEY

A tree survey was conducted during the reconnaissance survey. The number of trees occurring within the Harbor and Off-Site areas was estimated and the species noted. All of the trees within the Harbor and Off-Site areas, including the native trees, were planted as ornamental trees. Trees within the Harbor and Off-Site areas are located within planting areas scattered throughout the developed areas and as rows along the access roads. Although the Harbor and Off-Site areas do not contain any natural, native trees, the ornamental native trees were counted and mapped; refer to Exhibit 4.7-1.

ORANGE COUNTY CENTRAL/COASTAL NCCP MAP

Scale: N.T.S.
Source: RBF Consulting, 2004.

DANA POINT HARBOR REVITALIZATION PROJECT
PROGRAM ENVIRONMENTAL IMPACT REPORT

EXHIBIT 4.7-2

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION

SPECIAL STATUS PLANTS

Plant communities and subcommunities were determined in accordance with the categories set forth in the Orange County Habitat Classification System (OCHCS) (Gray and Bramlet, 1992). Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in Abrams (1923, 1944, 1951), Abrams and Ferris (1960), Hickman (1993), and Munz (1974). Plant nomenclature follows that of *The Jepson Manual, Higher Plants of California* (Hickman 1993).

The potential occurrence of special-status plants was evaluated through a literature review and field survey of the Harbor and Off-Site areas. No focused surveys for sensitive plants were conducted, as the vegetation community sub-types observed in the developed areas were non-urban commercial and ornamental landscaping. However, all habitat types in the Harbor and Off-Site areas were evaluated for the probability for special-status plants to occur on-site. The "potential for occurrence" ranking is based on the following criteria:

Present: Species were observed within the Harbor or Off-Site areas at the time of the survey.

High: Both a record exists of the species within the Harbor or Off-Site areas and their immediate vicinity and the habitat requirements associated with the species occur within the Harbor or Off-Site areas.

Moderate: Either a record exists of the species within the immediate vicinity of the Harbor or Off-Site areas or the habitat requirements associated with the species occur within the Harbor or Off-Site areas.

Low: No current records exist of the species occurring within the Harbor or Off-Site areas or their immediate vicinity and/or habitats needed to support the species are of poor quality.

Absent: Species was not observed during focused surveys conducted at an appropriate time for identification of the species, or species is restricted to habitats that do not occur within the Harbor or Off-Site areas.

SPECIAL-STATUS WILDLIFE

The reconnaissance-level wildlife survey was conducted over the entire Harbor and Off-Site areas on January 29, 2003, between the hours of 8:00 a.m. and 5:00 p.m. Weather conditions during the survey were mostly clear, with temperatures ranging from 60 degrees Fahrenheit (°F) to 75°F. Wind speeds ranged from 0 to 5 miles per hour (mph). Habitat types were investigated, concentrating on sensitive habitat areas (e.g., coastal sage scrub, riparian) on the sites and their immediate vicinity. Wildlife and wildlife sign (including tracks, scat, carcasses, burrows, nests, excavations, and vocalizations), if observed, were noted and recorded on standardized data sheets.

If the geographical distribution or general habitat requirements of a sensitive wildlife species encompassed part of the Harbor or Off-Site areas, it was considered as a potential inhabitant. Furthermore, the potential for each species to occur within the Harbor or Off-Site areas was also assessed. The "potential for occurrence" ranking is based on the following criteria:

Present: The species was observed within the Harbor or Off-Site areas at the time of the survey.

High: There is both: (a) a recent or historical record or observation of the species occurring within the Harbor or Off-Site areas or its immediate vicinity; and (b) the diagnostic habitat requirements strongly associated with the species occur within the Harbor or Off-Site areas or their immediate vicinity.

Moderate: There is a recent or historical record of the species within the Harbor or Off-Site areas or their immediate vicinity; and/or a limited amount of suitable habitat associated with the species occurs within the Harbor or Off-Site areas or their immediate vicinity.

Low: There is either a recent record or historical record of the species occurring within the Harbor or Off-Site areas or their immediate vicinity; however, the diagnostic habitat requirements that are strongly associated with the species do not occur within the Harbor or Off-Site areas or their immediate vicinity.

Absent: The species is considered to be absent from the Harbor or Off-Site areas, based on a failure to detect the species during focused surveys.

