

**APPENDIX B**  
**Biological Report**





# Biological Resources Report

Long Beach Cruise Terminal Improvement Project

Prepared for ATKINS

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## 1. Introduction

Carnival Corporation (“Carnival”) desires to make improvements to its facilities at the Long Beach Cruise Terminal (LBCT) to ensure that (i) the new Vista class of cruise ships with approximately 4,000 passengers can be safely moored at the POLB and be serviced; and (ii) improve existing safety at the berth related to swells. The improvements will entail all actions and activities necessary to safely accommodate the Vista class Carnival Panorama vessel and the associated increase in passenger numbers (the Proposed Project). The Proposed Project would introduce maritime improvements at the LBCT and onshore at Pier H within the adjacent parking garage.

Maritime improvements would require the dredging of approximately 33,250 cubic yards (cy) of dredged material from the existing berth and immediate surrounding area, disposal of the dredged material, as well as berth improvements such as the installation of new high-capacity mooring dolphins, fenders, and a new passenger bridge system. Additional onshore improvements include extensions to the existing parking structure, reconfiguration of leasehold traffic lanes, and final removal of an abandoned tunnel system.

The City of Long Beach (City), acting by and through its Board of Harbor Commissioners, is likely to be the lead agency. The location and scope of the project warrant evaluation for potential impacts to biological resources. This Biological Report has been prepared in order to evaluate the potential for sensitive biological resources to occur within or adjacent to the Proposed Project as well as the potential disposal site areas for dredged material.

## 2. Project Background

The Proposed Project site is currently leased to Carnival by POLB and Urban Commons LLC, the master tenant for the City and the Port. These leases were originally acquired for Carnival's relocation in 2003 from Port of Los Angeles to the POLB, when it moved the vessels from the Port of Los Angeles to POLB. Carnival also arranged to lease the entirety of the geodesic dome (which was originally built in 1983 to publicly display Howard Hughes' Spruce Goose seaplane) in early 2018 when it opened the newly-renovated dome and 'home-ported' Carnival Splendor, a 3,012-passenger vessel, to Long Beach. Four vessels currently call on the POLB Cruise Terminal. The Carnival Splendor, with an approximate capacity of 3,012 passengers, typically sails one day a week for cruises from seven to 14 days in duration. The Carnival Imagination (2,056 passengers) and Carnival Inspiration (2,054 passengers) vessels call on the terminal four days a week (combined) for three to four-day cruises. The Carnival Miracle occasionally docks at the POLB (scheduled for seven calls in 2019) and has a capacity of 2,124 guests. The proposed vessel (*Carnival Panorama*) will be replacing the *Carnival Splendor* 3,012-passenger seven-day ship in favor of a 4,008-passenger capacity ship on the same schedule. The dock is typically vacant for two days each week under the current schedule, which will mostly remain unchanged. Carnival transports approximately 600,000 passengers from the Port annually, with them embarking and debarking from the Long Beach Cruise Terminal. Carnival established this facility back in 2003 as the first and only privately-operated cruise terminal in the United States. Vessel operations are conducted five days a week on a year round basis, resulting in a utilization rate of 70%, making it



one of the busiest terminals. The change out of the Saturday vessel will result in an increased passenger throughput of 50,000 passengers annually.

The Carnival Cruise Lines Relocation Project Final Environmental Impact Report (FEIR) (November 2000) assessed the implications of the original relocation to POLB.

### 3. Project Objectives

The purpose of the Proposed Project is to make improvements at the existing berth and its environs to enable new Vista-class ships to safely moor and be serviced. The Proposed Project will improve safety at the existing facilities. The improvements will enable the home-porting of the 4,008-passenger *Carnival Panorama* at POLB, which is planned for arrival in Long Beach in 2019. This will be the first new Carnival ship based in Southern California in 20 years, providing additional economic growth for the City of Long Beach and the Southern California region. The *Carnival Panorama* will be replacing the 3,012 *Carnival Splendor*, which is currently home-ported at Long Beach until December 2019, as the largest craft operating out of Carnival's Port of Long Beach wharf.

### 4. Project Location

The POLB is located in San Pedro Bay within the southwest portion of the City of Long Beach in southern Los Angeles County, California. Figure 1 (Appendix B) provides a map of the Long Beach region, indicating the Project Area. State Route 47 (via Interstate 110 Freeway) and the Interstate 710 Freeway provide access to the site from the surrounding area.

The POLB is administered by the City of Long Beach Harbor Department and encompasses 3,200 acres, with 31 miles of waterfront, 10 piers, and 80 berths. The Port is the second-busiest container seaport in the United States, handling trade valued at more than \$180 billion annually, with the aim of creating the world's most modern, efficient, and sustainable seaport. The Port of Long Beach established a Green Port Policy, adopted in January 2005, which serves as a guide for decision making and established a framework for environmentally friendly Port operations.

The Project site is located adjacent to RMS Queen Mary (Pier J), at Pier H within the Queen Mary Seaport at 231 Windsor Way. The Queen Mary Seaport is located at the south end of the Interstate 710 Freeway, directly across Queensway Bay from downtown Long Beach.

Current bathymetric data for the area indicates water depth of the existing berth ranges from approximately 28 feet (ft) to 47 ft Mean Lower Low Water (MLLW) within the berth perimeter. Water depths in this area generally slope from the west to deeper depths to the east.

The proposed dredged material disposal site for dredged material is located at the LA-2 ocean dredged material disposal site (ODMDS), an existing dredged material disposal site just south of the Port of Long Beach. The site is located in the Pacific Ocean at 33°37'6" N, 118°17'24" W. In addition, an established temporary storage site (such as Pier S which has been used in the past) may also be used to offload and dry material before it is transported to the disposal site.



## 4.1 Definition of Study Area

The Study Area includes the project area and a circular buffer around the project area (Appendix B, Figures 2 and 3). The buffered area is designed to address the area within which any physical impacts to sensitive biological resources could occur as well as possible auditory and visual disturbance to aquatic and terrestrial wildlife. Therefore, the radius of the buffer varies in relation to underwater versus above ground project impacts. The land side of the buffer was truncated within urban Long Beach after a site visit verified that project-related impacts would not occur there. The remaining Study Area is intentionally conservative, and intended to encompass even the lowest probability impact areas for the purposes of this review. In order to develop the Study Area, we considered NMFS (National Marine Fisheries Service), USFWS (United States Fish and Wildlife Service), and Caltrans guidance on underwater auditory impacts to marine mammals and fish (physical injury as well as disturbance thresholds), underwater auditory impacts to seabirds (physical injury as well as disturbance thresholds), in-air impacts to marine mammals and seabirds (disturbance thresholds), as well as visual disturbance to wildlife (USFWS 2006b, Fisheries Hydroacoustic Working Group 2008, USFWS 2012, Buehler et al. 2015, NMFS 2018, WSDOT 2018). In addition, we considered the impacts of dredging on wildlife, eelgrass, and kelp via suspended sediment in the harbor.

## 5. Project Description

The Proposed Project would introduce maritime improvements at Carnival's Long Beach Cruise Terminal and onshore at Pier H within the adjacent parking garage. The enhancements are therefore discussed as maritime and onshore improvements (Appendix B, Figure 4).

### 5.1 Maritime Improvements

The maritime improvements are focused on accommodating safe and secure moorage along the sole wharf of the facility and to accommodate the *Vista* class vessel design. These improvements and associated activities include:

- Deepening the existing berth from the current design depth of 30 feet (ft) Mean Lower Low Water (MLLW) plus 1 foot of over-dredge to a new design depth of 36 ft MLLW plus 1 foot of over-dredge for a total depth of 37 ft MLLW. The areas enclosed by the bold contours and the berth perimeter will need dredging to achieve the new depth. The dredging will increase navigable and mooring margins; to cope with the pitch and roll movement of the vessels due to long period wave swells and to manage mooring loads on the dock structure. The estimated dredging volume is approximately 33,250 cubic yards (cy), which consists of the following:
  - Total dredging volume to 37 ft MLLW within the existing berth: 28,250 cy
  - Total dredging volume to 37 ft MLLW within the proposed berth extension area: 5,000 cy
  - Dredging the material is expected to take approximately 1 month





- Disposal of approximately 33,250 cy of dredged material at the LA-2 ODMS. This location has been selected based on the findings of the physical, chemical, and biological tests conducted on the material and in consultation with the Southern California Dredged Material Management Team. The disposal option selected would be the most cost-effective management option that best addresses the needs of environmental protection and economic development.
- The addition of two high-capacity, pile-founded mooring dolphins are needed to allow for adequate mooring capacity during reasonably anticipated dockside conditions, often including high winds and long-period wave swell actions, which have been anecdotally observed more frequently than in the past. The new dolphins will structurally follow the design detail applied to a similar installation performed in 2008 for the existing dolphins, which are located off the north and south ends of the dock. All dolphins will connect back to the wharf deck of the marine structure via installed catwalk bridge elements. The current dolphins have had capacity issues based upon current ship calls; thus the new dolphins will alleviate these problems.
- An extension to the existing passenger bridge system for an added ramp section to include an additional tower element on the existing wharf deck. A new tower and platform deck using new or current piles just south of the existing wharf deck. These new structures will connect to the existing gangway and will be approximately 63 feet above the water's surface. This will be designed to follow the specifications and design criteria of the existing gangway, to be adjustable for tidal conditions while remaining compliant with the American Disabilities Act.
- Replacement of the existing foam-filled fenders with oversized high-density foam-filled fenders and backing plates to improve the dampening characteristics that manage vessel movement and provide safe vessel stand-off distances from structures.
- Expansion of the existing water lease between POLB and Carnival from 7.81 acres to 11.8 acres to encompass the additional dredged area required. The existing and proposed lease does not encompass the full dredge limits; however, the lease language does allow dredging in the vicinity required for operation of the wharf. The total overwater work area is 17.06 acres, which includes the proposed water lease as well as the dredge extents.

## 5.2 Onshore Improvements

The onshore improvements are focused on an expansion of the existing parking garage to resolve current congestion and to support the increased passenger throughput expected from the larger vessel. Approximately an additional 500 vehicles will park at the facility on Saturdays for the Carnival Panorama. The onshore improvements include:

- Expanding the existing 5-level parking garage from 1,430 parking spaces to approximately 2,055 parking spaces by extending the parking garage laterally towards the southwest and northeast. This will expand existing levels at the same height of the existing structure. Both extensions are over the existing roadways on the leasehold, with vertical clearance heights



maintained for all through traffic lanes to accommodate commercial vehicles, including emergency response vehicles (from an adjacent fire department).

- Removal of a dilapidated and abandoned concrete tunnel, ramp and support structures (the Island Express Passengerway). The tunnel is approximately 450ft and runs adjacent to the southwestern façade of the parking garage, under Windsor Way to behind the IEX Helicopters building.
- Reconfiguration of the leasehold traffic lanes on the southwestern side of the existing parking garage. The existing traffic around the southern corner of the parking garage is open in both directions to the public with traffic moving counter-clockwise on the outside lanes and clockwise on the inside lanes. This project proposes to modify that configuration with traffic open to the public only in the counter-clockwise direction on the inside lanes and a fire lane in the outside lane operating in the clockwise direction.
- Due to the need to maintain existing parking for current vessel operations, construction of the garage improvements is estimated to take 13 months and will include (i) installation of 236 foundation piles and (ii) backfilling of the tunnel system over a two-week period.

### 5.3 Construction schedule

Construction of the proposed project would occur in two major phases, from August 2019 to November 2020. Maritime improvements would occur under Phase I, an approximate 4-month duration from August 2019 to December 2019. The onshore improvements would occur under Phase II over an approximate 13-month duration from October 2019 to November 2020.

Approximate details are set out as follows:

- Dredging berth area: one month (maximum). The equipment to be used for the dredging operations includes a barge with electric clamshell dredge with at least two tug boats, and two hopper barges. Active dredging is anticipated to take approximately 21 days, due to ship schedules. The dredging work may occur during times when pile driving is also taking place.
- Construction of mooring dolphins/catwalks: 2 months (may occur same time as dredging). Approximately 50 piles need to be installed. Pile driving will be performed using a derrick barge. Active pile-driving is anticipated to be completed within 3 to 4 weeks and may be concurrent with the dredging work days.
- Passenger boarding bridge foundation construction and tower installation: 2 months (to occur concurrently with dolphin construction)
- Parking garage: 13 months (to occur concurrently with maritime improvements and continue after completion of water-side work)



## 6. Regulatory Background

Following is an overview of agencies that have potential oversight of the Proposed Project related to biological resources. The regulatory setting is divided into sections on federal, state, and local jurisdiction.

### 6.1 Federal Jurisdiction

#### 6.1.1 National Environmental Policy Act (NEPA)

The National Environmental Policy Act of 1969 (NEPA) requires federal agencies to prepare environmental documentation that discloses to decision-makers and the interested public a clear, accurate description of potential environmental effects resulting from proposed federal actions and reasonable alternatives to those actions. Through NEPA, the U.S. Congress directed federal agencies to integrate environmental factors in their planning and decision-making processes, and encourage and facilitate public involvement in decisions that affect the quality of the human environment. Federal agencies are required to consider the environmental effects of a Proposed Action, alternatives to the Proposed Action, and a No Action alternative (assessing the potential environmental effects of not undertaking the Proposed Action).

#### 6.1.2 Endangered Species Act (ESA)

The ESA of 1973 (16 USC 1531 et seq.) establishes a national policy that all federal departments and agencies provide for the conservation of threatened and endangered species and their ecosystems. The Secretary of the Interior and the Secretary of Commerce are designated in the ESA as responsible for: (1) maintaining a list of species likely to become endangered within the foreseeable future throughout all or a significant portion of its range (threatened) and that are currently in danger of extinction throughout all or a significant portion of its range (endangered); (2) carrying out programs for the conservation of these species; and (3) rendering opinions regarding the impact of proposed federal actions on listed species. The ESA also outlines what constitutes unlawful taking, importation, sale, and possession of listed species and specifies civil and criminal penalties for unlawful activities.

Pursuant to the requirements of the ESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed or proposed species may be present in the project region, and whether the proposed project would result in a “take” of such species. The ESA prohibits “take” of a single threatened and endangered species except under certain circumstances and only with authorization from the USFWS or the National Oceanic and Atmospheric Administration (NOAA) Fisheries through a permit under Section 7 (for federal entities or federal actions) or 10(a) (for non-federal entities) of the Act. “Take” under the ESA includes activities such as “harass, harm, pursue, hunt shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS regulations define harm to include “significant habitat modification or degradation.” On June 29, 1995, a U.S. Supreme Court ruling further defined harm to include habitat modification “...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”



In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the ESA, or result in the destruction or adverse modification of critical habitat for such species (16 USC 1536[3][4]). If it is determined that a project may result in the "take" of a federally-listed species, a permit would be required under Section 7 or Section 10 of the ESA.

Critical Habitat is defined by the ESA as a specific geographic area containing features essential for the conservation of an endangered or threatened species. Under Section 7 of the ESA, critical habitat should be evaluated if designated for federally listed species that may be present in the project Action Area. The Action Area serves as the "study area" for the purposes of a Section 7 Biological Assessment.

#### 6.1.3 Marine Mammal Protection Act (MMPA)

The MMPA (16 U.S.C. 1362) of 1972 prohibits the "taking" of marine mammals and restricts the import, export, or sale of marine mammals. Take is defined as "the act of hunting, killing, capture, and/or harassment of any marine mammal; or, the attempt at such." Harassment includes disruption of behavioral patterns. Implementation of the MMPA is divided between USFWS (sea otters, walruses, polar bears, manatees, and dugongs) and NOAA Fisheries (pinnipeds including seals and sea lions and cetaceans including dolphins and whales). Incidental Harassment Authorizations (IHA) or Letters of Authorization (LOA) may be issued for certain activities which can result in small amounts of take associated with another activity.

#### 6.1.4 Clean Water Act (CWA)

The CWA (1977, as amended) establishes the basic structure for regulating discharges of pollutants into waters of the U.S. It gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions.

Discharge of fill material into "waters of the U.S.," including wetlands, is regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the CWA (33 USC 1251-1376). USACE regulations implementing Section 404 define "waters of the U.S." to include intrastate waters (such as, lakes, rivers, streams, wetlands, and natural ponds) that the use, degradation, or destruction of could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3; 40 CFR 230.3). The placement of structures in "navigable waters of the U.S." is also regulated by the USACE under Section 10 of the Federal Rivers and Harbors Act (33 USC 401 et seq.). Projects are approved by USACE under standard (i.e., individual) or general (i.e., nationwide, programmatic, or regional) permits. The type of permit is determined by the USACE and based on project parameters.

The USACE and the EPA announced the release of the Clean Water Rule on May 27, 2015 (80 FR 124: 37054-37127). The Rule is intended to ensure waters protected under the CWA are more



precisely defined, more predictable, easier to understand, and consistent with the latest science. The intent is to: 1) clearly define and protect tributaries that impact the quality of downstream waters; 2) provide certainty in how far safeguards extend to nearby waters; 3) protect unique regional waters; 4) focus on streams instead of ditches; 5) maintain the status of waters associated with infrastructure (i.e., sewer systems); and 6) reduce the need for case specific analysis of all waters. The U.S. Court of Appeals for the Sixth Circuit stayed implementation of the Clean Water Rule pending further action of the court in October 2015. In response, the USACE and EPA resumed case-by-case analysis of waters of the U.S. determinations. Implementation of the Clean Water Rule was pending litigation prior to February 2017. An Executive Order (Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the “Waters of the United States” Rule) was signed on February 28, 2017, directing the USACE and EPA to review The Rule and publish for notice and comment a proposed rule rescinding or revising The Rule. The USACE and EPA subsequently published a Notice of Intention to Review and Rescind or Revise the Clean Water Rule in the Federal Register on March 6, 2017. The definition of “navigable waters” under the CWA along with The Rule is currently under review per the Executive Order.

The Fish and Wildlife Coordination Act requires consultation with the USFWS, NOAA Fisheries, and responsible state wildlife agency for any federally authorized action to control or modify surface waters. Therefore, any project proposed or permitted by the USACE under the CWA Section 404 must also be reviewed by the federal wildlife agencies and California Department of Fish and Wildlife (CDFW).

Section 401 of the CWA requires any applicant for a federal license or permit, which involves an activity that may result in a discharge of a pollutant into waters of the U.S., obtain a certification that the discharge will comply with applicable effluent limitations and water quality standards. CWA 401 certifications are issued by Regional Water Quality Control Boards (RWQCBs) under the California Environmental Protection Agency.

#### 6.1.5 Executive Order 11990

Executive Order 11990 (1977) furthers the protection of wetlands under NEPA through avoidance of long and short-term adverse impacts associated with the destruction or modification of wetlands where practicable. The order requires all federal agencies managing federal lands, sponsoring federal projects, or funding state or local projects to assess the effects of their actions on wetlands. The agencies are required to follow avoidance, mitigation, and preservation procedures. The Presidential Wetland Policy of 1993 and subsequent reaffirmation of the policy in 1995 supports effective protection and restoration of wetlands, while advocating for increased fairness of federal regulatory programs.

#### 6.1.6 Migratory Bird Treaty Act (MBTA)

The MBTA of 1918 (16 USC 703-711) as amended established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. A migratory bird is defined as any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle. The MBTA prohibits the take, possession, buying, selling, purchasing, or bartering of any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Only



exotic species such as Rock Pigeons (*Columba livia*), House Sparrows (*Passer domesticus*), and European Starlings (*Sturnus vulgaris*) are exempt from protection.

In 2001, President Clinton defined “take” in Executive Order 13186 to include both “intentional” and “unintentional.” However, in 2017, the Department of the Interior’s (DOI) Office of Solicitor argued via Opinion M-37050 that incidental take was not prohibited under the Migratory Bird Treaty Act. Opinion M-37050 is currently the subject of a lawsuit between eight U.S. states and the U.S. DOI.

#### 6.1.7 Bald and Golden Eagle Protection Act (BGEPA)

The Bald Eagle Protection Act was originally enacted in 1940 in order to protect the national emblem of the United States, the Bald Eagle (*Haliaeetus leucocephalus*). At this time, the Bald Eagle was experiencing significant population pressures from hunting, egg collection, and habitat loss (Buehler 2000). This act was expanded upon in 1962 to include protections for the Golden Eagle (*Aquila chrysaetos*). Similarly, the Golden Eagle was also experiencing precipitous population declines due to habitat loss, hunting, and electrocution from power lines (Kochert et al. 2002).

The current federal statute as amended (16 U.S.C. 668-668d) includes criminal penalties for anyone, including individuals, associations, partnerships, and corporations who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or in any manner any bald eagle commonly known as the American eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof” without a permit (16 U.S.C. § 668a). “Take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb” (16 U.S.C. § 668c). “Disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” (50 CFR 22.3). Broadly construed, “take” may be applied to the protection of habitat around nest sites (Wisch 2002). Civil and criminal penalties may include monetary fines, imprisonment, a cancellation of grazing agreements on federal land, and a loss of property that was used in violating the act (e.g. boat, gun, or car). According to the USFWS, “a violation of the Act can result in a fine of up to \$100,000 (\$200,000 for organizations), imprisonment for one year, or both, for a first offense. Penalties increase substantially for additional offenses, and a second violation of this Act is a felony” (USFWS 2016). However, the act allows for Bureau of Indian Affairs certified tribe members to use eagles and eagle parts for religious ceremonies, as well as exceptions for scientific or educational purposes, falconry, and in cases of livestock depredation (16 U.S.C. § 668a). Any employee of the Department of the Interior (DOI) may enforce the provisions of the statute and may arrest individuals for violations (16 U.S.C. § 668b).

In the case of development projects, a permit may be required if the project activity is near an active or inactive eagle nest, roosting site, or foraging site. This is particularly true if the project is near breeding habitat (as opposed to wintering habitat or migratory stop-over sites). The act applies to all activities that may impact eagles, including projects without a federal nexus. If there is a possibility that the project could “non-purposefully take” eagles (unavoidable take associated with, but not the purpose of an activity) the USFWS may issue a programmatic take permit. In this case, the permit is subject to conditions or mitigation measures to minimize impacts. Post-construction monitoring and annual reports may also be required (50 CFR 22.26).