4.7.3 SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form, which includes questions relating to biological resources. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it 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 (CDFG) or U.S. Fish and Game and Wildlife Service (USFWS); refer to Impact Statements 4.7-1 (Terrestrial Biological Resources), 4.7-2 (Marine Biological Resources), and 4.7-3 (Cumulative Impacts);

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS; refer to Impact Statement 4.7-1 (Terrestrial Biological Resources) and 4.7-2 (Marine Biological Resources);

- 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; refer to Impact Statement 4.7-1 (Terrestrial Biological Resources) and 4.7-2 (Marine Biological Resources);

- Interfere substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; refer to Impact Statement 4.7-1 (Terrestrial Biological Resources) and 4.7-2 (Marine Biological Resources);

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; refer to Impact Statement 4.7-1 (Terrestrial Biological Resources) and 4.7-2 (Marine Biological Resources); or

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; refer to Section 7.0, Effects Found Not To Be Significant.

4.7.4 PROJECT IMPACTS

4.7.4.1 TERRESTRIAL BIOLOGICAL RESOURCES

4.7-1 *Project implementation would affect species identified as special-status species unless mitigated. Implementation of Project Design Features, Standard Conditions of Approval (SCAs), and Mitigation Measures would reduce impacts to a less than significant level. Additionally, no riparian or wetland habitat exists within the Harbor or Off-Site areas, and therefore the project would not result in impacts to riparian or wetland habitat.*

HARBORWIDE

Trees

Potential biological effects associated with the Project may include the removal of some native and non-native landscape, ornamental trees during construction. A number of these trees are large enough that they may provide habitat for several bird species. Adherence to Project Design Feature (PDF) 4.7-1, which provides a landscape concept plan to replant native trees at a minimum 1:1 ratio would offset the loss of any trees removed during construction activities. Additionally, this would provide the benefit of creating replacement habitat that may be utilized by native wildlife species. Therefore, implementation of PDF 4.7-1 would reduce impacts to a less than significant level.

Sensitive Plants

The developed nature of the Harbor precludes the occurrence of most native species. However, a small amount of native vegetation exists on portions of the Harbor. While most of the native vegetation was purposely installed and maintained as regular ornamental landscaping, coastal bluff scrub is located within Planning Area 7. The coastal bluff scrub potentially provides habitat for several native species of plants (although none with Federal- or State-listed status) and animals. The Project does not propose any development within Planning Area 7, as it would be maintained as a coastal preservation area.

However, to avoid construction impacts on native coastal bluff scrub habitat, the construction activities would be kept within the Project footprint and well away from the coastal bluff scrub habitat. Current plans indicate that the nearest construction would occur at the Dana Point Harbor Drive turn-around realignment, the Youth and Group Facility expansion, and the Marina Inn expansion. Standard Condition of Approval (SCA) 4.7-1 requires the submittal of a final landscape concept plan for review and approval to determine whether suitable plant materials are introduced to the Harbor. Furthermore, Mitigation Measure (MM) 4.7-4 includes BMPs ensure that construction areas are properly fenced off and flagged to preserve sensitive areas. The combination of SCA 4.7-1 and MM 4.7-4 would ensure that impacts on coastal bluff scrub would be reduced to a less than significant level.

Sensitive Wildlife

According to the literature review, a total of 69 sensitive wildlife species were identified as having the potential to occur within the Harbor. Of these 69 sensitive species, 6 were present, 2 have a high potential to occur, and 10 have a moderate potential to occur. Four Federal-listed endangered or threatened species were either present or have a moderate to high potential to occur on-site. These species are the California brown pelican (foraging only), American peregrine falcon (foraging only), Western snowy plover (wintering only), and California least tern (foraging only). Because these species are not expected to nest within the proposed construction areas, these species would not be significantly impacted by the Project.

The California gnatcatcher has a low potential for occurrence in the Harbor. Coastal sage scrub habitat for the California gnatcatcher is present within Planning Area 7. Since Planning Area 7 is designated for conservation purposes, no direct impacts on southern coastal bluff scrub would occur as a result of the Project. Indirect impacts on wildlife that inhabit this habitat may occur from noise associated with construction activities in Planning Areas 3, and 5. Implementation of the MM 4.7-1 would ensure that appropriate noise avoidance measures are implemented to minimize potential indirect impacts to the California gnatcatcher and reduce potential indirect impacts to a less than significant level.

Construction activities associated with the proposed Project may also result in direct and indirect impacts on black-crowned night herons and snowy egrets. Both species nest in trees on the east side of the Harbor and are subject to construction disturbance that may disrupt nesting. Black-crowned night herons are of particular concern because nests have been observed in trees near the shipyard (southeast portion of Planning Area 1), an area where substantial modifications are planned.