### 6.1.8 Magnuson-Stevens Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) provides the federal government with the authority to manage fisheries in the U.S. Exclusive Economic Zone (EEZ) (from state waters which end 3 nautical miles offshore to a distance of 200 nautical miles). In addition, the Act mandates inter-agency cooperation in achieving protection, conservation, and enhancement of Essential Fish Habitat (EFH). The Act defines EFH as "Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. For the purpose of interpreting the definition of EFH: 'Waters' include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; 'substrate' includes sediment, hard bottom, structures underlying the waters, and associated biological communities; 'necessary' means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle" (50 CFR 600.10). EFH designations serve to highlight the importance of habitat conservation for sustainable fisheries and sustaining valuable fish populations. EFH relates directly to the physical fish habitat and indirectly to factors that contribute to degradation of this habitat. Important features of EFH that deserve attention are adequate water quality, temperature, food source, water depth, and cover/vegetation.

## 6.2 State Jurisdiction

### 6.2.1 California Environmental Quality Act (CEQA)

CEQA applies to certain activities of state and local public agencies. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a "project." A project is an activity undertaken by a public agency or a private activity which must receive some discretionary approval. The Proposed Project is a project under CEQA; therefore, CEQA compliance is required. Under CEQA, a variety of technical studies including biological, cultural, traffic, and air quality studies as well as research and professional knowledge are considered to determine whether the project may have an "adverse effect" on the environment. Lead agencies are charged with evaluating the best available data when determining what specifically should be considered an "adverse effect" to the environment.

### 6.2.2 Porter-Cologne Water Quality Act

The Porter-Cologne Act provides for statewide coordination of water quality regulations by establishing the California State Water Resources Control Board. The State Board is the statewide authority that oversees nine separate RWQCBs that collectively oversee water quality at regional and local levels. California RWQCBs issue CWA Section 401 Water Quality Certifications for possible pollutant discharges into waters of the U.S. or state.

### 6.2.3 California Endangered Species Act (CESA)

The CESA includes provisions for the protection and management of species listed by the State of California as endangered, threatened, or designated as candidates for such listing (California Fish and Game Code (FGC) Sections 2050 through 2085). The CESA generally parallels the main



provisions of the ESA and is administered by the CDFW, who maintains a list of state threatened and endangered species as well as candidate and species of special concern. The CESA prohibits the “take” of any species listed as threatened or endangered unless authorized by the CDFW in the form of an Incidental Take Permit. Under FGC, “take” is defined as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

Species of special concern are broadly defined as species that are of concern to the CDFW, because of population declines, restricted distributions, and/or they are associated with habitats that are declining in California. Impacts to special status plants and animals may be considered significant under CEQA.

#### 6.2.4 California Fish and Game Code (FGC)

##### ***Lake or Streambed Alteration Agreement***

Streams, lakes, and riparian vegetation that serve as habitat for fish and other wildlife species are subject to jurisdiction by the CDFW under Sections 1600-1616 of the FGC. Any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake; generally require a 1602 Lake and Streambed Alteration Agreement (LSAA). The term “stream,” which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “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 a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as, “on, or pertaining to, the banks of a stream;” therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself.” Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW.

##### ***Native Plant Protection Act***

The CDFW administers the Native Plant Protection Act (Sections 1900–1913 of the FGC). These sections allow the California Fish and Game Commission to designate endangered and rare plant species and to notify landowners of the presence of such species. Section 1907 of the California Fish and Game Code allows the Commission to regulate the “taking, possession, propagation, transportation, exportation, importation, or sale of any endangered or rare native plants.” Section 1908 further directs that “... [n]o person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof that the Commission determines to be an endangered native plant or rare native plant.”





### Birds of Prey and Native Nesting Birds

Section 3503 of the FGC prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders *Falconiformes* (hawks and eagles) or *Strigiformes* (owls) and their eggs or nests. These provisions, along with the federal MBTA, essentially serve to protect nesting native birds. Non-native species, including the European Starling, Rock Dove, and House Sparrow, are not afforded protection under the MBTA or FGC.

### Fully Protected Species

The CDFW enforces the FGC, which provides protection for “fully protected birds” (Section 3511), “fully protected mammals” (Section 4700), “fully protected reptiles and amphibians” (Section 5050), and “fully protected fish” (Section 5515). As fully protected species, the CDFW cannot authorize any project or action that would result in “take” of these species even with an incidental take permit.

### 6.2.5 Sensitive Plant Communities

CDFW provides oversight of habitats (i.e. plant communities) listed as sensitive in the California Natural Diversity Database (CNDDDB), based on global and state rarity rankings according to the list of statewide natural communities, *Hierarchical List of Natural Communities*. The natural communities are broken down to alliance level for vegetation types affiliated with ecological sections in California. The list and alliances coincide with A Manual of California Vegetation (Sawyer et al. 2009). According to the CDFW vegetation classification of natural community hierarchy list, habitats are listed as “high priority for inventory” based on global or state rarity rankings. CDFW considers alliances and associations with a S1 to S3 rank to be of special concern as well as highly imperiled (CDFW 2013). The application of ranking for determination of sensitive communities is summarized as follows in Table 1 (NatureServe 2018):

Table 6.1 NatureServe Conservation Status Ranks

Name	Calculated Status Rank	Status Description
Score ≤ 1.5	G1, N1, S1	Critically Imperiled
1.5 ≤ Score ≤ 2.5	G2, N2, S2	Imperiled
2.5 ≤ Score ≤ 3.5	G3, N3, S3	Vulnerable
3.5 ≤ Score ≤ 4.5	G4, N4, S4	Apparently Secure
Score > 4.5	G5, N5, S5	Secure

### 6.2.6 Coastal Act

The Coastal Act defines an “environmentally sensitive habitat area” (ESHA) as an “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” (Section 30107.5). Three important elements define an ESHA:



- 1) A geographic area can be designated ESHA because of the presence of individual species of plants or animals or because of the presence of a particular habitat;
- 2) In order for an area to be designated as ESHA, the species or habitat must be either rare or it must be especially valuable; and,
- 3) The area must be easily disturbed or degraded by human activities.

Coastal Act Section 30240 states in part that:

- a) ESHA shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.
- b) Development in areas adjacent to ESHA and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

While there is not a specific list of habitats considered to be ESHA for the State or County, the Coastal Commission through the Coastal Act and counties or municipalities through the Local Coastal Program (LCP) are the jurisdictional agencies that exert authority in identifying and protecting ESHA in the course of project activities. In order for the Coastal Commission to determine if areas are to be classified as ESHA's, they often refer to CDFW's list of statewide natural communities, *Hierarchical List of Natural Communities*. CDFW does not use the term ESHA, but it has been inferred that CDFW terminology of "sensitive habitat" might be somewhat synonymous to Coastal Commission ESHA terminology. The Coastal Commission relies on this list to determine if habitats are considered a sensitive plant community and thus potentially ESHA. The global and state rarity ranking can be used to identify areas that may be considered ESHA and subject to protection by the Coastal Commission.

Issuance of Coastal Development Permits may be delegated to counties and municipalities under the Local Coastal Program (LCP).

## 6.3 Local Jurisdiction

### 6.3.1 City of Long Beach General Plan

The City of Long Beach General Plan sets forth the following goals and policies related to biological resources within the city and relevant to the Cruise Terminal Improvement Project:

#### ***General Plan - Land Use Element***

##### ***Goal No. 9. Preserve, Protect, Restore, and Reconnect with Natural Resources***

- LU Policy 20-2: "Protect and preserve the marine ecosystem functions and biological marine resources" (Long Beach Development Services 2017)
- LU Policy 20-4: "Preserve and restore Long Beach's remaining wetlands, lagoons and other natural marine areas to improve water quality, re-establish native riparian plant and wildlife habitat, reconnect tidal flow, and store carbon" (Long Beach Development Services 2017).



- LU Policy 20-5: “Prevent stormwater runoff and pollutants from entering natural water bodies, wildlife habitats, wetlands, rivers, and the Pacific Ocean” (Long Beach Development Services 2017).

### **General Plant - Conservation Element**

#### *Goals for Management of Vegetation*

- “To provide protective controls for lands supporting distinctive native vegetation, wildlife species which can be used for ecologic, scientific, and educational purposes” (City of Long Beach 1973).

#### *Wildlife Management Goals*

- “To promote measures and plans which protect and preserve distinctive types of wildlife including mammals, birds, marine organisms, and especially endangered species” (City of Long Beach 1973).

### 6.3.2 Port of Long Beach Green Port Policy

The Port of Long Beach’s Green Port Policy seeks to reduce environmental impacts associated with Port operations. The policy contains six major program elements including: wildlife, air, water, soils/sediments, community engagement, and sustainability (POLB 2018). The policy’s guiding principles include:

- Protect the community from harmful environmental impacts of Port operations.
- Distinguish the Port as a leader in environmental stewardship and compliance.
- Promote sustainability.
- Employ best available technology to avoid or reduce environmental impacts.
- Engage and educate the community.

## 7. Methods

### 7.1 Preliminary Investigation

#### 7.1.1 Database Searches (IPaC, CNDDDB, NMFS/MMPA, and CNPS)

A database search of the CNDDDB, USFWS IPaC (Information for Planning and Conservation) database, the NMFS/MMPA Google Earth species data, and CNPS (California Native Plant Society) database was conducted by GHD on October 29, 2018. The search encompassed 8 USGS quadrangles (quads), including the project site quad (Long Beach) and surrounding 7 quads (Inglewood, South Gate, Whittier, Torrance, Los Alamitos, San Pedro, and Seal Beach). Based on these database results, a literature search, as well as personal knowledge regarding the habitat and conditions surrounding the project site, the following tables were compiled (Appendix A, Tables 1-5) which summarize special status state or federal plant and wildlife species that could be present at the project site. These tables also present information such as the likelihood of each species to



occur at the project site. Maps indicating the locations of sensitive resources are also included in Appendix B (Figures 5-8).

### 7.1.2 National Wetlands Inventory (NWI)

A search of the U.S. Fish and Wildlife Service National Wetlands Inventory was conducted on October 28, 2018 for the immediate project vicinity. A National Wetlands Inventory Map that includes the project location is included in Appendix C. The inventory classifies the berthing dock and outer harbor as Estuarine and Marine Deepwater (M1UBL-Marine Subtidal Unconsolidated Bottom Subtidal). The Queen Mary berth, located adjacent, is identified as Estuarine and Marine Wetland (E1UBLx-Estuarine Subtidal Unconsolidated Bottom Subtidal Excavated). Also mapped near the project area, at Golden Shore Marine Biological Reserve, Grisson Island in the harbor, and along Junipero beach to the northwest, is Estuarine and Marine Wetland (M2USP-Marine Intertidal Unconsolidated Shore Irregularly Flooded and M2USN- Estuarine Subtidal Unconsolidated Shore Regularly Flooded).

## 7.2 Field Survey

### 7.2.1 Methods

A reconnaissance-level field visit was conducted on November 14-15, 2018 by Senior Ecologist Ken Mierzwa. On November 14<sup>th</sup> between about 1:30 and 4:00 pm, ecologist Ken Mierzwa and Maxwell Peters, manager of the Long Beach Cruise terminal, walked the entire project area including the existing dock, the adjacent waterfront, and the landside impact areas associated with the existing parking structure. This visit included a walk-through of the parking structure and a circuit of the rooftop to overlook surrounding areas. Various portions of the project area were photo documented, and any wildlife observed was noted (photos provided in Appendix D). No ship was present at the dock on the 14<sup>th</sup>.

On November 15<sup>th</sup> from about 8:00 to 10:00 am the project area was observed through binoculars from the sun deck of the Queen Mary. This allowed for surveillance of the project area from a high visual position, including the dock a short distance to the southeast, and the parking structure a short distance to the south. A cruise ship was docked and in the process of unloading during this time. On the afternoon of the 15<sup>th</sup> a drive-by reconnaissance was conducted of accessible portions of the downtown Long Beach waterfront including but not limited to parks, beaches, and river overpasses.

## 7.3 Agency Coordination

This document represents an initial review that will be used in future agency coordination (CDFW, USFWS, NOAA Fisheries, and USACE). As of November 2018, agency coordination has thus far been limited to a November 16<sup>th</sup>, 2018 telephone conversation with Laura McCue of NOAA Fisheries/Long Beach to discuss marine mammals potentially present in the project area, and the process and timeline for MMPA compliance. Additional agency coordination is anticipated as part of the permit process.



## 8. Results

### 8.1 Habitat and Vegetation Communities

The project area is within a major port complex which has been extensively modified over a period of more than a century, including extensive areas of historic fill. As a result, most of the area is not in a natural condition. Open water portions of the Port are generally maintained for shipping (28-47 feet depth MLLW in the project dredge footprint). The bottom is predominantly fine silt and turbidity is high as a result of frequent shipping traffic. In the project area, visibility below the surface generally extended only one to two feet during the site visit. Shorelines are generally rock armored, with very limited, mostly non-native vegetation growing on the few vegetated shoreline areas. Terrestrial areas were generally paved as roads, parking lots, or service areas. Small areas of landscaping are present generally as linear strips along roadsides or in medians or adjacent to structures. These landscaped areas consist largely of evenly spaced palms, eucalyptus, and other ornamentals with mowed or maintained grass or a few ornamental flowering plants or low shrubs as the ground layer. Overall, there is very little habitat structure within either marine or terrestrial habitats. Areas surrounding the Port on the land side are generally dense urban or industrial, with a few small maintained recreational parks and beaches.

The proposed dredged material disposal site for dredge material is located at LA-2 ODMDS, an existing dredged material disposal site just south of the Port of Long Beach (already permitted for disposal). The site is located in the Pacific Ocean at 33°37'6" N, 118°17'24" W. In addition, an established temporary storage site at Pier S in the Port may also be used to offload and dry material before it is transported to the final disposal site. The Pier S site consists of vacant land acquired by the Port in 1994. Contaminated soils have since been remediated. A DEIR was completed in 2011 for potential redevelopment, and described the site as "primarily landscape plantings and weedy species... no natural or sensitive plant communities are present" (Port of Long Beach 2011).

Two important marine habitat types (eelgrass and kelp forests) do have small areas of known presence within the Port and are described in the following sections. The introduced and invasive *Caulerpa taxifolia* is a concern in Southern California waters, however the most recent surveys did not detect its presence in POLB (MBC 2016). Pre-construction surveys may be required by permit conditions.

#### 8.1.1 Eelgrass

Eelgrass meadows are designated Essential Fish Habitat (EFH) and a Habitat Area of Particular Concern (HAPC) under the Magnuson-Stevens Fishery Conservation and Management Act of 1996. They are important for the foundational ecological functions they play, such as providing cover, foraging habitat, oxygen, and nursery environments for many fish. Eelgrass grows in shallow, semi-protected areas with soft-bottom substrate. The depth distribution of eel grass is constrained to its shallowest extent by the stress of desiccation during low tide, and to the deepest extent by sunlight's ability to penetrate through the water column (affected by turbidity, light intensity, water clarity, etc.) (MBC Applied Environmental Sciences 2016). According to the MBC Applied Environmental Sciences report from 2016, over 99% of eelgrass beds in San Pedro Bay occur between +0.5 and -15 feet mean lower low water (which is the average height of the lowest tide



recorded at a tide station each day during a 19-year recording period (COOPS 2018). On average, eelgrass is known to grow as deep as 20 feet, and rarely, to the extreme, as deep as 98 feet in southern California (Ramey 2008).

Several baseline biological surveys of Long Beach and Los Angeles Harbors have been completed over the past two decades. Initial eelgrass surveys occurred as early as 1996 (MBC Applied Environmental Sciences 2016). In 2013 and 2014 more comprehensive surveys were performed and found the port complex supported 67.56 acres of eelgrass during its spring peak. After two years of surveying however, it was concluded that the majority of the Long Beach side of the harbor, especially the east side near the Study Area, is too deep to support eelgrass communities. The Long Beach side of the harbor, due to natural conditions and dredging, has deeper depths and, in most areas, is unlikely to support eelgrass establishment (MBC Applied Environmental Sciences 2016). The only known occurrences in the POLB are well to the west and eelgrass has not been reported near the Project Area. If permit conditions necessitate, a CEMP compliant pre-construction eelgrass survey shall be completed to determine eelgrass presence or absence and assess the potential for impacts from construction activities and the need for mitigation.

#### 8.1.2 Kelp Forests

The major species of brown algae or kelp in the Long Beach and Los Angeles Harbors are giant kelp (*Macrocystis pyrifera*) and feather boa kelp (*Egregia menziesii*). During the 2013-2014 Biological Survey by MBC Applied Environmental Sciences, it was not feasible nor accurate enough to map the two types of kelp separately. They determined that feather boa kelp was “not the dominant kelp, likely constituting less than 5% of the total kelp canopy, and it was limited to the inner (shallower) margin of the kelp beds”. Giant kelp plays a key role in aquatic communities by creating structure, serving as nursery habitat and a food source for other organisms. Kelp requires hard, stable surfaces, like riprap, for attachment. It grows best in cold water temperatures when nutrients and oxygen have their highest concentrations. This causes kelp beds to undergo significant seasonal fluctuations (MBC Applied Environmental Sciences 2016).

The Central Region Kelp Survey Consortium (CRKSC) has been monitoring kelp beds using aerial photography from Ventura to Newport Beach, CA on a quarterly basis since 2003 (CRKSC 2011). Within the Port Complex, kelp beds had their maximum canopy area in the years 2006 and 2012. Their lowest recorded coverage occurred in 2007. Despite the high numbers in 2012, beds in the summer of 2014 were found to have receded significantly from their spring time peaks. Some beds even disappeared entirely. This substantial decrease in kelp has been linked to increased water temperatures (MBC Applied Environmental Sciences 2016). According to the San Pedro data buoy (station 46222 buoy 092- 5.5 nautical miles south of the Port Complex), water temperatures in June, July, and September 2014 were the highest recorded in the past 17 years (CDIP 2015).

However, even with the substantial decrease in kelp beds, surveys in 2013-2014 identified kelp beds growing as a thin band along “the west, south, and east facing outer faces of Pier J and both faces of the breakwater protecting the Pier J slip” just southwest of the Carnival Cruise docking area (MBC Applied Environmental Sciences 2016). It is possible that these kelp beds would be impacted by project activities. Permit approval from agencies may require pre-construction surveys to determine presence or absence. This will be determined with consultation and coordination with the agencies.



## 8.2 Plant and Wildlife Resources

### 8.2.1 Summary of General Biological Resources

Fourteen species of plants have a moderate potential of occurring at the project site. For a more detailed description of sensitive plant species likely to occur at the site, see section 8.2.3.

Benthic infauna (invertebrates living in the bottom sediment) and epifauna (living on the sediment surface) were thoroughly documented during biological surveys at the Port Complex in 2013-2014. Surveys documented 344 infauna species (mainly microscopic organisms) and 110 epifauna species (macroinvertebrates). Overall abundance, species richness, biomass, and diversity was higher in the outer harbor versus inner harbor (related to water quality and mixing). The majority of infauna biomass was attributed to polychaete annelids, mollusks, and shrimp (Giant Ghost Shrimp and Blue Mud Shrimp). The common epifauna species included shrimp and crab species while the biomass was primarily comprised of sponges, Target Shrimp, and California Spiny Lobster. Surveys also documented 558 species of biota living on harbor riprap, with higher species abundance in the mid-lower intertidal zone than upper intertidal or subtidal zones. Common biota included barnacles (*Balanus* and *Chthamalus*), limpets (*Lottia* spp.), *Ulva* (green algae), encrusting red and brown algae, and red algal turfs, articulated coralline, macroalgae, and invertebrates. Benthic infauna, epifauna, and riprap invertebrates were primarily comprised of native species, although multiple non-native species were also documented. No special status invertebrate species were documented during these surveys. However, two special status marine invertebrate species do have potential to occur within the Study Area, Black Abalone (*Haliotis cracherodii*) and White Abalone (*Haliotis sorenseni*). Neither has been documented during several previous studies and no good habitat has been reported to date.

The Port Complex is highly developed, with no high quality terrestrial vegetation, riparian habitat, coastal dunes, or marine marsh/wetland habitat that could support special status invertebrates such as beetles, bumble bees, weevils, butterflies, or fairy shrimp.

In addition, no special status fish species have a moderate to high potential of occurring in the Study Area. Southern California Steelhead DPS (Distinct Population Segment) (*Oncorhynchus mykiss irideus*) only have a low potential of occurring in the Study Area. For a more detailed discussion on the potential for Southern California Steelhead DPS to occur at the site, see section 8.2.2.

Due to a lack of suitable habitat, no special status amphibians are likely to occur in the Study Area. The Port Complex 2013-2014 biological surveys did not document the presence of any amphibians at or within the Port of Long Beach. However, common species such as tree frogs may be present in low numbers away from saline conditions.

Several species of sea turtles are occasionally observed along the California coast, although generally they are not resident there (CaliforniaHerps 2018). California observations of Loggerhead Sea Turtles (*Caretta caretta*) are rare and tend to occur from July through September. There are a few anecdotal reports of Pacific Hawksbill Sea Turtles (*Eretmochelys imbricata*) in California waters, but apparently none that are well documented. Olive Ridley Sea Turtles (*Lepidochelys olivacea*) are occasionally reported in El Niño years. Leatherback Sea Turtle (*Dermochelys coriacea*)



observations tend to be from boats at sea and away from shore and during the summer months. We are not aware of any recent documented reports of any of these species near the Study Area. However, a population of Green Turtles is associated with the warm water outfall of the Haynes Generating Station at the mouth of the San Gabriel River (CaliforniaHerps 2018). The species has been tracked and studied for several years. Radio tracking has revealed that they typically spend all their time in the river, though a few swim into the ocean during the day and return at night (Goldman 2016). Therefore, Green Sea Turtles (*Chelonia mydas*) have a moderate potential to occur in the Study Area.

The Port Complex Study Area provides habitat for numerous common species of gulls, waterfowl, aerial fish foragers, and wading birds. For a more detailed description of sensitive bird species likely to occur at the site, see sections 8.2.2 and 8.2.3.

Several species of marine mammals including California Sea Lions (*Zalophus californianus*), Harbor Seals (*Phoca vitulina richardii*), and Common Bottlenose Dolphins (*Tursiops truncatus*) are commonly observed in the Port Complex and have a high potential to occur in the Study Area during project implementation (MBC Applied Environmental Sciences 2016). For a more detailed description of sensitive mammal species likely to occur at the site, see section 8.2.3.

#### 8.2.2 Listed or Candidate Species (Under ESA and/or CESA)

Based on database searches, historical records, and a review of the primary literature, the following federally listed or state listed species have a moderate to high potential of occurring in the Study Area.

##### **Plants**

No federally listed, state listed, or candidate plant species are likely to occur within the Study Area.

##### **Invertebrates**

[Black Abalone \(\*Haliotis cracherodii\*\) and White Abalone \(\*Haliotis sorenseni\*\). Federally Endangered. Moderate Potential.](#) Black Abalone and White Abalone are marine snails that have lived along the California coast for at least 7,400 years. They can live up to 30 or 40 years, respectively. Both species reproduce by broadcasting their eggs and sperm. It is important for large groups to congregate to ensure reproductive mixing is successful. Even if eggs are fertilized, it is up to the currents to determine where the embryos settle.

In recent decades, commercial fishing of the two species has brought them perilously close to extinction. Black Abalone fisheries peaked in 1973, when close to 2 million pounds of abalone were harvested. In 1993, alarming population declines led to the closure of those fisheries. Although populations of Black Abalone along the northern to central California coast seem to have stabilized, southern California's populations are dwindling or have been completely extirpated at some locations. White Abalone have fared far worse, due to their meat being highly sought after. Populations have plummeted and southern California surveys indicate a 99 percent reduction in population size since the 1970's (NOAA Fisheries 2018). Though fishery closures in 1997 slowed the decline, populations continue to recede by around 14% per year (likely their natural death rate)





(Stierhof et al. 2012). This indicates that little to no reproduction is successful, and this species may indeed become extinct.

Black Abalone's preferred habitat are rocky intertidal and subtidal environments where protective crevices between rocks can provide shelter. White Abalone also prefer rocky refugia in areas near sandy channels where their food source, algae, accumulates. White Abalone are found at depths between 50 to 180 feet (NOAA Fisheries 2018). The tidal riprap areas of the Study Area could provide habitat for either of these species. No abalone were documented during the 2013-2014 surveys (MBC Applied Environmental Sciences 2016). If a few individuals missed detection during the survey, they would be a small population with limited viability, because these species rely on fertilization in the water column for reproduction and require massive dispersal numbers to increase the odds of successful fertilization. Therefore these species are not likely to be significantly impacted.

### **Fish**

[Southern California \(SC\) Steelhead DPS \(\*Oncorhynchus mykiss irideus\*\), Federally Endangered, Moderate Potential.](#) The SC Steelhead DPS is defined to be the naturally spawning populations of Steelhead from the Santa Maria River to the Tijuana River at the US-Mexico border. The decline of Steelhead populations have been attributed to factors such as watershed disturbances, including logging on steep slopes, grazing, road building, water diversions, and severe habitat degradation caused by timber harvest, intensive agricultural practices, and coastal development. These factors have resulted in decreased flows, loss of riparian habitat, channel widening, increased siltation, and higher water temperatures (Barnhart 1991, Stillwater Sciences 2006).

Steelhead spend their adult lives in marine environments, returning to freshwater at the age of four or five to spawn, usually in their stream of origin. The species spawns in rivers that are well oxygenated and have gravel bottoms. Steelhead is the anadromous form of rainbow trout, although steelhead are more similar to Pacific salmon than trout in terms of their ecological requirements. Unlike salmon, steelhead do not necessarily die after spawning. Rainbow trout differ phenotypically from Steelhead in that they are generally smaller, olive green in color and have bright red below their lateral line from gills to tail. Steelheads will begin to undergo "smoltification" as they transition from the freshwater environment to saltwater after about one to three years. This smoltification involves body coloration becoming silver, losing the red marking, and different body morphology (Behnke 2002). Several genetic studies have been conducted to better understand what triggers smoltification and several gene regions have been identified that contribute to migratory-related traits. Over time, populations that have barriers to migration begin to lose the genes that promote migration (Hale 2013).

During spawning, eggs are deposited in redds constructed in gravel. Eggs hatch after three to 14 weeks in later winter through spring. The hatchlings, or alevins, emerge from the gravel after an additional two to five weeks. During the egg and alevin stages, survival depends in part on the presence of clean, well-oxygenated gravel. Excessive siltation contributes to mortality at these stages (Barnhart 1991, Stillwater Sciences 2006). Juveniles remain in freshwater for one or two years before returning to saltwater, with emigration typically occurring from March through June. A second year of growth is thought to contribute to a much higher probability of survival in the open ocean (Stillwater Sciences 2006).



Juvenile Steelhead use a variety of in-stream habitats depending on age and size. Smaller fish inhabit shallow, slow moving margins of streams or other open water. Larger juveniles move to deeper water with more cover and vegetation. Steelhead juveniles typically have a longer freshwater rearing requirement, and both adults and juveniles are much more variable in the amount of time spent in fresh and salt water. For upstream migration, Steelhead require a minimum depth of at least seven inches and a maximum stream velocity of 8 ft/s (Smith 1973). Spawning requires a minimum of 1-3 ft/s velocity (Smith 1973), clean substrate and temperatures of 39 - 49° F.

This species has a low chance of seasonally occurring in the Study Area. The SC Steelhead DPS are winter-run populations only. Even if runs have not been documented in streams in recent years, Steelhead are known to opportunistically spawn in non-natal streams, and therefore re-colonize watersheds where they were previously extirpated (NMFS 2012). Any potentially occurring Steelhead runs would only be present from January-April when winter rains swell rivers and creeks, allowing passage into breeding habitat (Caltrout 2017). Most construction is expected to be outside this period of time. Given the scarcity of recent records this far south and seasonal avoidance, this species is not likely to be significantly impacted.

### ***Amphibians***

No federally listed, state listed, or candidate amphibian species are likely to occur within the Study Area.

### ***Reptiles***

*Green Sea Turtle, East Pacific DPS (Chelonia mydas), Federally Threatened. Moderate Potential.* Green Sea Turtles are a pantropical species, found throughout the Atlantic, Pacific, and Indian oceans (NatureServe 2018). The East Pacific DPS occurs from Baja to southern Alaska with most occurrences from San Diego, California to Baja (NOAA Fisheries 2018). Green Sea Turtles are the largest species of hard-shelled sea turtles and earned the name “green” due to the greenish color of their cartilage and fat (related to their diet of seagrasses and algae). Green Sea Turtles are commonly observed nearshore in bays, lagoons, reefs, and in seagrass beds (NOAA Fisheries 2018). The species is extremely long-lived and individuals may not reach sexual maturity until the age of 40 (NMFS and USFWS 2007, NOAA Fisheries 2018). They are known to engage in long-distance migrations from their nesting beaches to foraging sites and show strong site fidelity to each (Meylan et al. 1990, Godley et al. 2002, NatureServe 2018). Female Green Sea Turtles return to their natal beaches to lay eggs from spring through fall (peak breeding varies regionally) (Meylan et al. 1990, NatureServe 2018). Eggs hatch in 1.5-3 months (NatureServe 2018). Up to 3 nests may be created per season with females nesting 3 to 11 seasons during their lives (Hirth 1997). Green Sea Turtles are primarily herbivores and feed on seagrasses and algae. However, they will occasionally take invertebrates and sponges (NOAA Fisheries 2018). Threats to the species include mortality (bycatch) associated with commercial and recreational fishing, loss or degradation of nesting and foraging habitation, climate change, entanglement in marine debris, hunting, and wildlife trafficking (NatureServe 2018, NOAA Fisheries 2018). However, conservation efforts have allowed for increased nesting success in the species, including the East Pacific DPS nesting population along the Pacific coast of Mexico (NOAA Fisheries 2018). Occurrences of the East Pacific DPS are known from Los Angeles, Orange, and San Diego counties in California



(NatureServe 2018). A small and isolated population of Green Sea Turtles is associated with the warm water outfall of the Haynes Generating Station at the mouth of the San Gabriel River. The population was present as recently as April 2016 (Sahagun 2008, Roy 2013, Goldman 2016). This occurrence is about 4.5 miles east of the Study Area. This species has a moderate chance of occurring in the Study Area. There have been occasional reports of turtles away from the generating station in coastal waters near Long Beach, but such sightings are rare. Therefore, it is unlikely this species will be significantly impacted.

### **Birds**

*California Least Tern (Sternula antillarum browni)*, Federally Endangered, State Endangered, CDFW Fully Protected. High Potential. The California Least Tern was listed as an endangered species by the USFWS in 1970 and CDFG in 1971 (CDFW 2018). No federal critical habitat has been designated for the California Least Tern at this time. The species has undergone significant population declines in the last century due to habitat loss related to coastal development and human population growth (USFWS 1980, USFWS 2006a). Ongoing threats to the species include habitat loss, human disturbance at nest sites, nest predation from introduced/exotic species, and pesticides/environmental contaminants (USFWS 1980, Hothem and Zador 1995, USFWS 2006a). The California Least Tern is the smallest tern species in North America. The species is distinguished from other terns by plumage, beak color, and size (Thompson et al. 1997). The California Least Tern's breeding range extends from San Francisco, California to Baja California, Mexico along the coast. The wintering range is primarily limited to the southwestern coast of Mexico (Small 1994, USFWS 2006a). California Least Terns forage by flying or hovering just above the surface of the water (fresh or saltwater) and then plunge-diving to catch prey (Thomson et al. 1997). Foraging occurs nearshore as well as in the open ocean (USACE 2016). Preferred prey items are small fish such as anchovy, surfperches, and silversides (Atwood and Kelly 1984). Breeding habitat for the species includes open beaches free from vegetation, estuarine shores, on landfills, and open ground adjacent to salt ponds (USFWS 1985, USFWS 2006a). The designated nesting season for California Least Terns in southern California is April 15-September 15 (USACE 2016). California Least Terns breed in colonies and exhibit high colony site fidelity from year to year (Atwood and Massey 1988, USFWS 2006a). Nests are constructed in sand, dirt, or dried mud (Craig 1971, Swickard 1971, Massey 1974). The nests consist of a scrape lined with pebbles, twigs, and shell fragments (USFWS 1985). The species is known to forage in the immediate project vicinity. In addition, there is a known nesting population on Pier 400 just to the west of the project site in the Port of Los Angeles (MBC Applied Environmental Sciences 2016, eBird 2018).

This species has a high potential of occurring in the Study Area during construction activities. In-air and underwater noise from pile driving and dredging are most likely to affect this species. Analysis of anticipated noise impacts evaluated in GHD's Noise Technical Report (2019c) and Biological Assessment (2019a) determined that the major tern nest colony within the Port Complex (Pier 400) is well outside the largest area of airborne auditory impact of 438.7 feet. In addition, a "soft start" when initiating pile driving should also allow terns a chance to vacate the immediate area before full-force pile driving is initiated. Biological monitors will also be present during pile driving activities with the power to exercise Stop Work Authority if wildlife exhibit substantial behavioral disturbance to pile driving noise. No measurable effect on chick provisioning rates and survival is expected. A nesting bird survey shall be conducted prior to construction activities to ensure that no impacts to



nesting birds occur as a result of construction activities. Therefore, it is anticipated that the above and below water noise disturbance from impact pile driving and dredging would not result in significant effects to California Least Terns at nesting or perching sites.

### ***Mammals***

#### *Gray Whale, Western North Pacific Population (*Eschrichtius robustus*) Federally Endangered.*

*Moderate Potential.* Gray Whales were first listed under the Endangered Species Conservation Act in 1970 as a result of overexploitation from commercial whaling (35 FR 8491). No critical habitat has been published for this species or population at this time. Gray Whales are only found in the North Pacific Ocean. There are two recognized populations: the Western North Pacific and Eastern North Pacific. The Eastern North Pacific population recovered after the International Whaling Commission issued a ban on commercial whaling, and the population was delisted in 1994 (59 FR 31094 31095). The Western North Pacific population is currently estimated at roughly 140 individuals (NOAA Fisheries 2018). Western Gray Whales summer and feed along the Asian Coast and were believed to winter off the coast of Southern China (Weller et al. 2002). However, recent tracking data indicates that the Western Gray Whale population may in fact be Eastern Gray Whales foraging outside areas normally attributed to the population and that the two stocks may be more closely linked than previously thought (Mate et al. 2015). Gray Whales engage in extraordinarily long annual migrations, traveling up to 10,000 miles round-trip. The species currently holds the record for the longest recorded migration for a mammal (Mate et al. 2015). Female Gray Whales bear one calf roughly every two years. Known breeding grounds occur off the coast of Mexico and suspected breeding grounds include waters off of China and Japan (Weller et al. 2008, Mate et al. 2015, NOAA Fisheries 2015b, NatureServe 2018, and NOAA Fisheries 2018). Calving grounds in Mexico are characterized by sandy or muddy substrate, eelgrass beds, and mangrove swamps (Rice et al. 1981). The characteristics of possible Asian calving grounds are currently unknown (Mate et al. 2015). Gray Whales are unique in their feeding strategies compared to other whales. They feed on benthic and epibenthic invertebrates by sucking sediment from the sea floor and filtering prey from the mud with their baleen plates. Primary biological requirements include shallow coastal waters for calving and plentiful prey on summering grounds (benthic invertebrates) (NOAA Fisheries 2018). The primary historic threat to the species was overexploitation from commercial whaling (35 FR 8491). Current threats to the species include vessel strikes, shipping congestion in migration corridors, coastal development, offshore oil and gas exploration, entanglements in fishing gear, and human disturbance from tourism (NOAA Fisheries 2015b, NOAA Fisheries 2018). Anthropogenic noise may also serve as a threat to the species and, in fact, Gray Whales are known to modify the structure (modified frequency) and timing of underwater calls in relation to increased anthropogenic background noise (Dahlheim and Castellote 2016). Gray Whales seasonally migrate past the Port of Long Beach and are infrequently observed just outside the outer harbor (MBC Applied Environmental Sciences 2016). In addition, certain individuals are known to summer off the coast of California (NOAA Fisheries 2018). The species has a low potential to actually occur in the Study Area, but there has been at least one recent anecdotal report in the harbor. Recent tracking data on Gray Whales tagged off of Sakhalin Island, Russia (Western North Pacific population) revealed cross-basin movements. Tagged individuals crossed the Pacific Ocean from Russia to British Columbia, and then migrated south along the Pacific coast to Baja California (Mate et al. 2015). Since it is impossible to tell individuals from the Eastern and Western North Pacific populations apart without genetic testing, we must assume that some of the federally endangered



Western population could be present in California waters (NOAA Fisheries 2015b). This species overall has a moderate potential of occurring in the Study Area beyond the breakwater, although harbor entry is rare, during construction activities. However, based on numbers and geography, individual animals near the Study Area are more likely to be from the delisted Eastern North Pacific stock. In addition, mitigation measures described in Section 9 will reduce the level of impacts if any are in the area. Therefore, this population is not likely to be significantly affected.

### 8.2.3 Special Status Species (CDFW FP, CDFW SSC, CDFW Special Animals List, or CNPR Ranked)

The CDFW maintains a list of species and habitats of special concern. These are broadly defined as species that are of concern to the CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California.

State Species of Special Concern include those plants and wildlife species that have not been formally listed, yet are proposed or may qualify as endangered or threatened, or are candidates for such listing under the California Endangered Species Act. This affords protection to both listed species and species proposed for listing. In addition, United States Fish and Wildlife Service Birds of Conservation Concern and CDFW special-status invertebrates are considered special status species by CDFW. Plant species included within the California Native Plant Society Inventory of Rare and Endangered Plants with California Rare Plant Rank (CRPR) of 1 and 2 are also considered special status plant species. Few Rank 3 or Rank 4 plants meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act or Sections 2062 and 2067 of the FGC that outlines the CESA. There are occasions where CRPR List 3 or 4 species might be considered of special concern particularly for the type locality of a plant, for populations at the periphery of a species range, or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology. Also under the jurisdiction of CDFW and considered sensitive are Natural Communities with a State ("S") ranking of S1 through S3 in the List of Vegetation Alliances (CDFW 2018). CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database.

Based on database searches, historical records, and an overview of the primary literature, the following special status species have a moderate to high potential of occurring in the Study Area.

#### **Plants**

Forty-three listed and sensitive plant species were considered for presence within the Study Area (Appendix A). Most plant species are unlikely, or have a low potential, to be present based on the lack of preferred habitat onsite. Previous and on-going site disturbance, including the previous construction of the cruise line terminal, vegetation management (i.e., turf maintenance, landscaping, and mowing), reduces the likelihood of persistence or establishment of special status plants within the Study Area.

Fourteen species of plants have a moderate potential of occurrence. These species are tolerant of and/or prefer disturbed habitats, such as roadsides, irrigated lawns or alkaline/saline substrates and could occur in the general vicinity. None of the species are officially state or federally listed as threatened or endangered. Nine of the fourteen plant species are California Native Plant Rank (CNPR) 1B status (Plants that are rare, threatened or endangered in California and elsewhere).



These potential species include: aphanisma (*Aphanisma blitoides*) (CNPR 1B.2), Coulter's saltbush (*Atriplex coulteri*) (CNPR 1B.2), South coast saltscale (*Atriplex pacifica*) (CNPR 1B.2), Parish's brittlescale (*Atriplex parishii*) (CNPR 1B.1), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) (CNPR 1B.2), lucky morning-glory (*Calystegia felix*) (CNPR 1B.1), Peirson's morning-glory (*Calystegia peirsonii*) (CNPR 4.2), Lewis' evening-primrose (*Camissoniopsis lewisii*) (CNPR 3), southern tarplant (*Centromadia parryi* ssp. *australis*) (CNPR 1B.1), vernal barley (*Hordeum intercedens*) (CNPR 3.2), coast woolly-heads (*Nemacaulis denudata* var. *denudata*) (CNPR 1B.2), Hubby's phacelia (*Phacelia hubbyi*) (CNPR 4.2), estuary seablite (*Suaeda esteroa*) (CNPR 1B.2), woolly seablite (*Suaeda taxifolia*) (CNPR 4.2).

### **CNPR 1B Plants**

CDFW advises that impacts to plant species with a California Rare Plant Rank (CRPR) in the Inventory of Rare and Endangered Plants be disclosed by the lead agency during project review to ensure compliance with CEQA. Due to the extreme rarity of some plant species (CRPR 1Bs), any impact to any population would be considered significant and should be disclosed and reported under CEQA.

[Aphanisma CNPR 1B.2](#) is an annual succulent herb that is an innocuous and easily overlooked plant. It grows in sandy conditions along the southern California coast, from Baja California to Santa Barbara County and the Channel Islands (NatureServe 2018). Its mainland populations are in decline due to development, recreational use, foot traffic, and non-native plants (CNPS 2018). It could occur in the Study Area in sandy, unmaintained areas, such as around the parking structure, or if dredging material is disposed of over land. This species has a moderate possibility of occurring in the construction area. Due to its rarity, impacts to a population would be significant to the species. Lack of natural vegetation in the Study Area, however, reduces the chance of this plant occurring and therefore being impacted.

[Lucky morning-glory CNPR 1B.1](#) is an annual rhizomatous herb. The CNDDDB has a cited occurrence in 2014 a little over 7 miles from the Study Area. The locality is in a regional park and the CNPS Inventory of Rare and Endangered Plants states that "all recent occurrences [have been found] in irrigated landscapes. This species is threatened by development, urbanization, weeding, herbicide application, and hydrology alterations. This species could potentially be in patches of irrigated lawn and has a moderate possibility of occurring in the landscaped areas around the parking garage. Due to its extreme rarity, impacts to any population would be significant and CDFW should be notified, if presence is found.

[Southern tarplant CNPR 1B.1](#) is an annual herb that is often found in disturbed areas along the coast. There are seven element occurrences of this species within 5 miles of the Study Area, including several recently documented occurrences near the Alamitos Bay Marina Center in 2014 (CDFW 2018). It could occur in the construction areas in sandy, unmaintained areas, such as around the parking structure, or if dredging material is disposed of over land. Due to its extreme rarity, impacts to any population would be significant and CDFW should be notified if presence is found. Lack of natural vegetation in the Study Area, however, reduces the chance of this plant occurring and therefore being impacted.



[Coast woolly-heads CNPR 1B.2](#) is an annual herb found in sandy locations. It is noted as occurring within 5 miles of the Study Area near Alamitos Bay Marina Center and another occurrence at Terminal Island. It is threatened by coastal development, foot traffic, and non-native plants, such as iceplant (CNPS 2018, CDFW 2018). It could occur in the Study Area in sandy, unmaintained areas, such as around the parking structure, or if dredging material is disposed of over land. Due to its rarity, impacts to a population would be significant to the species. Lack of natural vegetation in the Study Area, however, reduces the chance of this plant occurring and therefore being impacted.

[Estuary seablite CNPR 1B.2](#) is a perennial herb that is adapted to saline coastal conditions. In addition, species in this genus tend to be disturbance tolerant. There are four occurrences within 5 miles of the Study Area, many from around the Alamitos Bay Marina Center. This species could persist or establish in unmaintained sandy areas, such as around the parking structure. Due to its rarity, impacts to a population would be significant to the species. Lack of natural vegetation in the Study Area, however, reduces the chance of this plant occurring and therefore being impacted.

[Special status saltbush species \(Atriplex spp.\)](#) These four species; Coulter's saltbush (perennial herb), south coast saltscale (annual herb), Parish's brittlescale (annual herb), and Davidson's saltscale (annual herb); are treated here together due to the shared attributes of this genus. Species in the Atriplex genus are in general adapted to harsh, saline, and alkaline conditions and are disturbance tolerant. All four species are threatened to be extirpated due to development and other related factors. There is potential for these species to take advantage of the riprap environment along the water's edge or other unmaintained areas where weeds could be allowed to exist possibly around the parking garage. Due to their rarity, impacts to populations of these species would be significant. Lack of natural vegetation in the Study Area, however, reduces the chance of this plant occurring and therefore being impacted.

#### ***Watch List and "More Information Needed" Plants***

[Peirson's morning-glory CNPR 4.2](#) is a perennial rhizomatous herb that is disturbance tolerant and often found along roadsides (CNPS 2018, CDFW 2018). A herbarium record was collected a little over 5 miles from the project site in 1994 (CCH 2018). This species could persist or have established along roadsides or in unmaintained places around the parking garage, and has a moderate possibility of occurring in the construction area. This species is only a watch list species, and therefore, as a whole species, is not likely to be significantly affected.