However, at this time, the improvements (i.e., lighthouse) are conceptual in nature. Thus, the exact footprint of the buildings and number of trees requiring removal are not known. Any trees removed from this area during the Project may reduce nesting and roosting habitat for black-crowned night herons, while trees removed in other areas of the Harbor could potentially reduce roosting availability for herons and egrets. Implementation of PDF 4.7-1, MM 4.7-2, and MM 4.7-4 would require focused surveys during the breeding season and a requirement for replacing trees with native species. Therefore, implementation of the recommended PDFs, and mitigation measures would reduce impacts on black-crowned night herons and snowy egrets to a less than significant level.

The red-tailed hawk was present and several other raptors (Cooper's hawk and osprey) have the potential to occur within the Harbor, as raptors are known to nest in urban areas, as well as in natural habitats. To avoid disrupting the nesting activities of any raptors during construction activities, MM 4.7-3 requires a qualified biologist to conduct nesting raptor surveys during the breeding season. If active nests are identified, then a 500-foot-wide buffer around these nests would have to be maintained until the young raptors fledge from the nest. Implementation of the recommended MM 4.7-3 and 4.7-4 would ensure that impacts would be reduced to a less than significant level.

The monarch butterfly (*Danaus plexippus*) overwintering roost sites extend along the coast from northern Mendocino to Baja California among wind-protected tree groves (eucalpytus, monterey pine, cypress) with nectar and water sources nearby. Suitable roosting habitat is present in eucalyptus trees within the Project site. Additionally, the Project site is within this species' overwintering range. Although suitable habitat (eucalyptus trees) is present within the Project site, the closest known occurrence is approximately 0.5 to 1 mile east of the Project site at Doheny State Beach. Thus, impacts in this regard are not anticipated.

COMMERCIAL CORE

Refer to the Harborwide discussion above.

OFF-SITE AREAS

SCWD Lot

Off-Site activities at the SCWD Lot would not have any significant direct or indirect impacts on native habitat or wildlife species.

Selva Parking Lot

Off-Site activities at the Selva Parking Lot would not have any significant direct or indirect impacts on native habitat or wildlife species.

4.7.4.2 MARINE BIOLOGICAL RESOURCES

4.7-2 *Implementation of the proposed Project would impact marine biological resources, but would be mitigated with implementation of Best Management Practices (BMPs), Mitigation Measures, and Standard Conditions of Approval (SCAs). The proposed project would result in less than significant levels with the incorporation of the recommended measures.*

HARBORWIDE

The potential impact on Harbor and marina biota associated with the potential future slip reconfigurations would be evaluated upon the identification of specific slip modifications. The marina and slip improvements may range from simple dock and column renovations to phased replacement and/or reconstruction of docks and columns. Sedimentation and water quality impacts would be addressed through site-specific permitting requirements. The Harbor generally lacks inner Harbor unique benthic species (e.g., eel grass). Additionally, on-going maintenance that is jointly carried out by the County and the ACOE includes periodically dredging the Harbor. This maintenance activity is designed to maintain a navigable waterway and is subject to separate regulatory agency permitting.

Marine Mammals

Any renovations of the Harbor would not significantly impact marine mammals in the Harbor. Although there are cetaceans and pinnipeds present nearby or known to frequent the Harbor, none of these have populations that would be at risk from the potential effects of construction or repair of the seawall or riprap structures. Additionally, the Harbor does not provide suitable habitat for breeding and feeding. However, should construction activities take place on the east and west breakwaters, MM 4.7-5 requires additional focused surveys for sensitive species prior to construction activities. Therefore, impacts would be less than significant.

Reptiles

Any renovations of the Harbor would not significantly impact sea turtles in the Harbor. Green sea turtles and other sea turtles are not known to frequent the Harbor, and therefore none of these populations would be at risk from the potential effects of construction on the seawall or riprap structures. Therefore, impacts would be less than significant.

Fish

No renovation of the Harbor would significantly impact fish in the Harbor. Although there are many species of fish that are present nearby in the Old Cove Marine Preserve or known to frequent the Harbor, none of these have populations that would be at risk from the potential effects of reconfiguring the seawall along the east and west breakwaters. The recently constructed Ocean Institute, where no new construction activities are proposed, buffers the Old Cove Marine Preserve from Harbor construction. The tidewater goby and steelhead trout do not occur within the Harbor, as it is not suitable for spawning. Note that MM 4.7-6 would reduce indirect

impacts by implementing water quality BMPs for construction activities to eliminate run-off into the waterside portions of the harbor. Therefore, impacts would be less than significant.