[Lewis' evening-primrose CNPR 3](#) is an annual herb that is tolerant of disturbance and grows in sandy areas, such as coastal strand communities along the southern California coast. A herbarium record was collected a little over 5 miles from the project site in San Pedro (CCH 2018). This species could persist or have established in unmaintained sandy areas around the parking garage. This species is one in which little is known and is often misidentified with other taxa. It has a note in the California Rare Plant Inventory indicating it may be moved to list 4 status. Therefore, as a whole species, is not likely to be significantly affected.

[Vernal barley CNPR 3.2](#) is an annual grass that is easily mistaken for a more common relative, alkali barley (*H. depressum*). More study is needed to determine the extent of its rarity and other specifics of this species. Misidentification could have caused this species to either be over reported or under reported. Species in this genus are disturbance and salt tolerant. The nearest occurrence



is farther north near Marina Del Rey. This species could be present in the construction area in grassy or unmaintained weedy areas around the parking garage. This species is one in which little is known and is often misidentified. Having a “.2” suffix indicates it is moderately threatened in California (20-80% of occurrences are threatened with a moderate degree and immediacy of threat). It is possible that this project could contribute to a significant effect. Lack of natural vegetation in the Study Area, however, reduces the chance of this plant occurring and therefore being impacted.

[Hubby's phacelia CNPR 4.2](#) is an annual herb that grows in rocky, gravelly areas. Many populations have not been reassessed in recent years and its current status is not well understood due to this data limitation. This species could take advantage of the riprap environment along the ocean front. Due to the low area of impact to the riprap environment, it is unlikely this species will be significantly affected. This species is only a watch list species, and therefore, as a whole species, is not likely to be significantly affected.

[Woolly seablite CNPR 4.2](#) is a perennial evergreen shrub found along the southern coast of California. There are several occurrences within 5 miles of the Study Area and dozens more in the Rolling Hills district to the west. This species could persist or establish in the riprap environment or in unmaintained areas. This species is only a watch list species, and therefore, as a whole species, is not likely to be significantly affected.

### ***Invertebrates***

No special status invertebrate species are likely to occur within the Study Area.

### ***Fish***

No special status fish species are likely to occur from the Study Area.

### ***Amphibians***

No special status amphibian species are likely to occur from the Study Area.

### ***Reptiles***

No state special status reptile species are likely to occur from the Study Area.

### ***Birds***

[Peregrine Falcon \(\*Falco peregrinus\*\), Federally Delisted, State Delisted, CDFW Fully Protected, USFWS Birds of Conservation Concern. Moderate Potential.](#) The Peregrine Falcon is one of the world's most widely distributed raptor species, occurring in urban areas, wetlands, deserts, maritime islands, mountains, tundra, and the tropics (White et al. 2002). Peregrine Falcons received significant attention during the middle of the 20th century due to precipitous population declines. These population crashes have been attributed to the lethal and sub-lethal effects of the organochlorine pesticide DDT (Dichlorodiphenyltrichloroethane). After DDT was banned in 1972, the Peregrine Falcon started to rebound nationwide. In western N. America, resident populations of Peregrines are found along the coast of California and the majority of the interior of the state, excluding the Central Valley and arid regions in the southeast (White et al. 2002). In California, Peregrines generally prefer open landscapes for foraging and cliffs or buildings for breeding. Nests





consist of a scrape in sand, gravel, or dirt on a cliff ledge, artificial nest boxes, or abandoned raptor or corvid nests (Wrege and Cade 1977, White et al. 2002). Peregrine Falcons feed on a variety of avian species including passerines, waterfowl, and shorebirds. They have also been known to take bats, amphibians, fish, and mammals. Prey are taken in flight, off the surface of water, or on land (Sherrod 1975). The Peregrine Falcon is the fastest member of the animal kingdom with diving (“stooping”) speeds recorded at speeds of 238 miles per hour (Franklin 1999). The species is a historical nester in the Port Complex, particularly on the Gerald Desmond Bridge, and is known to forage in the project vicinity (MBC Applied Environmental Sciences 2016, eBird 2018).

This species has a moderate potential of occurring in the Study Area during construction activities. In-air and underwater noise from pile driving and dredging are most likely to affect this species. Analysis of anticipated noise impacts evaluated in GHD’s Noise Technical Report (2019c) and Biological Assessment (2019a) determined that the largest area of airborne auditory impact, 438.7 feet, would fall well short of the known nesting site, more than a mile from the construction area. In addition, a “soft start” when initiating pile driving should also allow terns a chance to vacate the immediate area before full-force pile driving is initiated. Biological monitors will also be present during pile driving activities with the power to exercise Stop Work Authority if wildlife exhibit substantial behavioral disturbance to pile driving noise. No measurable effect on chick provisioning rates and survival is expected. A nesting bird survey shall be conducted prior to construction activities to ensure that no impacts to nesting birds occur as a result of construction activities. In addition, following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds. Therefore, it is anticipated that the above and below water noise disturbance from impact pile driving and dredging would not result in significant disturbance to this species.

[California Brown Pelican \(\*Pelecanus occidentalis californicus\*\), Federally Delisted, State Delisted, CDFW Fully Protected. High Potential.](#) Brown Pelicans received significant attention during the middle of the 20th century due to precipitous population declines. These population crashes have been attributed to the lethal and sub-lethal effects of the organochlorine pesticides DDT and endrin. After DDT was banned in 1972 and the use of endrin was restricted, the Brown Pelican populations started to rebound nationwide (Shields 2014). California Brown Pelicans are found year-round in coastal marine and estuary environments. The western sub-species breeds along the southern California coast to Baja, the Gulf of California, and Sinaloa. The California Brown Pelican migrates northward along the west coast during the fall and winters from British Columbia to Ecuador (Shepard 1999). The species typically forages in shallow waters within 75 miles from land at prey-rich coastal upwellings (Briggs et al. 1981). Brown Pelicans feed on surface schooling fish and the species is well-known for their foraging strategy of surface plunge-diving (Schreiber et al. 1975). The Channel Islands represent the closest known Brown Pelican nesting colonies in relation to the Study Area (Anderson et al. 2013). However, the species is known to forage year-round within the Study Area and rest on riprap in the harbor (MBC Applied Environmental Sciences 2016). One Brown Pelican was observed near the existing dock during the November 14, 2018 site visit. This species has a moderate potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for California Brown Pelicans.



*Caspian Tern (Hydroprogne caspia), USFWS Birds of Conservation Concern for Nesting Colonies.*

*Moderate Potential.* The Caspian Tern is the largest species of tern in the world and easily recognizable by its bright red bill with a dray gray/black mark near tip. Caspian Terns are found along coastlines, lakes, and inlets throughout North America (Cuthbert and Wires 1999). Habitat preferences include lakes, rivers, estuaries, shorelines, sloughs, lagoons, and occasionally open ocean (Cuthbert and Wires 1999). In California, these terns largely breed along the coast from the Oregon border to Point Conception. Many wintering populations exist along the Southern California coast, including populations in Los Angeles County (Small 1994, Collins 2006). Caspian Terns favor islands in rivers and lakes, coastal estuarine habitat, salt marsh, and barrier islands for nesting with sandy, pebble, or gravel beaches (Cuthbert and Wires 1999). The species typically nests in colonies (Cuthbert and Wires 1999). Nests consist of a depression/scrap in the sand/gravel lined with dried vegetation, shells, pebbles, and other debris (Penland 1976). Terns feed on fish, crayfish, and insects (Cuthbert and Wires 1999). The species is known to both winter and nest in the project vicinity (Collins 2006, MBC Applied Environmental Sciences 2016). This species has a moderate potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

*Black-crowned Night Heron (Nycticorax nycticorax), CDFW Watch List for Nesting Colonies. High*

*Potential.* The Black-crowned Night Heron is a globally wide-spread species, with populations on every continent with the exception of Antarctica and Australia. The species is a year-round resident in much of California, with notable exceptions in the Sierras, Central Valley, and the arid southeast portion of the state (Hothem et al. 2010). Non-resident Night Heron populations that breed in the interior of California are believed to winter to Mexico (Byrd 1978). Black-crowned Night-Herons can be found in a wide variety of habitats adjacent to water bodies including urban, wetland, partially forested, and agricultural landscapes (Palmer 1962, Hancock and Kushlan 1984). They are considered to be opportunistic foragers and feed on insects, mammals, birds, carrion, trash, clams, crayfish, turtles, and many other food items (Palmer 1962). The species feeds almost exclusively at night (Fasola 1984). During the breeding season, Black-crowned Night-Herons nest in mixed-species colonies (Burger 1979). They build platform stick nests in trees, reeds, cattails, bushes, or on the ground. Initiation of nesting in California is in early May (Hothem et al. 2010). At the Port of Long Beach, the species is known to forage and nest in the immediate project vicinity and has historically nested on the Navy Mole, a man-made peninsula in front of the former Naval Shipyard (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a high potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

*Double-crested Cormorant (Phalacrocorax auritus), CDFW Watch List for Nesting Colonies. High*

*Potential.* Double-crested Cormorants are widely-distributed in North American, with resident populations along the southern coasts and breeding populations in the Canadian and U.S. interior and northern coastal areas (Hatch 1995). Interior and eastern populations are highly migratory (Dorr et al. 2014). In California, Double-crested Cormorants breed along most of the California coast and some inland areas such as the Salton Sea, Central Valley, and Colorado River (Small 1994). Cormorants are associated with aquatic environments such as coastal or aquaculture areas with suitable roosting and loafing sites on rocks, pilings, or sandbars (Dorr et al. 2014). Double-crested Cormorants nest colonially on the ground, cliffs, power poles, rock islands, or trees or shrubs



(Stenzel et al. 1995, Chapdelaine and Bédard 2005). Nests are composed of small sticks, seaweed, and trash such as rope, balloons, and fishing line. Double-crested Cormorants typically feed in shallow, open water fairly close to shore. They are primarily piscivores but also will eat crustaceans, insects, eels, and amphibians (Palmer 1962, Colman et al. 2005). At the Port of Long Beach, the species is known to forage and nest in the immediate project vicinity. Double-crested Cormorants were observed at the dock during a site visit on Nov. 14<sup>th</sup>, 2018 (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a high potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

*Great Blue Heron (Ardea herodias), CDFW Special Animals List for Nesting Colonies. High Potential.* Great Blue Herons are a wide-spread species with populations in North American and southern Canada. The herons are year-round residents in the majority of coastal and central California. Notable exceptions include the Sierras and the very southeastern desert regions of the state (Vennesland and Butler 2011). Great Blue Herons are extremely adaptable and utilize a variety of habitats including most saltwater and freshwater bodies, agricultural land, swamps, wetlands, as well as commercial and residential areas such as golf courses (Butler 1997). They are opportunistic foragers, wading in shallow water to feed on fish, amphibians, and invertebrates. They also hunt on shore for reptiles, birds, and small mammals (Palmer 1962). Additionally, they are known to scavenge carrion (Ritzi and Ritzi 2005). Foraging activity is linked to tidal cycles on the Pacific Coast (Brandman 1976). Nesting habitat includes trees, bushes, artificial structures, or the ground adjacent to a water body (Vennesland and Butler 2011). Great Blue Herons are colonial nesters (Butler 1997). Nests platforms are typically constructed out of locally available sticks and lined with material such as grass, moss, and reeds (Cottrille and Cottrille 1958, Palmer 1962). The species is known to forage and nest in the immediate project vicinity. There is a known colony in Port of Long Beach on Navy Mole (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a high potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

*Great Egret (Ardea alba), CDFW Special Animals List for Nesting Colonies. Moderate Potential.* Great Egrets are year-round residents in western California, with breeders concentrated in the Klamath and Warner basin in Siskiyou and Modoc Counties, along the coast in Humboldt County, the San Francisco Bay area, Monterey County, the Salton Sea, and the Central Valley (Roberson and Tenney 1993, Shuford 1993, Small 1994). Populations from more northern latitudes also winter in California west of the Cascades/Sierras. In term of habitat, Great Egrets favor wetlands, estuaries, lakes, rivers, ponds, swamps, streams, marshes, and tidal flats (Mccrimmon, Jr. et al. 2011). They are opportunistic foragers, wading in shallow water to feed on fish, amphibians, and invertebrates. They also hunt on shore for reptiles, birds, and small mammals (Palmer 1962). Great Egrets utilize a variety of substrates for nesting including trees, woody vegetation, artificial nest platforms, or the ground adjacent to water (Pratt 1970, Wiese 1976, Gladstone 1979, Mccrimmon, Jr. et al. 2011). Nests platforms are typically constructed out of locally available sticks and greenery. Great Egrets nests communally with conspecifics or in mixed-species colonies (Nesbitt et al. 1982). The species is known to forage in the immediate project vicinity at the Port of Long Beach (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a moderate potential of



occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

[Snowy Egret \(\*Egretta thula\*\), CDFW Special Animals List for Nesting Colonies. Moderate Potential.](#)

Snowy Egrets were hunted to the brink of extinction by the plume trade at the end of the 19th and beginning of the 20th century. However, many populations rebounded after the Migratory Bird Treaty Act was passed in 1918 (Allan 1974). Year-round populations of Snowy Egrets are found around Humboldt Bay, the San Francisco Bay area, the Central Valley, and the Salton Sea (Small 1994). Wintering populations are also located along much of the rest of the California coast (Parsons and Master 2000). In terms of habitat, Snowy Egrets prefer riparian and estuarine areas, marshes, wet meadows, inland lakes, and river courses (Garrett and Dunn 1981). Snowy Egrets hunt in shallow water and on shore, frequently making use of their distinctly yellow feet to attract and capture prey items (Hom 1983). Prey includes fish, amphibians, snakes, lizards, crustaceans, insects, and worms (Kushlan 1978). Snowy Egrets are colonial nesters, with colonies comprised of both conspecifics and allospecifics (Burger 1978). Snowy Egrets construct stick nest platforms in a variety of tree and shrub species including willows, holly, birch, and wax myrtle. Nests are lined with reeds, grasses, and moss (Parsons and Master 2000). The species is known to forage in the immediate project vicinity at the Port of Long Beach. Snowy Egrets were observed on riprap adjacent to the dock during a site visit on Nov. 14<sup>th</sup>, 2018 (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a moderate potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

[Osprey \(\*Pandion haliaetus\*\), CDFW Watch List for Nesting. Moderate Potential.](#) Osprey are a globally occurring species. In North America, the majority of the Osprey migrate south during the fall and winter in Central and South America (Washburn et al. 2014). Osprey are distributed along much of coastal California with breeding populations from Del Norte to San Diego and San Bernardino counties (Bierregaard et al 2016). Osprey received significant attention during the middle of the 20th century due to precipitous population declines. These population crashes have been attributed to the lethal and sub-lethal effects of the organochlorine pesticide DDT. After DDT was banned in 1972, Osprey started to rebound nationwide (Wiemeyer et al. 1988, Bierregaard et al 2016). Osprey prefer forested or coastal habitat adjacent to large bodies of shallow water in temperate or tropical climates (Bierregaard et al 2016). During the breeding season, Osprey build large platform stick nests in a variety of tree species, on artificial nest platforms, power poles, and cliffs (Henny and Anderson 1979, Hagan and Walters 1990, Castellanos and Ortega-Rubio 1995, Ewins et al. 1995). Osprey will occasionally breed in large colonies (Greene 1987). In terms of prey, Osprey are strictly piscivores and capture their prey via plunge-diving (Poole et al. 2002). The species is known to forage in the immediate project vicinity in the Port of Long Beach. However, no historical nest sites are known from the project vicinity or at the proposed dredged material disposal site (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a moderate potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

[Cooper's Hawk \(\*Accipiter cooperii\*\), CDFW Watch List for Nesting. Moderate Potential.](#) Cooper's Hawks are found in most temperate areas of North America south of the boreal forest (Curtis et al.



2006). While many populations are year-round residents, the northernmost populations (in Canada and northern U.S. states) are migratory and winter in the U.S. or Mexico (Palmer 1988, Curtis et al. 2006). In California, migrants from more northern climates pass through the state during the fall months (August-November). However, some of these northern populations of Cooper's Hawks likely winter in the state (Small 1994, Curtis et al. 2006). Cooper's Hawks may be found in a variety of forested habitats including deciduous, mixed, or evergreen forests in urban, suburban, or rural areas. Cooper's Hawk populations have increased over the past few decades in urban and suburban areas, likely as a result of readily available/growing prey populations in these habitats (e.g., European Starling and Rock Pigeon flocks) (Stahlecker and Beach 1979, Reynolds et al. 1982, Curtis et al. 2006). Cooper's Hawks prey on a variety of small bird and mammal species including European Starlings, Mourning Doves, Rock Pigeons, deer mice, squirrels, and hares (Palmer 1988, Reynolds 1989, Bielefeldt et al. 1992, Curtis et al. 2006). During the breeding season, nest site selection is most likely related to dense prey availability in the surrounding area as well as canopy cover and the adjacent habitat structure (Kennedy 1988, Bosakowski et al. 1992). Cooper's Hawks build their nests in any number of trees including pines, oaks, firs, eucalyptus, etc (Moore and Henny 1983, Asay 1987, Palmer 1988, Sureda 1996). Their nests are constructed out of sticks and bark, and may be built on top of existing squirrel or other raptor nests (Moore and Henny 1983, Bosakowski et al. 1992). At the Port of Long Beach, the species is known to forage in the immediate project vicinity. However, no nest sites are known from the project vicinity or at the proposed dredged material transfer site (Pier S) and would require surveys to confirm (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a moderate potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

*Black Skimmer (Rynchops niger)*, CDFW Species of Special Concern. High Potential. Black Skimmers are coastal waterbirds that are distinguished from other superficially similar species (e.g., terns) by a highly unique bill. Their lower mandible extends well beyond the upper, and the bill is bright red at the basal end and black at the distal end. The bill is a unique adaptation for catching fish, shrimp, and crustaceans in shallow water (Leavitt 1957, Erwin 1990, Gochfeld and Burger 1994). Black Skimmers breed along both coasts of North America. On the east coast, their breeding range extends from Massachusetts to southern Mexico, while on the west coast, they are found from southern California to Nayarit, Mexico (American Ornithologists' Union 1983, Clapp et al. 1983). The species winters in southern California, Mexico, Central America, and southern Florida (Gochfeld and Burger 1994). During the winter, Black Skimmer habitat includes coastal beaches (Murphy 1936). In the breeding season, the species is found primarily along the coast, with the exception of a few inland lakes (Salton Sea, CA and Palm Beach, FL). They nest in colonies on open sand, gravel, shell bars, islands, or wrack on salt marshes (Erwin 1979, Erwin 1980, Burger and Gochfeld 1990). Nests are comprised of a scrape in sand or marsh mats with no additional material added (Gochfeld and Burger 1994). At the Port of Long Beach, the species is known to forage and has historically nested in the immediate project vicinity (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a high potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

*California Gull (Larus californicus)*, CDFW Watch List for Nesting Colonies. High Potential. The California Gull is a unique species of gull in North America due to the fact that they breed at inland



waters (i.e. lakes) and winter on the coast. The breeding range of the species extends from San Francisco Bay and Mono Lake in California east to the Dakotas and north to Manitoba. During the fall, the species migrates west to the Pacific Coast and winters from British Columbia to Baja California, with some isolated populations in the Central Valley and Salton Sea in California, the Willamette Valley in Oregon, and along the lower Colorado River (Rosenberg et al. 1991, Gilligan et al. 1994, Small 1994, Winkler 1996). Wintering habitat for this species includes marine habitats such as beach, mudflats, estuaries, and river deltas (Winkler 1996). During the breeding season, the species breeds in colonies on islands in lakes, reservoirs, or rivers (aquatic environment may be freshwater or saline) (Jones 1986, Winkler 1996). Nests are constructed out of a scrape in the substrate and lined with bones, feathers, and vegetation (Behle 1958). California Gulls are opportunistic feeders and will take mammals, invertebrates, insects, shrimp, birds, fruit, and garbage (Cottam 1935, Merrell 1959, Jehl and Mahoney 1983, Page et al. 1985, Winkler 1996). This species is common in the project vicinity during the winter (observed foraging and resting in the project vicinity). However, this species is not known to nest in the Port of Long Beach (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a high potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

[Long-billed Curlew \(\*Numenius americanus\*\), USFWS Birds of Conservation Concern, CDFW Watch List for Nesting. Moderate Potential.](#) The Long-billed Curlew exists as the largest shorebird in North America. The species has undergone significant population declines due to breeding and wintering habitat loss associated with habitat conversion to agriculture and development. Habitat loss serves as an ongoing threat to the species (Jenni et al 1981, Dugger and Dugger 2002). Long-billed Curlews are easily distinguished from other shorebirds by their extremely long decurved bill (length may reach up to one third of the body length). The species breeds in grassland habitats in southwestern Canada, the Great Plains, and the Great Basin and winters in coastal and inland habitats in Louisiana, California, and Texas (Dugger and Dugger 2002). In California, Long-billed Curlews are commonly observed in the winter along the coast in Humboldt County, in the Central Valley, Salton Sea basin, and Imperial Valley (Small 1994). During the winter, the species favors habitat such as sandy beaches, flooded pastures, and tidal flats/estuaries (Stenzel et al. 1976, Day and Colwell 1998, Colwell and Sundeen 2002). Breeding habitat includes open short-grass or mixed-grass prairie (Pampush and Anthony 1993, Hooper and Pitt 1996). Long-billed Curlew nests consist of a scrape/bowl lined with animal droppings, vegetation, bark, and pebbles surrounded by patchy vegetation. Nests are often located near microhabitat feature such as rocks, cow pies, or dirt mounds (King 1978, Allen 1980, Jenni et al. 1981, Cochrane and Anderson 1987, Pampush and Anthony 1993). Long-billed Curlews feed on crabs, shrimp, fish, earthworms, insects, and occasional bird nestlings and eggs (Sadler and Maher 1976, Stenzel et al. 1976, Leeman 2000). At the Port of Long Beach, the species is known to forage in the immediate project vicinity (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a moderate potential occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

[Elegant Tern \(\*Thalasseus elegans\*\), CDFW Watch List for Nesting Colonies. High Potential.](#) The Elegant Tern is distinguished from other co-occurring tern species by a shaggy crest, reddish-orange bill, and pale white/pink ventral feathers (during breeding season) (Burness et al. 1999). The species occurs in the Americas from Washington State to Chile (Devillers and Terschuren 1977,



Burness et al. 1999). The wintering range is generally limited to Central and South America but stragglers are frequently observed in California in late winter (Shuford et al. 1989, Burness et al. 1999). Wintering habitat includes nearshore coastal water such as lagoons, estuaries, bays, and harbors (Anderson 1983). Only five breeding colonies exist for this species in North America and Mexico, with the colony on Isla Rasa in Mexico containing up to ninety-seven percent of the total population (Clapp et al. 1993). In California, breeding colonies exist in San Diego Bay, Bolsa Chica Ecological Reserve, Los Angeles Harbor, and Isla Montague in the Colorado River Delta (Collins et al. 1991, Palacios and Mellink 1993, Burness et al. 1999). Breeding habitat includes muddy dikes adjacent to salt ponds with patchy vegetation, sandy islands, mud flats, or pebble beaches (Schaffner 1982, Collins et al. 1991, Palacios and Mellink 1992, Burness et al. 1999). Following the breeding season, the species migrates north and forages off the California coast before migrating south again for the winter (Small 1994). Elegant Terns forage on schooling fish and catch prey via plunge-diving (Schaffner 1982, Schaffner 1986). The species is known to forage in the immediate project vicinity. In addition, there is a known nesting population on Pier 400 just to the west of the project site in the Port of Los Angeles (MBC Applied Environmental Sciences 2016, eBird 2018). This species has a high potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

*Common Loon (Gavia immer), CDFW Species of Special Concern. Moderate Potential.* The Common Loon occurs in freshwater environments in North America, Greenland, and Iceland. The species is distinguished from congeners by plumage, bill color, and generally larger size. Common Loons winter on the Pacific and Atlantic Coasts as well as the Gulfs of California and Mexico. The species is typically found in nearshore waters during the winter including bays, inlets, and marine channels (Lee 1987, Kenow et al. 2002, Evers et al. 2010). In addition, loons may use freshwater rivers and reservoirs during the winter (Evers et al. 2010). Wintering habitat is closely tied to prey availability (McIntyre 1978, Lee 1987). During the summer, non-breeding birds may also be found in marine habitats (McIntyre 1988). In North America, the breeding range extends from the taiga shield in Alaska and Canada south to the great lakes, northeastern Washington State, New York's Adirondack Mountains, northern New England, and northeastern Wyoming. Breeding habitat includes freshwater lakes and reservoirs with clear water, islands for nesting, and abundant prey (Evers et al. 2010). Nests are built on the ground on islands in lakes, on the mainland adjacent to lakes, or on floating bog inlets (Yonge 1981, McIntyre 1975). Microhabitat at the nest site may include sedge mats, marshes, muskrat houses, and cranberry bogs (Palmer 1962, Vermeer 1973, McIntyre 1988). Nests consist of a large matt of vegetation (vegetation varies considerably based on surrounding habitat) (McIntyre 1975). Common loons feed on a variety of fish species (e.g., perch, bluegill, and chubs) and may also take crustaceans (Barr 1973, Creaser et al. 1993, Evers et al. 2004, Seiler et al. 2004). At the Port of Long Beach, the species is known to forage seasonally in the immediate project vicinity. This species has a moderate potential of occurring in the Study Area during construction activities. Following mitigation measures mentioned in Section 9 of this report should reduce impacts to below significant thresholds for this species.

### ***Mammals***

*Gray Whale, Eastern North Pacific Population (Eschrichtius robustus), Federally Delisted, MMPA Protected. Moderate Potential.* Gray Whales are only found in the North Pacific Ocean. There are



two recognized populations: the Western North Pacific and Eastern North Pacific. The Eastern North Pacific population was originally listed as endangered under the Endangered Species Act in 1970. However, the population recovered after the International Whaling Commission issued a ban on commercial whaling. The Eastern North Pacific population was delisted in 1994 (NOAA Fisheries 2018). The Eastern North Pacific winters off the coast of Baja California and Sinaloa and spends the summer foraging in the Bering and Chukchi Seas. However, some Gray Whales are known to summer off the coast of California. Gray Whales engage in extraordinarily long annual migrations, traveling up to 10,000 miles round-trip. Female Gray Whales bear one calf roughly every two years in shallow bays and lagoons in Mexico (NatureServe 2018, NOAA Fisheries 2018). Calving grounds are characterized by sandy or muddy substrate, eelgrass beds, and mangrove swamps (Rice et al. 1981). Gray Whales are unique in their feeding strategies compared to other whales. They feed on benthic and epibenthic invertebrates by sucking sediment from the sea floor and filtering prey from the mud with their baleen plates. Current threats to the species include underwater noise, vessel strikes, and human disturbance from tourism (NOAA Fisheries 2018). Gray whales seasonally migrant past the Port of Long Beach and are infrequently observed just outside the outer harbor (MBC Applied Environmental Sciences 2016). The species has a moderate potential to occur in the study area, and there has been at least one anecdotal report in the harbor in 2018 (Laura McCue NMFS, pers. comm). This species has a moderate potential of occurring in the Study Area during construction activities. An Incidental Harassment Authorization (IHA) is being requesting for marine mammals. Other mitigation measures in Section 9 should reduce impacts to below significant thresholds for this species.

*Pacific White Sided Dolphin (Lagenorhynchus obliquidens), MMPA Protected. Moderate Potential.* Pacific White Sided Dolphins are found throughout the North Pacific Ocean from the Kamchatka Peninsula and southern Alaska south to Japan and Baja California (NatureServe 2018). In the U.S., Pacific White Sided Dolphins commonly occur in waters over the continental shelf or along the continental slope (NOAA Fisheries 2017c). Pacific White Sided Dolphins are distinguished for other co-occurring dolphins by their unique white markings: white stripes on either side of the body that extend from eye to tail (NOAA Fisheries 2018). In North America, the species may make seasonal north-south migrations, with dolphins spending the spring and summer off the coast of Oregon and Washington, and the winter off the coast of California (Barlow 2016). This species has a slow reproductive rate and adults do not reach sexual maturity until the age of 8 to 10 years old. Calving season occurs in later summer or early fall. Adult females give birth to one calf and only reproduce once every three years (NatureServe 2018, NOAA Fisheries 2018). Pacific White Sided Dolphins are social and travel in schools of ten to one hundred individuals. They also will work cooperatively to hunt schooling fish (NOAA Fisheries 2018). Although the Pacific White Sided Dolphin is not listed at the federal or state level, they are protected under the federal Marine Mammal Protection Act. Population trends for this species are currently unknown. Threats to the species include mortality associated with entrapment in fishing gear and underwater noise pollution (NatureServe 2018, NOAA Fisheries 2018). This species has been infrequently observed in the outer harbor. The outer harbor may prove foraging opportunities in the form of schooling fish (MBC Applied Environmental Sciences 2016, iNaturalist 2018). This species has a moderate potential of occurring in the Study Area during construction activities. An IHA is being requesting for marine mammals. Other mitigation measures in Section 9 should reduce impacts to below significant thresholds for this species.





*Short-beaked Common Dolphin (Delphinus delphis), MMPA Protected. Moderate Potential.* Short-beaked Common Dolphins occur worldwide in temperate and subtropical waters, usually no more than 300 nautical miles from shore (NOAA Fisheries 2017d, NatureServe 2018). On the west coast of the U.S., the species distribution follows the California Current, and Short-beaked Common Dolphins are found off the coast of California year-round (NOAA Fisheries 2018). The species is considered to be the most abundant cetacean in California waters (NOAA Fisheries 2017d). Short-beaked Common Dolphins are associated with prey-rich ocean upwellings and underwater landscape features such as seamounts, continental shelves, and oceanic ridges (NOAA Fisheries 2018). The species is distinguished from other cetaceans by a unique “hour glass” color pattern on their bodies, their size, and habitat preferences (NOAA Fisheries 2018). This species may exhibit seasonal migratory movements, as the population size off the California coast increases in association with warmer water temperatures (Forney and Barlow 1998, Barlow 2016). Like most cetaceans, this species has a slow reproductive rate and adults do not reach sexual maturity until the age of 5 to 12 years old. Calving season occurs in the winter in California. Adult females give birth to one calf and only reproduce every two to three years (NatureServe 2018, NOAA Fisheries 2018). Short-beaked Common Dolphins are highly social and may be found in “megapods” of thousands of individuals (NOAA Fisheries 2018). The species typically forages for prey, such as schooling fish and squid, at night (NatureServe 2018, NOAA Fisheries 2018). Although the Short-Beaked Common Dolphin is not listed at the federal or state level, they are protected under the federal Marine Mammal Protection Act. Population trends for this species are currently unknown. However, threats to the species include exploitation/mortality associated with the yellow-fin tuna industry, mortality from drift gill nets, and underwater noise (NOAA Fisheries 2017d, NatureServe 2018, NOAA Fisheries 2018). At the Port of Long Beach, *Delphinus sp.* have been infrequently observed in the outer harbor. The outer harbor may prove foraging opportunities in the form of schooling fish (MBC Applied Environmental Sciences 2016, iNaturalist 2018). This species has a moderate potential of occurring in the Study Area during construction activities. An IHA is being requested for marine mammals. Other mitigation measures in Section 9 should reduce impacts to below significant thresholds for this species.

*Common Bottlenose Dolphin (Tursiops truncatus), MMPA Protected. High Potential.* Common Bottlenose Dolphins are found worldwide in tropical, subtropical, and temperate waters (NatureServe 2018). On the west coast of North America, Common Bottlenose Dolphins occur from Baja California to San Francisco Bay (NOAA Fisheries 2017b). In California, both coastal and pelagic populations of bottlenose dolphins exist (Walker 1981). These populations are known to be both genetically and morphologically distinct. Common Bottlenose Dolphins inhabiting coastal areas are commonly found in lagoons, bays, sounds, and river mouths and exhibit north south movements, likely influenced by prey resources (Defran et al. 1999, NatureServe 2018). Bottlenose Dolphins may travel in groups or alone and they exhibit complex social interactions including “playing” and cooperatively pursuing and trapping prey. They will take a variety of prey items including schooling fish, crustaceans, and squid. Like most cetaceans, adults do not reach sexual maturity until the age of 5 to 15 years old. Calving season varies between individual populations (Urian et al. 1996). In California, calving season generally peaks in spring and fall (Marine Mammal Center 2018). Females give birth to one calf and the calf stays with its mother for three to six years (NOAA Fisheries 2018). Although the Common Bottlenose Dolphin is not listed at the federal or state level, they are protected under the federal Marine Mammal Protection Act. Population trends



for Common Bottlenose Dolphins in coastal California waters are currently unknown. However, worldwide threats to the species include pollution, human harassment (via feeding and wildlife tours), underwater noise pollution, mortality associated with commercial and recreation fishing, mortality associated with algal blooms, and hunting in Japanese waters (NatureServe 2018, NOAA Fisheries 2018). At the Port of Long Beach, *Tursiops sp.* have been observed in the outer as well as the inner harbor. There have been recent sightings of this species near the Queen Mary Dock and elsewhere in the general project area (MBC Applied Environmental Sciences 2016, iNaturalist 2018, Laura McCue, NMFS; pers. comm.). This species has a high potential of occurring in the Study Area during construction activities. An IHA is being requested for marine mammals. Other mitigation measures in Section 9 should reduce impacts to below significant thresholds for this species.

*California Sea Lion (Zalophus californianus), MMPA Protected. High Potential.* California Sea Lions are found in the eastern North Pacific Ocean. The species generally ranges from the U.S./Mexico border to Canada, although males may be found foraging during the winter as far north as southern Alaska (NatureServe 2018, NOAA Fisheries 2018). California Sea Lions are polygynous, with males defending breeding territories with up to 14 females. Although sea lions reach sexual maturity at 4 to 5 years old, males do not defend territories until 9 years of age, when they reach “social” maturity (NOAA Fisheries 2018). The breeding season occurs in summer and early fall and pups are born in spring and summer (NatureServe 2018, NOAA Fisheries 2018). The largest breeding colonies are found on offshore islands from the Channel Islands in California, south to Baja. California Sea Lions breed on sandy beaches or in rocky coves. They are also commonly “haul out” on jetties, ocean buoys, and on marina docks (NOAA Fisheries 2018). California Sea Lions feed at night on a variety of prey including squid and fish (Hawes 1983, NatureServe 2018). Although the California Sea Lion is not listed at the federal or state level, they are protected under the federal Marine Mammal Protection Act. Threats to the species include mortality associated with the commercial fishing industry, mortality associated with algal blooms, human harassment (via feeding and wildlife tours), food shortages during El Niño, and underwater noise pollution (Ono et al. 1987, Nature 2000, NOAA Fisheries 2017a, NatureServe 2018, NOAA Fisheries 2018). California Sea Lions are known to occur in the project area year-round. There are recent sightings of this species from the inner as well as the outer harbor (MBC Applied Environmental Sciences 2016, iNaturalist 2018, Laura McCue NMFS, pers. comm.). This species has a high potential of occurring in the Study Area during construction activities. An IHA is being requested for marine mammals. Other mitigation measures in Section 9 should reduce impacts to below significant thresholds for this species.

*Pacific Harbor Seal (Phoca vitulina richardii), MMPA Protected. High Potential.* Pacific Harbor Seals are found in temperate waters off the coast of North America, from the California/Mexico border to Alaska (NOAA Fisheries 2015a). Pacific Harbor Seals are non-migratory and show strong fidelity to haul out sites. However, the species will travel to find breeding and foraging sites (Herder 1986, NOAA Fisheries 2015a, NOAA Fisheries 2018). Harbor Seals do not reach sexual maturity until 3 to 7 years old. Breeding occurs in the water and pups are born on haul out sites (NOAA Fisheries 2018). Haul out sites are located on the mainland as well as on offshore islands and may include beaches, rocky shores, and intertidal sandbars (NatureServe 2018). The peak haul out period occurs from May to July in California (NOAA Fisheries 2015a). Pupping season primarily occurs during the spring and summer. Female Harbor Seals raise their pups in large nurseries (NOAA Fisheries 2018). Harbor Seals feed on a variety of prey items including shellfish,



crustaceans, and fish (NOAA Fisheries 2018). Foraging sites may be located in the open ocean as well as in bays (Ougzin 2013). Although the Pacific Harbor Seal is not listed at the federal or state level, they are protected under the federal Marine Mammal Protection Act. Along the west coast of the U.S., the Pacific Harbor Seal population is stable or increasing (NOAA Fisheries 2018). Threats to the species include mortality associated with the commercial fishing industry, human harassment, habitat degradation, and pollution (NatureServe 2018, NOAA Fisheries 2018). At the Port of Long Beach, this species is known to occur in the project area year-round and is said to occasionally follow cruise ships to forage on organisms churned up from the harbor bottom and on food thrown off the deck by passengers (MBC Applied Environmental Sciences 2016, iNaturalist 2018, M. Peters, Carnival Cruise Lines, pers. comm.). This species has a high potential of occurring in the Study Area during construction activities. An IHA is being requested for marine mammals. Other mitigation measures in Section 9 should reduce impacts to below significant thresholds for this species.

### 8.3 Critical Habitat

Palo Verdes Blue Butterfly Critical Habitat is present in the hills of Rancho Palos Verdes (to the west of the project). However, this Critical habitat is more than 8 miles from project activities and will not be impacted by construction. Black Abalone Critical Habitat is located from the Palo Verdes/Torrance Border to the western edge of Los Angeles Harbor. No critical habitat for this species is present in the harbor however, and this critical habitat is 6 miles from project activities. Construction will not impact Palo Verdes Blue Butterfly or Black Abalone Critical Habitat.

### 8.4 Essential Fish Habitat

Essential fish habitat is designated for species managed in Fisheries Management Plans under the MSA. EFH applies to species within the Study Area for the proposed Project. Under the MSA, Long Beach Harbor is designated as Essential Fish Habitat within Coastal Pelagics Fishery Management Plan (5 species and Euphausiids), Pacific Groundfish Fishery Management Plan (85 species), and the Highly Migratory Species Fishery Management Plan (11 species). The Coastal Pelagics Fishery Management Plan (as amended) was created to promote efficient, sustainable, and profitable fishery practices and to prohibit the harvest of krill species. The Highly Migratory Species Fishery Management Plan (as amended) seeks to manage sustainable fisheries in the eastern Pacific Ocean across jurisdictional boundaries. No HAPCs have been designated under this plan as of 2018. The Pacific Coast Groundfish Fishery Management Plan (as amended) prohibits activities such as bottom trawling and dredging that could result in long-term damage to the ocean floor. In addition, the plan designates habitat areas of particular concern (HAPC) such as kelp, eelgrass beds, and estuaries. HAPCs at the project location include kelp and eelgrass beds in the harbor.

Due to the nature of the Project, there is a potential for adverse effects EFH managed species and their habitats from construction involving pile driving in the Port of Long Beach. It is possible for any of the Coastal Pelagic species to occur in the Study Area. However, the only species that have a moderate to high potential of occurring in the Study Area, based on previously biological surveys, are Northern Anchovy (*Engraulis mordax*), Pacific Sardines (*Sardinops sagax*), and Jack Mackerel (*Trachurus summetricus*). In addition, the results of extensive biological surveys indicate that the only Pacific Groundfish species likely to occur in the Study Area are English Sole (*Parophrys*



*vetulus*), Vermillion Rockfish (*Sebastes miniatus*), and California Skates (*Raja inornata*). In addition, no species managed under the Highly Migratory Species Fishery Management Plan are likely to occur in the Port Complex, based on previous biological surveys (MBC Applied Environmental Sciences 2016, MBC Aquatic Sciences 2018).

Kelp and eelgrass beds in the harbor are located primarily on the Los Angeles side of the Port Complex, and eelgrass is not believed to occur close to the study area. Kelp is present in narrow bands along Pier J close to the construction area and may require further review and/or avoidance measures. Construction will not result in increased shading over eelgrass beds. No estuaries, wetlands, mudflats, or marshes are located in the project vicinity and therefore will not be impacted by construction. As the project consists of minor alterations to the existing Carnival Cruise berth, no high-quality habitat will be lost. Construction will result in no physical barriers to wildlife movement. In addition, project activities are localized and temporary and are not expected to result in any long-term or significant impacts to water quality in terms of dredging or the possible discharge of effluent. Impacts on water quality will be evaluated during the required pre-dredge sediment and elutriate testing, and in consultation and compliance with Los Angeles Regional Water Quality Control Board (LARWQCB) standards. The Study Area already experiences significant turbidity and Waste Discharge Requirement Plans for Port of Long Beach Maintenance Dredging have been adopted (Order No. R4-2018-0173). Similar water quality requirements can be expected for this proposed project. Best practicable treatments or controls of the dredging and disposal of material shall be followed to comply with LARWQCB consultation and standards (LARWQCB 2018). All acoustic impacts to fish, marine and terrestrial birds, and marine mammals as a result of pile driving activities will be minimized or mitigated via conservation measures (i.e. "soft start" when pile driving, which would cause wildlife in the immediate vicinity to leave, biological observers, bubble curtains, etc.). The Proposed Project is not expected to have an effect on EFH.

## 9. Summary of Potential Impacts and Mitigation

Potential impacts will be addressed in detail in environmental review documents (CEQA/NEPA), Biological Assessment, Noise Technical Report, permit applications, and during consultation. In general, impacts are expected to be associated with dredge activity, including direct contact and sediment suspension; with noise and vibration associated with pile driving; and to a lesser extent with noise associated with landside construction including parking garage expansion. In addition, project activities are localized and temporary and are not expected to result in any long term or significant impacts to water quality. Impacts on water quality will be evaluated during the required pre-dredge sediment and elutriate testing, and in consultation and compliance with LARWQCB standards and will be coordinated with the Board during permitting.

To the extent practical, impacts will be avoided, minimized, or mitigated. Analysis of anticipated noise impacts were evaluated in GHD's Noise Technical Report (2019c) and Biological Assessment (2019a). In addition, an Incidental Harassment Authorization (IHA) is being requesting for marine mammals that may be impacted by proximity to the Study Area (GHD 2019b). A biological monitor with the power to exercise Stop Work Authority shall be present during in water work, pile driving and dredging, to verify that marine mammals and green sea turtle are not present within the potential impact zone.



A nesting bird survey shall be conducted prior to the start of construction and any active nests avoided, and some of the work would be done after the end of the nesting season (March 1 – September 30 for southern California). A “soft start” when initiating pile driving should allow any birds a chance to vacate the immediate area before full-force pile driving is initiated. Disturbances are expected to be temporary and of short duration. The Carnival Cruise berth only occupies a small portion of the Port of Long Beach and alternative foraging is found throughout the Port (as well as the nearshore Pacific Ocean). In addition, Biological monitors will also be present during pile driving and dredging activities with the power to exercise Stop Work Authority if wildlife exhibit substantial behavioral disturbance to noise.

Most of the non-marine portion of the project area is paved and devoid of vegetation of any kind. A small area of sparse vegetation along the waterfront would not be impacted by the project. Small areas of landscaped vegetation along two sides of the existing parking garage would be removed as part of parking expansion. A site visit identified only small, linear areas of frequently maintained lawn and associated ornamental trees and shrubs in these areas, and no native vegetation was observed during a site visit. Although some special-status plants have been determined to have a moderate potential of occurring in the general project vicinity, they are not known to occur within the project area and it is not likely that they occur within or immediately adjacent to the ground disturbance area. No impacts are anticipated and thus no mitigation is proposed.

## 10. Conclusion

The project area is within one of the busiest ports on the west coast of the U.S., within highly modified habitat. In spite of the generally degraded habitat conditions, a few special-status or sensitive species are present or potentially present as described above. These include a number of plants, birds and several marine mammals. Small areas of kelp beds have also been reported along the Pier J breakwaters. Through a variety of avoidance, minimization, and mitigation measures it is believed that potential adverse impacts can be kept below a significant level. More specific measures will be identified in permit applications and during consultation with resource agencies.