Invertebrates

Proposed renovations of the Harbor would not significantly impact white abalone, as they are not anticipated to be located within the Harbor. Therefore, impacts would be less than significant.

Plants

Proposed renovations of the Harbor would not significantly impact saltmarsh bird's beak, as it is not anticipated to be located within the Harbor. Therefore, impacts would be less than significant.

Rocky Intertidal Epibiota

Potential effects from land-based construction are limited to runoff into the Harbor resulting from construction-related activities (e.g., wash-down) or rain and deposition of airborne particulates into Harbor waters. Turbid water can interfere with filter-feeding intertidal organisms and introduced contaminants could potentially affect intertidal organisms. The implementation of MM 4.7-6 would incorporate BMPs to reduce this impact by incorporating features to catch run-off.

Modifications of the seawall or riprap structures would occur adjacent to or in the marine environment. Construction activities would directly impact the rocky intertidal biota, including increasing turbidity (which can interfere with filter-feeding intertidal organisms) and introducing contaminants (which could potentially affect intertidal organisms and directly remove organisms). The implementation of MM 4.7-5 would reduce this impact by ensuring that the improvements would remain within the seaward footprint of the existing structures and requiring focused surveys prior to construction activities. Following construction, intertidal organisms are expected to recolonize the impacted area, developing an intertidal community similar to that which was displaced during construction. Impacts on the rocky intertidal subtidal biota are expected to be localized and short-term. Therefore, impacts would be less than significant.

Rocky Subtidal Epibiota

The renovation of the Harbor is expected to have some minor impacts on the rocky subtidal epibiota of the Harbor. Modifications of the seawall or riprap structures would occur adjacent to or within the marine environment. Construction activities would directly impact the rocky subtidal biota, including increasing turbidity (which can interfere with filter-feeding subtidal organisms) and introducing contaminants that could potentially affect these species. Additionally, direct removal and replacement of the rocky subtidal habitat would result in the loss of some of these organisms. The implementation of MM 4.7-5 and MM 4.7-6 would reduce construction run-off impacts and construction impacts during the modifications to the east and west breakwaters. Following construction, subtidal organisms are expected to recolonize the impacted area and to develop a subtidal community similar to that which was

covered or replaced during construction. Impacts on the rocky subtidal biota are expected to be localized and short-term. Therefore, impacts would be less than significant.

Benthic Infauna

The renovation of the Harbor is not expected to cause significant impacts on the resident infaunal community; however, modifications of the seawall or riprap structures would occur adjacent to or in the marine environment. Depending on the amount of construction and the need to move or replace the riprap, some portions of the infaunal community could be disrupted by these activities. However, there would be no permanent loss of habitat and the subtidal organisms are expected to recolonize the disturbed area. Therefore, impacts would be less than significant.

Plankton

Expected modifications to the seawall and/or riprap structures would not impact the plankton community. Potential effects are limited to runoff into the Harbor resulting from construction-related activities (e.g., equipment wash-down) or rain and deposition of airborne particulates into Harbor waters. Turbid water can interfere with phytoplankton photosynthesis and the feeding of zooplankton and ichthyoplankton. The incorporation of MM 4.7-5 and 4.7-6 would ensure that these potential impacts are reduced to less than significant levels. No open water habitat would be lost due to the proposed Project. Therefore, impacts would be less than significant.

Beach Replenishment Activities

Although the Revitalization Plan does not contemplate any significant changes to the Baby Beach area of the Harbor at this time, several studies are currently underway to determine how much the water quality at Baby Beach can be improved by with various devices and best management practices; pending the results of the studies, the form and function of this beach may be modified.

Since Baby Beach is in the inner reaches of the Harbor, there is no rocky substrate other than the breakwater and no kelp within the Harbor that would be impacted by sediment movement. Sediment movement and therefore turbidity issues would be minimal, as there is no wave shock within the Harbor to move sediments, and currents are minimal in the reaches of the Harbor. Therefore, there is little likelihood of inundation of even the breakwater across from Baby Beach. Impacts on invertebrates' associated beach replenishment activities would be consistent with those of dredging and would be short-term, as the infauna would quickly recolonize any sediment that covers any portion of the infauna. Impacts on the fish populations would be minimal, with the exception of direct burial of goby habitat during the construction phase. However, gobies are short-lived, usually less than two or three years, and would rapidly repopulate any sediment. Therefore, impacts on fish populations would be short-term and are considered less than significant. Additionally, as stated in previous sections, the renovation of the Harbor would not significantly impact any marine biological resources identified as endangered, threatened, and other species of special concern in the Harbor area.