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## 12. Personal Communications

Laura McCue, NOAA Fisheries Long Beach, November 19, 2018

Max Peters, Carnival Cruise Lines, pers. comm. 2018



## Appendices

A. CNDDDB, IPaC, CNPS, NMFS, and MMPA Database Search Results

B. Figures

C. National Wetlands Inventory Results

D. Reconnaissance Site Visit Photographs

# Appendix A CNDDDB, IPaC, CNPS, NMFS, and MMPA Database Search Results

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## Appendix A: CNDDDB, IPaC, CNPS, NMFS, and MMPA Database Search Results

Appendix A1: CNDDB Species from Eight Quad Scoping Surrounding Long Beach, CA									
Long Beach Cruise Terminal Improvement Project									
SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<b>Insects</b>									
<i>Glaucopsyche lygdamus palosverdesensis</i>	Palos Verdes blue butterfly	Endangered	None		XERCES_CI-Critically Imperiled	Coastal scrub	Restricted to the cool, fog-shrouded, seaward side of Palos Verdes Hills, Los Angeles County.	Host plant is Astragalus trichopodus var. lonchus (locoweed).	<b>Low Potential.</b> No coastal scrub habitat is present at or adjacent to the project site or proposed waste disposal area. All recent records of this species in the vicinity are from the Palo Verdes Hills and the species' host plant (locoweed) is unlikely to be present in the project or waste disposal area.
<i>Bombus crotchii</i>	Crotch bumble bee	None	None		IUCN_EN-Endangered	Open grassland and scrub habitats	Coastal California east to the Sierra-Cascade crest and south into Mexico.	Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	<b>Low Potential.</b> Although the project area is within the species historical range, no open grassland, coastal dune, or scrub habitat are present within or directly adjacent to the project vicinity or at the proposed waste disposal site. The closest known recent records of this species species to the project area are from the Baldwin Hills and Redondo Beach.
<i>Cicindela gabbii</i>	Western Tidal-flat Tiger Beetle	None	None			Estuary   Mud shore/flats	Inhabits estuaries and mudflats along the coast of Southern California.	Generally found on dark-colored mud in the lower zone; occasionally found on dry saline flats of estuaries.	<b>Low Potential.</b> Species is believed to be extirpated in Los Angeles County. All known extant occurrences of this species are from San Diego, Orange, and Ventura County at parks or military facilities.
<i>Cicindela hirticollis gravida</i>	Sandy Beach Tiger Beetle	None	None			Coastal dunes	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico.	Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	<b>Low Potential.</b> Species is believed to be extirpated in Los Angeles County. All known extant occurrences of this species are from San Diego, San Luis Obispo, Santa Barbara, and Ventura County at parks, preserves, or military facilities.
<i>Cicindela latesignata latesignata</i>	Western Beach Tiger Beetle	None	None			Mud shore/flats	Mudflats and beaches in coastal Southern California.		<b>Low Potential.</b> Species is believed to be extirpated in Los Angeles County. All known extant occurrences of this species are from San Diego County.
<i>Cicindela senilis frosti</i>	Senile Tiger Beetle	None	None			Mud shore/flats   Wetland	Inhabits marine shoreline, from Central California coast south to salt marshes of San Diego. Also found at Lake Elsinore	Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.	<b>Low Potential.</b> Species is believed to be extirpated in Los Angeles County. All known extant occurrences of this species are from San Diego County.
<i>Danaus plexippus pop. 1</i>	Monarch - California overwintering population	None	None		USFS_S-Sensitive	Closed-cone coniferous forest	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	<b>Low Potential.</b> Recent records from Long Beach (Heartwell Park and El Dorado Nature Center). However, no wind-protected tree groves are present at or in the vicinity of the project site or at the proposed waste disposal site (very limited vegetation in the highly developed Port of Long Beach).
<i>Panaquina errans</i>	wandering (=saltmarsh) skipper	None	None		IUCN_NT-Near Threatened	Marsh & swamp   Wetland	Southern California coastal salt marshes.	Requires moist saltgrass for larval development.	<b>Low Potential.</b> Closest records are from Playa Del Ray and Bolsa Chica Ecological Reserve. No high quality tidal marsh for the species is present within or directly adjacent to the project vicinity or at the proposed waste disposal site.
<i>Trigonoscuta dorothea dorothea</i>	Dorothy's El Segunda Dune weevil	None	None			Coastal dunes	Coastal sand dunes in Los Angeles County.		<b>Low Potential.</b> Found in coastal sand dunes in Los Angeles County (Playa del Rey area) and at Bolsa Chica Ecological Reserve in Orange County. No coastal dune habitat for this species in present within or directly adjacent to the project vicinity or at the proposed waste disposal site.
<b>Mollusks</b>									
<i>Tryonia imitator</i>	Mimic Tryonia (=California brackishwater snail)	None	None		IUCN_DD-Data Deficient	Aquatic   Brackish marsh   Estuary   Lagoon   Marsh & swamp   Salt marsh   Wetland	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County.	Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	<b>Low Potential.</b> No brackish salt marshes are present on or directly adjacent to the project site or proposed waste disposal area.
<b>Crustaceans</b>									
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	Endangered	None		IUCN_EN-Endangered	Coastal scrub   Valley & foothill grassland   Vernal pool   Wetland	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub.	Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	<b>No Potential.</b> No vernal pools or fresh water pools suitable for their life cycle exist at or near the study area.
<b>Fish</b>									
<i>Siphoteles bicolor mohavensis</i>	Mohave tui chub	Endangered	Endangered		AFS_EN-Endangered   CDFW_FP-Fully Protected	Aquatic   Artificial flowing waters   Artificial standing waters	Endemic to the Mojave River basin, adapted to alkaline, mineralized waters.	Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.	<b>No Potential.</b> The CNDDB occurrence near the study area was an experimental transplant of fish at a botanical garden in the 1970's. In six years, the experiment failed and the population became extirpated.
<b>Amphibians</b>									

Appendix A1: CNDDDB Species from Eight Quad Scoping Surrounding Long Beach, CA

Long Beach Cruise Terminal Improvement Project									
SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Spea hammondi</i>	Western Spadefoot	None	None		BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_NT-Near Threatened	Cismontane woodland   Coastal scrub   Valley & foothill grassland   Vernal pool   Wetland	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Vernal pools are essential for breeding and egg-laying.	<b>Low Potential.</b> No suitable habitat present,.
<b>Reptiles</b>									
<i>Anniella stebbinsi</i>	southern California legless lizard	None	None		CDFW_SSC-Species of Special Concern   USFS_S-Sensitive	Broadleaved upland forest   Chaparral   Coastal dunes   Coastal scrub	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County.	Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	<b>Low Potential.</b> No suitable habitat present,.
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	None	None		CDFW_SSC-Species of Special Concern		Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas.	Ground may be firm soil, sandy, or rocky.	<b>Low Potential.</b> No suitable habitat present,.
<i>Emys marmorata</i>	western pond turtle	None	None		BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_VU-Vulnerable   USFS_S-Sensitive	Aquatic   Artificial flowing waters   Klamath/North coast flowing waters   Klamath/North coast standing waters   Marsh & swamp   Sacramento/San Joaquin flowing waters   Sacramento/San Joaquin standing waters   South coast flowing waters   South coast standing waters   Wetland	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	<b>Low Potential.</b> No suitable habitat present,.
<i>Phrynosoma blainvillii</i>	coast horned lizard	None	None		BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Chaparral   Cismontane woodland   Coastal bluff scrub   Coastal scrub   Desert wash   Pinon & juniper woodlands   Riparian scrub   Riparian woodland   Valley & foothill grassland	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	<b>Low Potential.</b> No suitable habitat present,.
<b>Birds</b>									
<i>Agelaius tricolor</i>	Tricolored Blackbird	None	Candidate Endangered		BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_EN-Endangered   NABCI_RWL-Red Watch List   USFWS_BCC-Birds of Conservation Concern	Freshwater marsh   Marsh & swamp   Swamp   Wetland	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	<b>Low Potential.</b> No nesting or foraging habitat for the species is present on or directly adjacent to the project site or proposed waste disposal area. No records of the species from the project vicinity in the last 10 years.
<i>Pelecanus occidentalis californicus</i>	California Brown Pelican	Delisted	Delisted		BLM_S-Sensitive   CDFW_FP-Fully Protected   USFS_S-Sensitive		Colonial nester on coastal islands just outside the surf line.	Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	<b>High Potential.</b> The species is known to forage in the immediate project vicinity.
<i>Empidonax traillii extimus</i>	Southwestern Willow Flycatcher	Endangered	Endangered		NABCI_RWL-Red Watch List	Riparian woodland	Riparian woodlands in Southern California.		<b>Low Potential.</b> No nesting or foraging habitat for the species is present on or directly adjacent to the project site or proposed waste disposal area. No records of the species from the project vicinity.
<i>Rallus obsoletus levipes</i>	Light-footed Ridgway's Rail	Endangered	Endangered		CDFW_FP-Fully Protected   NABCI_RWL-Red Watch List	Marsh & swamp   Salt marsh   Wetland	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation.	Requires dense growth of either pickleweed or cordgrass for nesting or escape cover, feeds on molluscs and crustaceans.	<b>Low Potential.</b> Resident population at Seal Beach National Wildlife Refuge to the east of the project vicinity but no pickleweed/cordgrass foraging or nesting habitat for this species is present in the immediate project vicinity or at the proposed waste disposal site.
<i>Sternula antillarum brownii</i>	California Least Tern	Endangered	Endangered		CDFW_FP-Fully Protected   NABCI_RWL-Red Watch List	Alkali playa   Wetland	Nests along the coast from San Francisco Bay south to northern Baja California.	Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	<b>High Potential.</b> The species is known to forage in the immediate project vicinity. In addition, there is a known nesting population on Pier 400 just to the west of the project site in the Port of Los Angeles.

Appendix A1: CNDDB Species from Eight Quad Scoping Surrounding Long Beach, CA

Long Beach Cruise Terminal Improvement Project

SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Vireo bellii pusillus</i>	Least Bell's Vireo	Endangered	Endangered		IUCN_NT-Near Threatened   NABCI_YWL-Yellow Watch List	Riparian forest   Riparian scrub   Riparian woodland	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft.	Nests placed along margins of bushes or on twigs projecting into pathways; usually willow, Baccharis, mesquite.	<b>Low Potential.</b> Although there are a few records of this species in the Long Beach (i.e. along the LA River at Willow Street), there is no breeding or foraging habitat for this species in the project vicinity or at the proposed waste disposal site.
<i>Passerculus sandwichensis beldingi</i>	Belding's Savannah Sparrow	None	Endangered			Marsh & swamp   Wetland	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County.	Nests in Salicornia on and about margins of tidal flats.	<b>Low Potential.</b> Records from Seal Beach National Wildlife Refuge to the east of the project vicinity but no coastal marsh foraging or nesting habitat for this species is present in the immediate project vicinity or at the proposed waste disposal site.
<i>Coccyzus americanus occidentalis</i>	Western Yellow-billed Cuckoo	Threatened	Endangered		BLM_S-Sensitive   NABCI_RWL-Red Watch List   USFS_S-Sensitive   USFWS_BCC-Birds of Conservation Concern	Riparian forest	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	<b>Low Potential.</b> No nesting or foraging habitat for the species is present on or directly adjacent to the project site or proposed waste disposal area. No records of the species from the project vicinity in the last 10 years.
<i>Athene cucularia</i>	Burrowing Owl	None	None		BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Coastal prairie   Coastal scrub   Great Basin grassland   Great Basin scrub   Mojavean desert scrub   Sonoran desert scrub   Valley & foothill grassland	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	<b>Low Potential.</b> Records from Seal Beach National Wildlife Refuge to the east of the project vicinity but no foraging or nesting habitat for this species is present in the immediate project vicinity or at the proposed waste disposal site.
<i>Buteo regalis</i>	Ferruginous Hawk	None	None		CDFW_WL-Watch List   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Great Basin grassland   Great Basin scrub   Pinon & juniper woodlands   Valley & foothill grassland	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	<b>Low Potential.</b> Records from Seal Beach National Wildlife Refuge to the east of the project vicinity but no foraging or nesting habitat for this species is present in the immediate project vicinity or at the proposed waste disposal site.
<i>Rynchops niger</i>	Black Skimmer	None	None		CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   NABCI_YWL-Yellow Watch List   USFWS_BCC-Birds of Conservation Concern	Alkali playa   Sand shore	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.		<b>High Potential.</b> The species is known to forage and has historically nested in the immediate project vicinity.
<i>Charadrius alexandrinus nivosus</i>	Western Snowy Plover	Threatened	None		CDFW_SSC-Species of Special Concern   NABCI_RWL-Red Watch List   USFWS_BCC-Birds of Conservation Concern	Great Basin standing waters   Sand shore   Wetland	Sandy beaches, salt pond levees & shores of large alkali lakes.	Needs sandy, gravelly or friable soils for nesting.	<b>Low Potential.</b> Incidental sightings in the Port Complex. However, the species is not known to breed/commonly forage in the project vicinity. Closest records are from Bolsa Chica Ecological Reserve.
<i>Paliptila californica californica</i>	Coastal California Gnatcatcher	Threatened	None		CDFW_SSC-Species of Special Concern   NABCI_YWL-Yellow Watch List	Coastal bluff scrub   Coastal scrub	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California.	Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	<b>Low Potential.</b> Records from Seal Beach National Wildlife Refuge to the east of the project vicinity but no foraging or nesting habitat for this species is present in the immediate project vicinity or at the proposed waste disposal site. However, one incidental record of this species at the Los Angeles Harbor Pier 400 seabird colony.
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	None	None		CDFW_WL-Watch List   IUCN_LC-Least Concern	Riparian forest   Riparian scrub   Riparian woodland	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state.	Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	<b>High Potential.</b> The species is known to forage and nest in the immediate project vicinity.
<i>Ardea alba</i>	Great Egret	None	None		CDF_S-Sensitive   IUCN_LC-Least Concern	Brackish marsh   Estuary   Freshwater marsh   Marsh & swamp   Riparian forest   Wetland	Colonial nester in large trees.	Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	<b>Moderate Potential.</b> The species is known to forage in the immediate project vicinity.
<i>Ardea herodias</i>	Great Blue Heron	None	None		CDF_S-Sensitive   IUCN_LC-Least Concern	Brackish marsh   Estuary   Freshwater marsh   Marsh & swamp   Riparian forest   Wetland	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	<b>High Potential.</b> The species is known to forage and nest in the immediate project vicinity. There is a known colony in Port of Long Beach on Navy Mole.
<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	None	None		IUCN_LC-Least Concern	Marsh & swamp   Riparian forest	Colonial nester, usually in trees, occas	Rookery sites located adjacent to	<b>High Potential.</b> The species is known to forage nest in the immediate project vicinity and has historically nested on Navy Mole.
<i>Egretta thula</i>	Snowy Egret	None	None		IUCN_LC-Least Concern	Marsh & swamp   Meadow & seep   Riparian forest   Riparian woodland   Wetland	Colonial nester, with nest sites situated in protected beds of dense tules.	Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	<b>Moderate Potential.</b> The species is known to forage in the immediate project vicinity.
<i>Larus californicus</i>	California Gull	None	None		CDFW_WL-Watch List   IUCN_LC-Least Concern		Littoral waters, sandy beaches, waters and shorelines of bays, tidal mud-flats, marshes, lakes, etc.	Colonial nester on islets in large interior lakes, either fresh or strongly alkaline.	<b>High Potential.</b> This species is common in the project vicinity only during the winter (observed foraging and resting in the project vicinity; not a local nester).

Appendix A1: CNDDB Species from Eight Quad Scoping Surrounding Long Beach, CA									
Long Beach Cruise Terminal Improvement Project									
SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Numenius americanus</i>	Long-billed Curlew	None	None		CDFW_WL-Watch List   IUCN_LC-Least Concern   NABCI_YWL-Yellow Watch List   USFWS_BCC-Birds of Conservation Concern	Great Basin grassland   Meadow & seep	Breeds in upland shortgrass prairies and wet meadows in northeastern California.	Habitats on gravelly soils and gently rolling terrain are favored over others.	<b>Moderate Potential.</b> The species is known to forage in the immediate project vicinity.
<i>Pandion haliaetus</i>	Osprey	None	None		CDFW_S-Sensitive   CDFW_WL-Watch List   IUCN_LC-Least Concern	Riparian forest	Ocean shore, bays, freshwater lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	<b>Moderate Potential.</b> The species is known to forage in the immediate project vicinity. However, no historical nest sites are known from the project vicinity or at the proposed waste disposal site.
<i>Accipiter cooperii</i>	Cooper's Hawk	None	None		CDFW_WL-Watch List   IUCN_LC-Least Concern	Cismontane woodland   Riparian forest   Riparian woodland   Upper montane coniferous forest	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	<b>Moderate Potential.</b> The species is known to forage in the immediate project vicinity. However, no nest sites are known from the project vicinity or at the proposed waste disposal site and would require surveys to confirm.
<i>Circus cyaneus</i>	Northern Harrier	None	None		CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Coastal scrub   Great Basin grassland   Marsh & swamp   Riparian scrub   Valley & foothill grassland   Wetland	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas.	Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	<b>Low Potential.</b> Records from Seal Beach National Wildlife Refuge to the east of the project vicinity but no foraging or nesting habitat for this species is present in the immediate project vicinity or at the proposed waste disposal site.
<i>Hydroprogne caspia</i>	Caspian Tern	None	None		IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern		Nests on sandy or gravelly beaches and shell banks in small colonies inland and along the coast.	Inland freshwater lakes and marshes; also, brackish or salt waters of estuaries and bays.	<b>High Potential.</b> The species is known to forage in the immediate project vicinity. In addition, there is a known nesting population on Pier 400 just to the west of the project site in the Port of Los Angeles.
<i>Thalasseus elegans</i>	Elegant Tern	None	None		CDFW_WL-Watch List   IUCN_NT-Near Threatened	Sand shore	Only 3 known breeding colonies: San Diego Bay, Los Angeles Harbor and Bolsa Chica Ecological Reserve.	Nests on open, sandy, undisturbed beaches and on salt-evaporating pond dikes (San Diego) in association with Caspian tern.	<b>High Potential.</b> The species is known to forage in the immediate project vicinity. In addition, there is a known nesting population on Pier 400 just to the west of the project site in the Port of Los Angeles.
<i>Gavia immer</i>	Common Loon	None	None		CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Great Basin standing waters	Nesting locations at certain large lakes and reservoirs in interior of state, primarily in northeastern plateau region.	Bodies of water regularly frequented are extensive, fairly deep, and produce quantities of large fish.	<b>Moderate Potential.</b> The species is known to forage in the immediate project vicinity.
<i>Falco peregrinus anatum</i>	Peregrine Falcon	Delisted	Delisted		CDF_S-Sensitive   CDFW_FP-Fully Protected   USFWS_BCC-Birds of Conservation Concern		Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.	<b>High Potential.</b> May fly over and forage within the project vicinity. Historical nester within the port.
<i>Riparia riparia</i>	Bank Swallow	None	Threatened		BLM_S-Sensitive   IUCN_LC-Least Concern	Riparian scrub   Riparian woodland	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	<b>Low Potential.</b> Incidental sightings near the Port of Long Beach. However, the species is not known to commonly occur in the project area and no breeding habitat is present.
<b>Mammals</b>									
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	Endangered	None		CDFW_SSC-Species of Special Concern	Coastal scrub	Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County.	Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned.	<b>Low Potential.</b> No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Eumops perotis californicus</i>	Western Mastiff Bat	None	None		BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   WBWG_H-High Priority	Chaparral   Cismontane woodland   Coastal scrub   Valley & foothill grassland	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	Roosts in crevices in cliff faces, high buildings, trees and tunnels.	<b>Low Potential.</b> No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Lasionycteris noctivagans</i>	Silver-haired Bat	None	None		IUCN_LC-Least Concern   WBWG_M-Medium Priority	Lower montane coniferous forest   Oldgrowth   Riparian forest	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas.	Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	<b>Low Potential.</b> No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Lasiurus xanthinus</i>	Western Yellow Bat	None	None		CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   WBWG_H-High Priority	Desert wash	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	Roosts in trees, particularly palms. Forages over water and among trees.	<b>Low Potential.</b> No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Microtus californicus stephensi</i>	South Coast Marsh Vole	None	None		CDFW_SSC-Species of Special Concern		Tidal marshes in Los Angeles, Orange and southern Ventura counties.		<b>Low Potential.</b> No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None	None		CDFW_SSC-Species of Special Concern	Coastal scrub	Coastal scrub of Southern California from San Diego County to San Luis Obispo County.	Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	<b>Low Potential.</b> No habitat is present for this species in the project vicinity or at the proposed waste disposal site.



Appendix A1: CNDDB Species from Eight Quad Scoping Surrounding Long Beach, CA

Long Beach Cruise Terminal Improvement Project									
SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat	None	None		CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   WBWG_M-Medium Priority	Joshua tree woodland   Pinon & juniper woodlands   Riparian scrub   Sonoran desert scrub	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc.	Rocky areas with high cliffs.	<b>Low Potential</b> . No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Nyctinomops macrotis</i>	Big Free-tailed Bat	None	None		CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   WBWG_MH-Medium-High Priority		Low-lying arid areas in Southern California.	Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	<b>Low Potential</b> . No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Sorex ornatus salicornicus</i>	Southern California Saltmarsh Shrew	None	None		CDFW_SSC-Species of Special Concern	Salt marsh	Coastal marshes in Los Angeles, Orange and Ventura counties.	Requires dense vegetation and woody debris for cover.	<b>Low Potential</b> . No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<i>Taxidea taxus</i>	American badger	None	None		CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog & fen, brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, desert dunes, desert wash, freshwater marsh, great basin grassland, great basin scrub, interior dunes, lone formation, Joshua tree woodland, limestone, lower montane coniferous forest, marsh & swamp, meadow & seep, Mojavean desert scrub, montane dwarf scrub, north coast coniferous forest, oldgrowth, pavement plain, redwood, riparian forest, riparian scrub, riparian woodland, salt marsh, Sonoran desert scrub, Sonoran thorn woodland, ultramafic, upper montane coniferous forest, upper Sonoran scrub, valley & foothill grassland	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	<b>Low Potential</b> . No habitat is present for this species in the project vicinity or at the proposed waste disposal site.
<b>Plants</b>									
<i>Aphanisma blitoides</i>	aphanisma	None	None	1B.2		Coastal bluff scrub   Coastal dunes   Coastal scrub	Coastal bluff scrub, coastal dunes, coastal scrub.	On bluffs and slopes near the ocean in sandy or clay soils. 3-305 m.	<b>Moderate Potential</b> . Nearest occurrence is 8 miles away at Palos Verdes Peninsula near Los Angeles city boundary (CCH 2018). This species may exist at the project site as a waif in unmanaged areas.
<i>Astragalus pycnostachyus var. lanosissimus</i>	Ventura Marsh milk-vetch	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden   SB_SBBG-Santa Barbara Botanic Garden	Coastal dunes   Coastal scrub   Marsh & swamp   Salt marsh   Wetland	Marshes and swamps, coastal dunes, coastal scrub.	Within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs. 1-35 m.	<b>No Potential</b> . Habitat for this species does not exist at the project site. In addition, nearest occurrences are farther north near Santa Monica, CA (CCH 2018).
<i>Astragalus tener var. titi</i>	coastal dunes milk-vetch	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal bluff scrub   Coastal dunes   Coastal prairie	Coastal bluff scrub, coastal dunes, coastal prairie.	Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. 1-45 m.	<b>No Potential</b> . Habitat for this species does not exist at the project site. In addition, nearest occurrences are farther north near Inglewood, CA (CCH 2018).
<i>Atriplex coulteri</i>	Coulter's saltbush	None	None	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal bluff scrub   Coastal dunes   Coastal scrub   Valley & foothill grassland	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland.	Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m.	<b>Moderate Potential</b> . There is a historic CNDDB occurrence within 5 miles of the project site. This population is thought to be extirpated due to development in the area, but other populations still persist in the Rolling Hills area (CNDDB 2018, CCH 2018). Species in the <i>Atriplex</i> genus are disturbance and alkali tolerant in general. This species could exist at the project site as a waif in unmanaged areas.

Appendix A1: CNDDDB Species from Eight Quad Scoping Surrounding Long Beach, CA

Long Beach Cruise Terminal Improvement Project

SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Atriplex pacifica</i>	south coast saltscale	None	None	1B.2		Alkali playa   Coastal bluff scrub   Coastal dunes   Coastal scrub	Coastal scrub, coastal bluff scrub, playas, coastal dunes.	Alkali soils. 1-400 m.	<b>Moderate Potential.</b> There is a historic CCH specimen collected around 5 miles from the project site. Other collections have been taken in the Rolling Hills area (CNDDDB 2018, CCH 2018). Species in the <i>Atriplex</i> genus are disturbance and alkali tolerant in general. This species could exist at the project site as a waif in unmanaged areas.
<i>Atriplex parishii</i>	Parish's brittlescale	None	None	1B.1	USFS_S-Sensitive	Alkali playa   Chenopod scrub   Meadow & seep   Vernal pool   Wetland	Vernal pools, chenopod scrub, playas.	Usually on drying alkali flats with fine soils. 5-1420 m.	<b>Moderate Potential.</b> There is a historic CNDDDB occurrence within 5 miles of the project site. This population is thought to be extirpated due to development in the area, but other populations still persist in the general area (CNDDDB 2018, CCH 2018). Species in the <i>Atriplex</i> genus are disturbance and alkali tolerant in general. This species could exist at the project site as a waif in unmanaged areas.
<i>Atriplex serenana</i> var. <i>dauidsonii</i>	Davidson's saltscale	None	None	1B.2		Coastal bluff scrub   Coastal scrub	Coastal bluff scrub, coastal scrub.	Alkaline soil. 0-480 m.	<b>Moderate Potential.</b> There is a historic CNDDDB occurrence within 5 miles of the project site. This population could be extirpated due to development in the area, but other collections have been taken in the area (CNDDDB 2018, CCH 2018). Species in the <i>Atriplex</i> genus are disturbance and alkali tolerant in general. This species could exist at the project site as a waif in unmanaged areas.
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None	None	4.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral   Cismontane woodland   Coastal scrub   Lower montane coniferous forest   Valley & foothill grassland	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest.	Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	<b>No Potential.</b> Geophytes would be unlikely to persist at the project site due to previous development and disturbance at the cruise terminal. No populations would likely establish or persist. Occurrences are farther north in the mountains above Los Angeles (CCH 2018).
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa-lily	None	None	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden   USFS_S-Sensitive	Chaparral   Coastal scrub   Valley & foothill grassland	Coastal scrub, chaparral, valley and foothill grassland.	Dry, rocky calcareous slopes and rock outcrops. 60-1575 m.	<b>No Potential.</b> Geophytes would be unlikely to persist at the project site due to previous development and disturbance at the cruise terminal. No populations would likely establish or persist. Occurrences are farther north in the mountains around Hacienda Heights (CCH 2018).
<i>Calystegia felix</i>	lucky morning-glory	None	None	1B.1		Meadow & seep   Riparian scrub	Meadows and seeps, riparian scrub.	Sometimes alkaline, alluvial. 9-205 m.	<b>Moderate Potential.</b> A population was discovered as recently as 2014 in El Dorado Regional Park around 7 miles from the project site (CNDDDB 2018). This species seems to tolerate disturbance and could exist as a waif in unmaintained areas.
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	None	None	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Marsh & swamp   Salt marsh   Valley & foothill grassland   Vernal pool   Wetland	Marshes and swamps (margins), valley and foothill grassland, vernal pools.	Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-975 m.	<b>Moderate Potential.</b> Many occurrences have been recorded within 5 miles of the project. This species is tolerant of disturbance and could exist as a waif in unmaintained areas.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	Endangered	Endangered	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden   SB_SBBG-Santa Barbara Botanic Garden	Coastal dunes   Marsh & swamp   Salt marsh   Wetland	Marshes and swamps, coastal dunes.	Limited to the higher zones of salt marsh habitat. 0-10 m.	<b>Low Potential.</b> Two occurrences are within 5 miles of the project, however both are reported to be extirpated. In addition, no salt marsh habitat exists at the project site.
<i>Crossosoma californicum</i>	Catalina crossosoma	None	None	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral   Coastal scrub	Chaparral, coastal scrub.	On rocky sea bluffs, wooded canyons, and dry, open sunny spots on rocky clay. 5-535 m.	<b>Low Potential.</b> Occurrences are reported in the Rolling Hills area west of the project site. It is unlikely the project site would support this species though.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None	None	1B.2	BLM_S-Sensitive   SB_RSABG-Rancho Santa Ana Botanic Garden   USFS_S-Sensitive	Chaparral   Coastal scrub   Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	In heavy, often clayey soils or grassy slopes. 1-910 m.	<b>Low Potential.</b> The study area is unlikely to contain clay soils. In addition, there is too much disturbance at the site to maintain a stable population of this genus.
<i>Dudleya virens</i> ssp. <i>insularis</i>	island green dudleya	None	None	1B.2		Coastal bluff scrub   Coastal scrub	Coastal bluff scrub, coastal scrub.	Rocky soils. 0-275 m.	<b>Low Potential.</b> There is too much disturbance at the site to maintain a stable population of this genus.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal scrub   Valley & foothill grassland   Vernal pool   Wetland	Vernal pools, coastal scrub, valley and foothill grassland.	San Diego mesa hardpan & claypan vernal pools & southern interior basalt flow vernal pools; usually surrounded by scrub. 15-880 m.	<b>No Potential.</b> The study area does not have suitable habitat and is outside the optimal elevation range for this species.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None	None	1A		Freshwater marsh   Marsh & swamp   Salt marsh   Wetland	Marshes and swamps (coastal salt and freshwater).	35-1525 m.	<b>Low Potential.</b> The study area is outside the elevation range for this species.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None	None	1B.2		Chaparral   Coastal scrub	Coastal scrub, chaparral.	Sandy soils; often in disturbed sites. 1-915 m.	<b>Low Potential.</b> An herbarium specimen was collected on Terminal Island, but the population is believed to be extirpated. May be impacted if dredge is disposed of over land.

**Appendix A1: CNDDB Species from Eight Quad Scoping Surrounding Long Beach, CA**

**Long Beach Cruise Terminal Improvement Project**

SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Lasthenia glabrata ssp. coulteri</i>	Coulter's goldfields	None	None	1B.1	BLM_S-Sensitive   SB_RSABG-Rancho Santa Ana Botanic Garden	Alkali playa   Marsh & swamp   Salt marsh   Vernal pool   Wetland	Coastal salt marshes, playas, vernal pools.	Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m.	<b>No Potential.</b> Habitat for this species does not exist within the study area.
<i>Lycium brevipes var. hassei</i>	Santa Catalina Island desert-thorn	None	None	3.1		Coastal bluff scrub   Coastal scrub	Coastal bluff scrub, coastal scrub.	Coastal bluffs and slopes. 30-95 m.	<b>No Potential.</b> The study area is outside the elevation range for this species.
<i>Nama stenocarpa</i>	mud nama	None	None	2B.2		Marsh & swamp   Wetland	Marshes and swamps.	Lake shores, river banks, intermittently wet areas. 5-500 m.	<b>Low Potential.</b> There are two occurrences around 5 miles from the study area. This species prefers freshwater habitats, however. The study area would not support this species. Could be impacted if dredge disposal occurs inland.
<i>Nasturtium gambelii</i>	Gambel's water cress	Endangered	Threatened	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden   SB_SBBG-Santa Barbara Botanic Garden	Brackish marsh   Freshwater marsh   Marsh & swamp   Wetland	Marshes and swamps.	Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-305 m.	<b>Low Potential.</b> All the occurrences in the Los Angeles Co. area are presumed extirpated. In addition, this species occurs in freshwater to brackish habitats, not salt water habitat associations. The study area does not have suitable habitat for this species.
<i>Navarretia fossalis</i>	spreading navarretia	Threatened	None	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Alkali playa   Chenopod scrub   Marsh & swamp   Vernal pool   Wetland	Vernal pools, chenopod scrub, marshes and swamps, playas.	San Diego hardpan and San Diego claypan vernal pools; in swales & vernal pools, often surrounded by other habitat types. 15-850 m.	<b>No Potential.</b> Habitat for this species does not exist within the study area, and the area is outside the elevation range for the species.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None	None	1B.1		Coastal scrub   Meadow & seep   Valley & foothill grassland   Vernal pool   Wetland	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps.	Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m.	<b>Low Potential.</b> There is a CNDDB occurrence within 4 miles of the study area. It has not been seen since 1882, and is considered likely extirpated. This species could be impacted if dredge disposal occurs over land.
<i>Nemacaulis denudata var. denudata</i>	coast woolly-heads	None	None	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal dunes	Coastal dunes.	0-5 m.	<b>Moderate Potential.</b> There are two occurrences around 4 miles from the study area. This species may exist at the project site as a waif in sandy unmanaged areas. Could be impacted if dredge disposal occurs over land.
<i>Orcuttia californica</i>	California Orcutt grass	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Vernal pool   Wetland	Vernal pools.	10-660 m.	<b>No Potential.</b> Habitat for this species does not exist within the study area.
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral   Coastal scrub   Valley & foothill grassland	Chaparral, valley and foothill grassland, coastal scrub.	Edges of clearings in chaparral, usually at the ecotone between grassland and chaparral or edges of firebreaks. 30-670 m.	<b>Low Potential.</b> There is a CNDDB occurrence within 4 miles of the study area. It is considered likely extirpated. This species could be impacted if dredge disposal occurs over land.
<i>Phacelia stellaris</i>	Brand's star phacelia	None	None	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal dunes   Coastal scrub	Coastal scrub, coastal dunes.	Open areas. 3-370 m.	<b>Low Potential.</b> There are herbarium records of this species in the area, however most are farther north near Redondo Beach or farther east near Westminster. It is unlikely this species will occur in the study area.
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None	None	2B.2	USFS_S-Sensitive	Alkali playa   Chaparral   Coastal scrub   Lower montane coniferous forest   Mojavean desert scrub   Wetland	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub.	Alkali springs and marshes. 3-2380 m.	<b>Low Potential.</b> The study area does not have suitable habitat for this species.
<i>Suaeda esteroa</i>	estuary seablite	None	None	1B.2		Marsh & swamp   Salt marsh   Wetland	Marshes and swamps.	Coastal salt marshes in clay, silt, and sand substrates. 0-80 m.	<b>Moderate Potential.</b> There are four CNDDB occurrences within 5 miles of the study area. This species is adapted to salty coastal settings. Species in this genera tolerate disturbance. This species could exist at the project site in unmanaged areas.
<i>Symphotrichum defoliatum</i>	San Bernardino aster	None	None	1B.2	BLM_S-Sensitive   USFS_S-Sensitive	Cismontane woodland   Coastal scrub   Lower montane coniferous forest   Marsh & swamp   Meadow & seep   Valley & foothill grassland	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland.	Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	<b>Low Potential.</b> Most of the recorded occurrences are from the 1930 and are presumed extirpated. The study area does not provide ideal habitat for this species.

**Habitats**

Southern Dune Scrub	Southern Dune Scrub	None	None			Coastal dunes			<b>No Potential.</b> The study area is heavily developed. This vegetation community is not expected to occur in the study area.
Southern Foredunes	Southern Foredunes	None	None			Coastal dunes			<b>No Potential.</b> The study area is heavily developed. This vegetation community is not expected to occur in the study area.
Southern Coastal Salt Marsh	Southern Coastal Salt Marsh	None	None			Marsh & swamp   Wetland			<b>No Potential.</b> The study area is heavily developed. This vegetation community is not expected to occur in the study area.
Southern Coastal Bluff Scrub	Southern Coastal Bluff Scrub	None	None			Coastal bluff scrub			<b>Low Potential.</b> The study area is heavily developed. This vegetation community has a low potential to have established on the riprap along the ocean front.

Potential to Occur:

**Appendix A1: CNDDDB Species from Eight Quad Scoping Surrounding Long Beach, CA**

**Long Beach Cruise Terminal Improvement Project**

SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
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**No Potential:** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

**Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

**Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

**High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

**Appendix A2: US Fish and Wildlife Service Additional Species from Eight Quad Scoping Surrounding Long Beach, CA (not on CNDDDB scoping list)**

**Long Beach Cruise Terminal Improvement Project**

SciName	ComName	FedList	CalList	RPlantRank	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
Euphilotes battoides allyni	El Segundo Blue Butterfly	Endangered	None		XERCES_C1-Critically Imperiled	Coastal dunes	Restricted to remnant coastal dune habitat in Southern California.	Host plant is <i>Eriogonum parvifolium</i> ; larvae feed only on the flowers and seeds; used by adults as major nectar source.	<b>Low Potential.</b> The closest known records of this species to the project area are from coastal dunes on the west side of Rancho Palos Verdes and along Redondo Beach. No coastal dune habitat is present at or directly adjacent to the project site or proposed waste disposal site. The coastal dune host plant ( <i>Eriogonum parvifolium</i> ) is also unlikely to occur in the project vicinity or at the proposed waste disposal site.
Branchinecta sandiegonensis	San Diego Fairy Shrimp	Endangered	None		IUCN_EN-Endangered	Chaparral   Coastal scrub   Vernal pool   Wetland	Endemic to San Diego and Orange County mesas.	Vernal pools.	<b>No Potential.</b> No vernal pools exist at or near the study area.
Berberis nevii	Nevin's Barberry	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden   SB_SBBG-Santa Barbara Botanic Garden	Chaparral   Cismontane woodland   Coastal scrub   Riparian scrub	Chaparral, cismontane woodland, coastal scrub, riparian scrub.	On steep, N-facing slopes or in low grade sandy washes. 290-1575 m.	<b>Low Potential.</b> There are no occurrence of this species along the coast and the study area is outside its elevation range.

Potential to Occur:

**No Potential:** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

**Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

**Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

**High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

**Appendix A3: California Native Plant Society Additional Species from Eight Quad Scoping Surrounding Long Beach, CA (not on CNDDDB or IPaC)**

Long Beach Cruise Terminal Improvement Project										
Scientific Name	Common Name	Lifeform	Rare Plant Rank	CESA	FESA	Blooming Period	Elevation (m)	Habitat	MicroHabitat	Potential to Occur
<i>Calochortus catalinae</i>	Catalina mariposa lily	perennial bulbiferous herb	4.2	None	None	(Feb) Mar-Jun	15-700	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland		<b>No Potential.</b> Geophytes would be unlikely to persist at the project site due to previous development and disturbance at the cruise terminal. No populations would likely establish or persist. The occurrences are recorded in the Rolling Hills area to the west.
<i>Calystegia peirsonii</i>	Peirson's morning-glory	perennial rhizomatous herb	4.2	None	None	Apr-Jun	30-1500	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland	sandy	<b>Moderate Potential.</b> An herbarium record was collected a little over 5 miles from the project site in 1994 (CCH 2018). This species is tolerant of disturbance and could exist as a waif in unmaintained areas.
<i>Camissoniopsis lewisii</i>	Lewis' evening-primrose	annual herb	3	None	None	Mar-May (Jun)	0-300	Chaparral (openings), Coastal scrub, Valley and foothill grassland	clay, serpentinite seeps	<b>Moderate Potential.</b> An herbarium record was collected a little over 5 miles from the project site in San Pedro (CCH 2018). This species is tolerant of disturbance and could exist as a waif in unmaintained areas.
<i>Cistanthe maritima</i>	seaside cistanthe	annual herb	4.2	None	None	(Feb) Mar-Jun (Aug)	5-300	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland	sandy	<b>Low Potential.</b> The nearest occurrence is farther north near Santa Monica or Catalina Island. It is unlikely this species will occur in the project boundary due to the development onsite and continual disturbance.
<i>Convolvulus simulans</i>	small-flowered morning-glory	annual herb	4.2	None	None	Mar-Jul	30-740	Chaparral (openings), Coastal scrub, Valley and foothill grassland	clay, serpentinite seeps	<b>Low Potential.</b> Herbarium records were collected a little over 5 miles from the project site in San Pedro and Rolling Hills (CCH 2018). This species, however, prefers serpentine or wet clay sites. It is unlikely this area will support this species. Could be affected if dredge material is disposed of via an inland route.
<i>Hordeum intercedens</i>	vernal barley	annual herb	3.2	None	None	Mar-Jun	5-1000	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools		<b>Moderate Potential.</b> The nearest occurrence is farther north near Marina Del Rey. This species is easily mistaken for a more common relative. Species in this genus are disturbance tolerant and could be present at the project site.
<i>Juglans californica</i>	Southern California black walnut	perennial deciduous tree	4.2	None	None	Mar-Aug	50-900	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	alluvial	<b>No Potential.</b> Habitat for this species does not exist within the study area, and the area is outside the elevation range for the species. The nearest reported occurrence is north of the project site, near Torrance.
<i>Leptosyne maritima</i>	sea dahlia	perennial herb	2B.2	None	None	Mar-May	5-150	Coastal bluff scrub, Coastal scrub		<b>No Potential.</b> Populations in Los Angeles Co. are presumed extirpated.
<i>Lycium californicum</i>	California box-thorn	perennial shrub	4.2	None	None	(Dec) Mar, Jun, Jul, Aug	5-150	Coastal bluff scrub, Coastal scrub		<b>Low Potential.</b> Herbarium specimens have been collected within 2 miles of the study area. Most are probably extirpated. The species is not particularly disturbance tolerant and it is unlikely this species has persisted or colonized the project area's habitats.
<i>Phacelia hubbyi</i>	Hubby's phacelia	annual herb	4.2	None	None	Apr-Jul	0-1000	Chaparral, Coastal scrub, Valley and foothill grassland	gravelly, rocky, talus	<b>Moderate Potential.</b> There are herbarium specimens of this species from 2004 from the Rolling Hills area to the west along the water. This species may exist at the project site in unmanaged areas.
<i>Ribes divaricatum</i> var. <i>parishii</i>	Parish's gooseberry	perennial deciduous shrub	1A	None	None	Feb-Apr	65-300	Riparian woodland		<b>No Potential.</b> Habitat for this species does not exist within the study area.
<i>Suaeda taxifolia</i>	woolly seablite	perennial evergreen shrub	4.2	None	None	Jan-Dec	0-50	Coastal bluff scrub, Coastal dunes, Marshes and swamps (margins of coastal salt)		<b>Moderate Potential.</b> There are many herbarium records (as recent as 2010) of this species in the nearby area and along the coast. Species in this genera tolerate disturbance. This species could exist at the project site in unmanaged areas.

Potential to Occur:

**No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

**Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

**Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

**High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Appendix A4: NMFS Species from Eight Quad Scoping Surrounding Long Beach, CA								
Long Beach Cruise Terminal Improvement Project								
SciName	ComName	FedList	CalList	OthrStatus	Habitats	GenHab	MicroHab*	Potential to Occur
<i>Oncorhynchus kisutch</i>	Coho Salmon - southern Oregon/northern California ESU	Threatened	Threatened	AFS_TH-Threatened	Aquatic   Klamath/North coast flowing waters   Sacramento/San Joaquin flowing waters	Federal listing refers to populations between Cape Blanco, Oregon and Punta Gorda, Humboldt County, California.	State listing refers to populations between the Oregon border and Punta Gorda, California.	<b>Low Potential.</b> Outside of species and ESU's range.
<i>Oncorhynchus kisutch</i>	Coho Salmon - Central California Coast ESU	Endangered	Endangered	AFS_EN-Endangered	Aquatic	Federal listing = pops between Punta Gorda & San Lorenzo River. State listing = pops south of Punta Gorda.	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water & sufficient dissolved oxygen.	<b>Low Potential.</b> Outside of species and ESU's range.
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon - California Coastal ESU	Threatened	None	AFS_TH-Threatened	Aquatic   Sacramento/San Joaquin flowing waters	Federal listing refers to wild spawned, coastal, spring & fall runs between Redwood Cr, Humboldt Co & Russian River, Sonoma Co		<b>Low Potential.</b> Outside of species and ESU's range.
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon - Central Valley spring run ESU	Threatened	Threatened	AFS_TH-Threatened	Aquatic   Sacramento/San Joaquin flowing waters	Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 C are lethal to adults.	Federal listing refers to populations spawning in Sacramento River and tributaries.	<b>Low Potential.</b> Outside of species and ESU's range.
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon - Sacramento River winter-run ESU	Endangered	Endangered	AFS_EN-Endangered	Aquatic   Sacramento/San Joaquin flowing waters	Sacramento River below Keswick Dam. Spawns in the Sacramento River, but not in tributary streams.	Requires clean, cold water over gravel beds with water temperatures between 6 and 14 C for spawning.	<b>Low Potential.</b> Outside of species and ESU's range.
<i>Oncorhynchus mykiss irideus</i>	Steelhead - northern California DPS	Threatened	None	AFS_TH-Threatened	Aquatic   Sacramento/San Joaquin flowing waters	Coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead.		<b>Low Potential.</b> Outside of DPS's range.
<i>Oncorhynchus mykiss irideus</i>	Steelhead - Central California coast DPS	Threatened	None	AFS_TH-Threatened	Aquatic   Sacramento/San Joaquin flowing waters	From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.		<b>Low Potential.</b> Outside of DPS's range.
<i>Oncorhynchus mykiss irideus</i>	Steelhead - south-central California coast DPS	Threatened	None	AFS_TH-Threatened	Aquatic   Sacramento/San Joaquin flowing waters   South coast flowing waters	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.		<b>Low Potential.</b> Outside of DPS's range.
<i>Oncorhynchus mykiss irideus</i>	Steelhead - southern California DPS	Endangered	None	AFS_EN-Endangered	Aquatic   South coast flowing waters	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County).	Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	<b>Low Potential.</b> Few occurrences along this stretch of coast. DPS may be extirpated.
<i>Oncorhynchus mykiss irideus</i>	Steelhead - California Central Valley DPS	Threatened	None	AFS_TH-Threatened	Aquatic   Sacramento/San Joaquin flowing waters	Populations in the Sacramento and San Joaquin rivers and their tributaries.		<b>Low Potential.</b> Outside of DPS's range.
<i>Thaleichthys pacificus</i>	Eulachon	Threatened	None		Aquatic   Klamath/North coast flowing waters	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries.	Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pe-sized gravel, sand, and woody debris.	<b>Low Potential.</b> Outside of species range.
<i>Acipenser medirostris</i>	Green Sturgeon - southern DPS	Threatened	None	AFS_VU-Vulnerable   CDFW_SSC-Species of Special Concern   IUCN_NT-Near Threatened   NMFS_SC-Species of Concern	Aquatic   Klamath/North coast flowing waters   Sacramento/San Joaquin flowing waters	These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, & Trinity Rivers.	Spawns at temps between 8-14 C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	<b>Low Potential.</b> This species prefers more northern waters around the San Francisco Bay and Columbia River, but in a rare 2008 El Niño year occurred as far south as Baja California.