COMMERCIAL CORE

Refer to the Harborwide discussion above.

4.7.5 CUMULATIVE IMPACTS

4.7-3 *Cumulative development (including the proposed Project) in the Harbor and Off-Site areas would impact the area's biological resources. However, analysis has concluded that Project implementation would not result in significant cumulative biological impacts with implementation of the previously specified Mitigation Measures.*

Implementation of the proposed Project may impact terrestrial and marine biological resources in the Harbor and Off-Site areas. However, as stated in the previous sections, all potentially significant impacts on biological resources would be reduced to less than significant levels through implementation of the recommended SCAs, PDF, and Mitigation Measures. The following discussion describes the potential for cumulative impacts on biological resources associated with the proposed Project.

Implementation of the proposed Project may include the removal of some native and non-native trees during construction. However, implementation of the PDFs to replant native trees where they would fit into newly developed or landscaped areas would reduce cumulative impacts to a less than significant level.

Coastal bluff scrub is located within Planning Area 7, and potentially provides habitat for several native species of plants (although none with Federal- or State-listed status) and animals. However, no cumulative impacts would occur on the coastal bluff scrub because the Project does not propose development within Planning Area 7, which would be maintained as a coastal preservation area. Also, to avoid construction impacts on native coastal bluff scrub habitat, the construction activities would be kept within the Project footprint and well away from the coastal bluff scrub habitat. Implementation of standard BMPs would ensure that cumulative impacts on coastal bluff scrub would be reduced to a less than significant level.

Cumulative impacts may occur on bird species that include the black-crowned night herons, snowy egrets, California gnatcatcher, and raptors. However, implementation of the recommended PDF and Mitigation Measures, which include maintaining or relocating trees to other areas of the Harbor and noise avoidance measures, would reduce cumulative impacts on these bird species to less than significant levels.

For marine biological resources, the study area considered for the cumulative impacts of other projects is (a) the area that could be affected by proposed Project activities and (b) the areas affected by other projects whose activities could directly or indirectly affect the marine environment in the Harbor.

As described in the section above, all potentially significant impacts on marine biological resources would be reduced to less than significant levels through implementation of the recommended SCAs, PDF, and Mitigation Measures. Also, impacts on marine biological resources would be confined to the Harbor Area. Thus, the Project itself would not significantly contribute to cumulative impacts on marine biological resources. However, it is acknowledged that cumulative impacts on

marine biological resources could occur as a result of additional visitors and beach and intertidal zone users within the Harbor area. The beach and intertidal zones for the marine areas within Dana Point Harbor are currently experiencing impacts and resulting degradation due to visitors (resulting in trampling of individuals, habitat destruction, and other inadvertent damage) and illegal taking of organisms. The planned improvements associated with the proposed Project would increase visitors, as growth in south Orange County continues to add demand for coastal activities. The impact of the proposed Project, while not significant in itself, would incrementally add to the existing impact.

When viewed in conjunction with other major developments planned for the City of Dana Point, the potential loss of biological resources and/or wildlife habitat could be considered a negative cumulative effect. However, this cumulative impact would be reduced to less than significant levels through implementation of PDFs, SCAs, and Mitigation Measures.

4.7.6 PROJECT DESIGN FEATURES

The proposed Project includes features that reduce or eliminate potential impacts to environmental resources. The following Project Design Features (PDFs) are specified to be implemented.

PDF 4.7-1 The landscape concept plan provides a design to minimize the loss of native trees within the Harbor. Trees that are removed during construction will be replanted on at least a 1:1 ratio. The landscape replanting program provides a preferential use of native species and vegetation.

4.7.7 STANDARD CONDITIONS OF APPROVAL

Controls are imposed on new developments through the permitting process via the adoption of conditions of approval or through enforcement of existing ordinances and regulations. The applicable County Standard Condition of Approval (SCA) is identified below.

SCA 4.7-1 The County of Orange Dana Point Harbor Department shall submit a final landscape and irrigation plan for review and approval by the Harbor Review Board. The plan shall be prepared by a State licensed landscape architect and shall include all proposed and existing plant materials (location, type, size, quantity), an irrigation plan, a grading plan, an approved site plan and a copy of the entitlement conditions of approval.

4.7.8 MITIGATION MEASURES

4.7.8.1 HARBORWIDE

TERRESTRIAL BIOLOGICAL RESOURCES

MM 4.7-1 If Project construction activities within Planning Areas 3 and 5 are anticipated during the breeding season of the California gnatcatcher (March 1 to August 15), surveys of the area within 500 feet of the site by a qualified biologist shall be required prior to start of Project construction activities. If nesting gnatcatchers are identified, Project construction activities must cease for the remainder of the breeding season unless a qualified acoustician can demonstrate that, with or without noise attenuation measures, Project activity noise levels would not exceed 60 decibels (dB) (hourly average) within gnatcatcher-occupied portions of the surveyed area. The qualified biologist shall monitor active nest sites. If the biologist notes that the nest fails, or the young fledge from the nest, then the noise restriction near the nest is no longer required.

MM 4.7-2 The following measures shall be utilized to protect the nesting habitat of the black-crowned night herons and snowy egrets:

- If construction activities are performed during the breeding season (February 1 through August 15), a preconstruction survey within 500 feet of the site for nests shall be performed by a qualified biologist to document the presence/absence of all these species;

- If nesting black-crowned night herons or snowy egrets are identified, Project construction activities within 500 feet of the nest site must cease for the remainder of the breeding season unless a qualified acoustician can demonstrate that with or without noise attenuation measures, construction noise levels would not exceed 60 dBA within 500 feet of the occupied nests. The qualified biologist shall monitor active nest sites on a weekly basis. If the biologist notes that all young have fledge from the nest, then the noise restriction near the nest is no longer required.

MM 4.7-3 The following measures shall be utilized to protect nesting habitat of the raptors (red tailed hawk, Cooper's hawk, osprey, etc):

- If work is scheduled to be performed during the breeding season of any raptor (February 1 through August 15), a preconstruction survey within 500 feet of the site for raptor nests shall be performed by a qualified biologist to document the presence/absence of all nesting raptors; and

- If active raptor nests are found, a buffer of 500 feet in diameter should be established around the nest and no construction activity shall occur within that buffer until the young have fledged.

MM 4.7-4 In order to minimize indirect impacts on biological resources that may be related to noise and construction activity, the County of Orange Dana Point Harbor Department shall implement the following Best Management Practices (BMPs) prior to or during construction activities.

- Limit construction and all Project activities to a well-defined area; and
- Construction limits shall be fenced or flagged adjacent to preserved trees and/or sensitive habitats to avoid direct impacts.

MARINE BIOLOGICAL RESOURCES

MM 4.7-5 Future waterside improvements to the east and west breakwaters (Planning Areas 8, 11, and 12) shall be reconstructed within the seaward footprint of the existing structures except as necessary to provide for public safety or public access. Construction activities taking place below the mean higher high water (MHHW) mark shall prepare a focused marine biological survey to determine if sensitive species are present.

MM 4.7-6 The County of Orange Dana Point Harbor Department shall require that standard BMPs be utilized in order to ensure no impacts to water quality or the marine environment are minimized. Standard BMPs include:

- Erosion to be controlled by landscaping (leave existing vegetation in place where possible), paving and drainage structures;
- Berms (sand bags) around all construction sites to catch run-off;
- Roads of gravel to minimize dirt being tracked into and out of the Project site;
- During wet weather, harbor basin inlets shall be protected by placing a wire mesh and gravel filter to intercept debris and soil runoff; and
- Appropriate housekeeping activities to minimize the potential for pollutants from material storage or construction activities.

CUMULATIVE IMPACTS

No mitigation is required.

4.7.8.2 COMMERCIAL CORE

TERRESTRIAL BIOLOGICAL RESOURCES

Refer to MM 4.7-1 to MM 4.7-4.

MARINE BIOLOGICAL RESOURCES

Refer to MM 4.7-5 and 4.7-6.

CUMULATIVE IMPACTS

No mitigation is required.

4.7.8.3 OFF-SITE AREAS

SCWD LOT

No mitigation is required.

SELVA PARKING LOT

No mitigation is required.

4.7.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Compliance with SCAs, incorporation of PDFs, and implementation of the recommended Mitigation Measures would reduce potential biological resource impacts to a less than significant level.