**Appendix A4: NMFS Species from Eight Quad Scoping Surrounding Long Beach, CA**

**Long Beach Cruise Terminal Improvement Project**

SciName	ComName	FedList	CallList	OthrStatus	Habitats	GenHab	MicroHab*	Potential to Occur
<i>Haliotis cracherodii</i>	Range Black Abalone	Endangered	None	IUCN_CR-Critically Endangered	Marine intertidal & splash zone communities	Mid to low rocky intertidal areas.	Black abalone live on rocky substrates in intertidal and shallow subtidal reefs (to about 18 feet deep) along the coast. They typically occur in habitats with complex surfaces and deep crevices that provide shelter for juveniles and adults. Because they occur in coastal habitats, black abalone can withstand extreme variations in temperature, salinity, moisture, and wave action (NMFS).	<b>Moderate Potential.</b> This species could occur in the rip rap environment along oceans edge.
<i>Haliotis sorenseni</i>	Range White Abalone	Endangered	None		Marine intertidal & splash zone communities	Rocky pinnacles and deep reefs in Southern California; especially those off the Channel Islands.	White abalone live on rocky substrates alongside sand channels, which tend to accumulate the algae they eat. Live at depths of at least 80 feet to over 200 feet.	<b>Moderate Potential.</b> This species could occur in the rip rap environment along oceans edge.
<i>Chelonia mydas</i>	Green Sea Turtle - East Pacific DPS	Threatened	None	IUCN_EN-Endangered	Marine bay	Marine.	Completely herbivorous; needs adequate supply of seagrasses and algae.	<b>Moderate Potential.</b> Species is known to occupy warm water outfall at the Haynes Generating Station near the mouth of the san gabriel River 4.5 miles east of the project site, but is not known to forage outside the outfall area.
<i>Lepidochelys olivacea</i>	Olive Ridley Sea Turtle	Endangered	None	IUCN_VU-Vulnerable	Marine	Marine	Tropical and subtropical waters including protected, shallow, marine and estuarine waters, bays and lagoons, to offshore areas. Nesting occurs on upper beaches.	<b>Low Potential.</b> Occasional visitor to California waters but rarely present at any one time or location.
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle	Endangered	None	IUCN_CR-Critically Endangered	Marine	Marine	Open ocean. Also seas, gulfs, bays, and estuaries. Seldom approaches land except for nesting.	<b>Low Potential.</b> Occasional visitor to California waters but rarely present at any one time or location.
<i>Caretta caretta</i>	North Pacific Loggerhead Sea Turtle	Endangered	None	IUCN_EN-Endangered	Marine	Marine	Open sea to more than 500 miles from shore, mostly over continental shelf, and in bays, estuaries, lagoons, creeks, and mouths of rivers; mainly warm temperate and subtropical regions not far from shorelines	<b>Low Potential.</b> Occasional visitor to California waters but rarely present at any one time or location.
<i>Balaenoptera musculus</i>	Blue Whale	Endangered	None	IUCN_EN-Endangered	Marine	Marine	Mainly pelagic; generally prefers cold waters and open seas, but young are born in warmer waters of lower latitudes	<b>Low Potential.</b> Species is occasionally observed just outside the outer harbor. However, no suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Balaenoptera physalus</i>	Fin Whale	Endangered	None	IUCN_EN-Endangered	Pelagic	Pelagic	Pelagic; usually found in largest numbers 25 miles or more from shore. Young are born in the warmer waters of the lower latitudes.	<b>Low Potential.</b> Species is a seasonal migrant and frequently observed just outside the outer harbor. However, no suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Megaptera novaeangliae</i>	Humpback Whale	Endangered	None	IUCN_LC-Least Concern	Marine	Marine	Habitat includes the open ocean and coastal waters, sometimes including inshore areas such as bays. Summer distribution is in temperate and subpolar waters. In winter, most humpbacks are in tropical/subtropical waters near islands or coasts.	<b>Low Potential.</b> Species is a seasonal migrant and frequently observed just outside the outer harbor. However, no suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Orcinus orca</i>	Southern Resident Killer Whale	Endangered	None		Near shore, pelagic	Near shore, pelagic	Mainly in coastal waters, but may occur anywhere in all oceans and major seas at any time of year	<b>Low Potential.</b> Species range center in the Puget Sound region with furthest records south to Central California. The project vicinity and the waste disposal vicinity are outside of the known range for this species.



Appendix A4: NMFS Species from Eight Quad Scoping Surrounding Long Beach, CA								
Long Beach Cruise Terminal Improvement Project								
SciName	ComName	FedList	CallList	OthrStatus	Habitats	GenHab	MicroHab*	Potential to Occur
<i>Eubalaena japonica</i>	North Pacific Right Whale	Endangered	None	IUCN_EN-Endangered	Marine	Marine (North Pacific)	Near shore, Pelagic, Bearing Sea Shelf, Gulf of Alaska	<b>Low Potential.</b> Considered to be one of the rarest whale species and population size is estimated to be only a few hundred individuals. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Balaenoptera borealis</i>	Sei Whale	Endangered	None	IUCN_EN-Endangered, MMPA Depleted	Marine	Marine	Generally in deep water; along edge of continental shelf and in open ocean.	<b>Low Potential.</b> Population for the North Pacific is estimated at only 8,600 individuals. Typically observed in deep water far from the coast or along the continental shelf. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Physeter macrocephalus</i>	Sperm Whale	Endangered	None	IUCN_VU-Vulnerable, MMPA Depleted	Marine	Marine	Tends to occur near productive waters, and often near continental shelves. Females generally restricted to waters with surface temperatures warmer than about 15 degrees C and rarely found in waters less than 1000 m deep. Males, although primarily found in deep water, are sometimes found in waters 200 to 1000 m deep.	<b>Low Potential.</b> Observed in deep water between Long Beach and Avalon Island. Prefers deep water along continental shelves and marine trench/canyons associated with productive upwellings. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Arctocephalus townsendi</i>	Guadalupe Fur Seal	Threatened	Threatened	CDFW_FP-Fully Protected, IUCN_NT-Near Threatened, MMPA Depleted	Marine intertidal & splash zone communities   Protected deepwater coastal communities	Breeds on Isla de Guadalupe off of Mexico, occasionally found on San Miguel, San Nicolas, and San Clemente islands.	Prefers shallow, nearshore island water, with cool and sheltered rocky areas for haul-outs.	<b>Low Potential.</b> Small breeding population known on the northern Channel Islands (San Miguel Island) although the majority of the population breeds in Mexico on Guadalupe Island. Breeding habitat includes coastal rocky areas and caves. Uncommonly observed species during the non-breeding season. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.

\*Microhabitat details from CNDDDB 2018 or NatureServe 2018

Potential to Occur:

**No Potential:** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

**Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

**Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

**High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Appendix A5: NMFS MMPA Species from Eight Quad Scoping Surrounding Long Beach, CA									
Long Beach Cruise Terminal Improvement Project									
SciName	ComName	MMPA Status	FedList	CalList	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Berardius bairdii</i>	Baird's Beaked Whale	MMPA Depleted	None	None		Pelagic	Pelagic	Typically occurs in waters deeper than 1000m. Found over the continental slope and areas with submarine escarpments.	<b>Low Potential.</b> Infrequently observed in shallow nearshore waters. Preferred habitat is pelagic and associated with deep water. No prime habitat for the species is present on or directly adjacent to the project site or proposed waste disposal area. No records of the species from the project vicinity .
<i>Ziphius cavirostris</i>	Cuvier's Beaked Whale	MMPA Protection	None	None	IUCN_LC-Least Concern	Pelagic	Pelagic	Typically occurs in deep offshore tropical and temperate waters.	<b>Low Potential.</b> Infrequently observed in shallow nearshore waters. Preferred habitat is pelagic and associated with deep water. No prime habitat for the species is present on or directly adjacent to the project site or proposed waste disposal area. No records of the species from the immediate project vicinity .
<i>Kogia sima</i>	Dwarf Sperm Whale	MMPA Protection	None	None		Pelagic	Pelagic	Found in temperate and tropical seas. Forages in deep water at can dive to 300 meters. Almost never observed at the water's surface.	<b>Low Potential.</b> Rare species to observe in Southern California waters. Preferred habitat is pelagic and associated with deep water. No prime habitat for the species is present on or directly adjacent to the project site or proposed waste disposal area. No records of the species from the immediate project vicinity .
<i>Pseudorca crassidens</i>	False Killer Whale	MMPA Protection	None	None		Pelagic	Pelagic	Found in tropical, subtropical, and temperate waters although not abundant anywhere. Generally in deep, offshore waters.	<b>Low Potential.</b> Rare species to observe in Southern California waters. Preferred habitat is pelagic and associated with deep water. No prime habitat for the species is present on or directly adjacent to the project site or proposed waste disposal area. No records of the species from the immediate project vicinity .
<i>Eschrichtius robustus</i>	Gray Whale (Western North Pacific)	MMPA Depleted	Endanger	None	IUCN_CR-Critically Endangered	Pelagic	Pelagic	Found along the coast of eastern Asia.	<b>Low Potential.</b> The project vicinity and proposed waste disposal site fall outside the species' primary range and any occurrences would be highly incidental.
<i>Eschrichtius robustus</i>	Gray Whale (Eastern North Pacific)	MMPA Protection	Delisted	None	IUCN_LC-Least Concern	Pelagic	Pelagic	Found along the west coast of North America. Summers in the Bering and Chukchi Seas but occasionally visitors to the Pacific coast in Northern California.	<b>Moderate Potential.</b> Species is a seasonal migrant and frequently observed just outside the outer harbor.
<i>Mesoplodon carlhubbsi</i>	Hubb's Beaked Whale	MMPA Protection	None	None		Pelagic	Pelagic	Range is limited to the North Pacific Ocean. Species rarely observed and limited to deep waters.	<b>Low Potential.</b> No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Orcinus orca</i>	Killer Whale	MMPA Protection	None	None		Pelagic	Nearshore pelagic	Resident, transient, and migratory populations off the west coast of North America in bays/sounds as well as the open ocean.	<b>Low Potential.</b> Occasionally observed off coast from Point Vicente (Rancho Palos Verdes) and San Pedro. Rarely near shore. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Balaenoptera acutorostrata</i>	Minke Whale	MMPA Protection	None	None	IUCN_LC-Least Concern	Pelagic	Nearshore pelagic	In bays/sounds as well as the open ocean.	<b>Low Potential.</b> Occasionally observed offshore near Orange County. Animals in nearshore waters off California are generally considered residents. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Kogia breviceps</i>	Pygmy Sperm Whale	MMPA Protection	None	None		Pelagic	Seward of continental shelf, also coastal waters	Found in mid-and deep water and near the ocean floor	<b>Low Potential.</b> Rarely observed at the waters surface. Prefer deep water. No records of this species from the project vicinity. In addition, no suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Globicephala macrorhynchus</i>	Short Finned Pilot Whale	MMPA Protection	None	None		Pelagic	Pelagic tropical and temperate waters	Prefer deep waters (associated with squid prey habitat)	<b>Low Potential.</b> Historic resident population around Santa Catalina Island believed to be extirpated. Occasional sightings off San Diego. Species is found inshore mainly in spring off southern California. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.

Appendix A5: NMFS MMPA Species from Eight Quad Scoping Surrounding Long Beach, CA									
Long Beach Cruise Terminal Improvement Project									
SciName	ComName	MMPA Status	FedList	CalList	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Mesoplodon stejnegeri</i>	Stejneger's Beaked Whale	MMPA Protection	None	None		Pelagic	Cold, temperate, or subarctic water of the North Pacific Ocean	Deep offshore waters and seaward of the continental slope	<b>Low Potential.</b> Prefers deep waters (associated with squid prey). No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Phocoenoides dalli</i>	Dall's Porpoise	MMPA Protection	None	None	IUCN_LC-Least Concern	North Pacific Ocean from Gulf of Alaska and Bering sea south to Japan (to west) and U.S./Mexico border (to east)	Pelagic, nearshore pelagic	Species may move inshore near the California coast in the winter and spring. Observed in the open ocean as well as bays and sounds.	<b>Low Potential.</b> Records of this species in Santa Monica Bay and the San Pedro Channel but none close to shore near the Port of Long Beach.
<i>Phocoena phocoena</i>	Harbor Porpoise	MMPA Protection	None	None	IUCN_LC-Least Concern	North Atlantic and North Pacific in coastal and offshore waters	Pelagic, nearshore pelagic	Bays, estuaries, harbors, and fjords	<b>Low Potential.</b> Range on the west coast of North America extends from the Beaufort Sea south to Monterey Bay, California. The project area and waste disposal site are outside the known range for this species.
<i>Lissodelphis borealis</i>	Northern Right Whale Dolphin	MMPA Protection	None	None	IUCN_LC-Least Concern	North Pacific Ocean. On the west coast of North America from the Gulf of Alaska to Baja California.	Pelagic, deep cold waters	deep water on outer continental shelf	<b>Low Potential.</b> Uncommon species in nearshore southern California waters. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Lagenorhynchus obliquidens</i>	Pacific White Sided Dolphin	MMPA Protection	None	None	IUCN_LC-Least Concern	Kamchatka Peninsula, Amchitka Island, and Kodiak Island south into Sea of Japan and along entire Pacific coast of Japan, and south to tip of Baja California in the eastern Pacific	Pelagic	Seaward edge of continental slope. Close to shore in areas of deep water.	<b>Moderate Potential.</b> Species has been infrequently observed in the outer harbor. Outer harbor may prove foraging opportunities in the form of schooling fish.
<i>Grampus griseus</i>	Risso's Dolphin	MMPA Protection	None	None		Temperate and tropic waters worldwide	Pelagic	Deep offshore waters and edge of the continental shelf. However, can also occur in nearshore waters.	<b>Low Potential.</b> Numerous records offshore near Catalina Island and the Channel Islands. Infrequently seen close to shore and no known records from the Port of Long Beach.
<i>Delphinus delphis</i>	Short-Beaked Common Dolphin	MMPA Protection	None	None	IUCN_LC-Least Concern	Worldwide in tropical and temperate oceans	Nearshore pelagic	Asspcoated with prey-rich upwellings near underwater ridges and continental shelves.	<b>Moderate Potential.</b> <i>Delphinus sp.</i> have been infrequently observed in the outer harbor. Outer harbor may prove foraging opportunities in the form of schooling fish.
<i>Stenella coeruleoalba</i>	Striped Dolphin	MMPA Protection	None	None	IUCN_LC-Least Concern	Worldwide in subtropical and temperate oceans	Pelagic, seaward of continental shelf	Asspcoated with prey-rich upwellings near underwater ridges and continental shelves.	<b>Low Potential.</b> Uncommon species in nearshore southern California waters. No suitable habitat for this species exists in the project vicinity or in the vicinity of the proposed waste disposal site.
<i>Tursiops truncatus</i>	Common Bottlenose Dolphin	MMPA Protection	None	None	IUCN_LC-Least Concern	Worldwide in tropical, subtropical, and temperate oceans	Nearshore pelagic, coastal	Bay/sound, lagoon, estuary, tidal river	<b>High Potential.</b> <i>Tursiops sp.</i> have been observed in the outer as well as the inner harbor. Sightings right off of the Queen Mary Dock.
<i>Zalophus californianus</i>	California Sea Lion	MMPA Protection	None	None	IUCN_LC-Least Concern	West coast of North America, shallow waters from Canada to U.S./Mexico border	Coastal waters, upwellings	Sancy beaches, docks, buoys, jetties, rocky coves	<b>High Potential.</b> Known to occur in the project area year-round. Sightings from the inner as well as the outer harbor.
<i>Mirounga angustirostris</i>	Northern Elephant Seal	MMPA Protection	None	None	IUCN_LC-Least Concern	Eastern and Central North Pacific Ocean from Gulf of Alaska to Baja California	Breeding habitat includes offshore islands in southern California and Mexico	Deep water, sandy beaches, care rock/talus/scree	<b>Low Potential.</b> Known occurencess from offshore islands (Catalina Island and Channel Islands) and offshore of Orange County. Unlikely to occur in Port of Long Beach or proposed waste disposal vicinity based on habitat and historical records.
<i>Callorhinus ursinus</i>	Northern Fur Seal	MMPA Depleted	None	None	IUCN_VU-Vulnerable	North Pacific Ocean. Bearing Sea to Baja California.	Pelagic	open ocean, rocky and sandy beaches	<b>Low Potential.</b> Uncommon species nearshore. Prefers open ocean except during the breeding season, when the species is found on offshore islands. Unlikely to occur in Port of Long Beach or proposed waste disposal vicinity based on habitat and historical records.

Appendix A5: NMFS MMPA Species from Eight Quad Scoping Surrounding Long Beach, CA									
Long Beach Cruise Terminal Improvement Project									
SciName	ComName	MMPA Status	FedList	CalList	OthrStatus	Habitats	GenHab	MicroHab	Potential to Occur
<i>Phoca vitulina richardii</i>	Pacific Harbor Seal	MMPA Protection	None	None	IUCN_LC-Least Concern	North Pacific Ocean. From Aleutian Islands in Alaska to Baja California, Mexico.	Marine, coastal	Bay/sound, lagoon, estuary, tidal river, tidal flat, shore	<b>High Potential.</b> Known to occur in the project area year-round.
<i>Eumetopias jubatus</i>	Steller Sea Lion	MMPA Protection	Delisted	None	IUCN_NT-Near Threatened, MMC SSC	California north to the Bering Strait	Nearshore, pelagic	Nearshore islands, tidal flats, shores, and in coastal waters	<b>Low Potential.</b> Majority of occurrences between the Channel Islands and Oxnard and off the coast of Long Beach. Occurrences in the harbor would be incidental and rare.

\*Habitat details from NatureServe 2018 AND NOAA Fisheries Species Directory

Potential to Occur:

**No Potential:** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

**Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

**Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

**High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

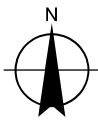
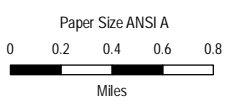
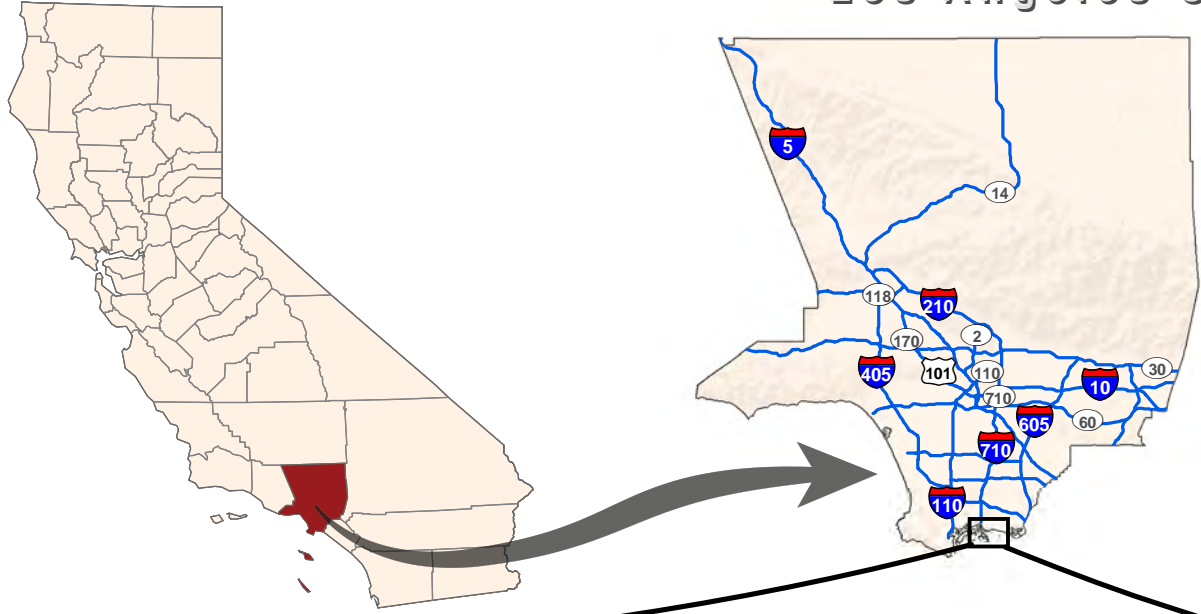
## Appendix B Figures

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### Appendix B: Figures



# Los Angeles County



City of Long Beach  
Port of Long Beach Carnival Cruise  
Lines Terminal Improvement Project

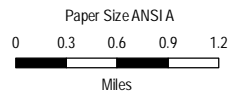
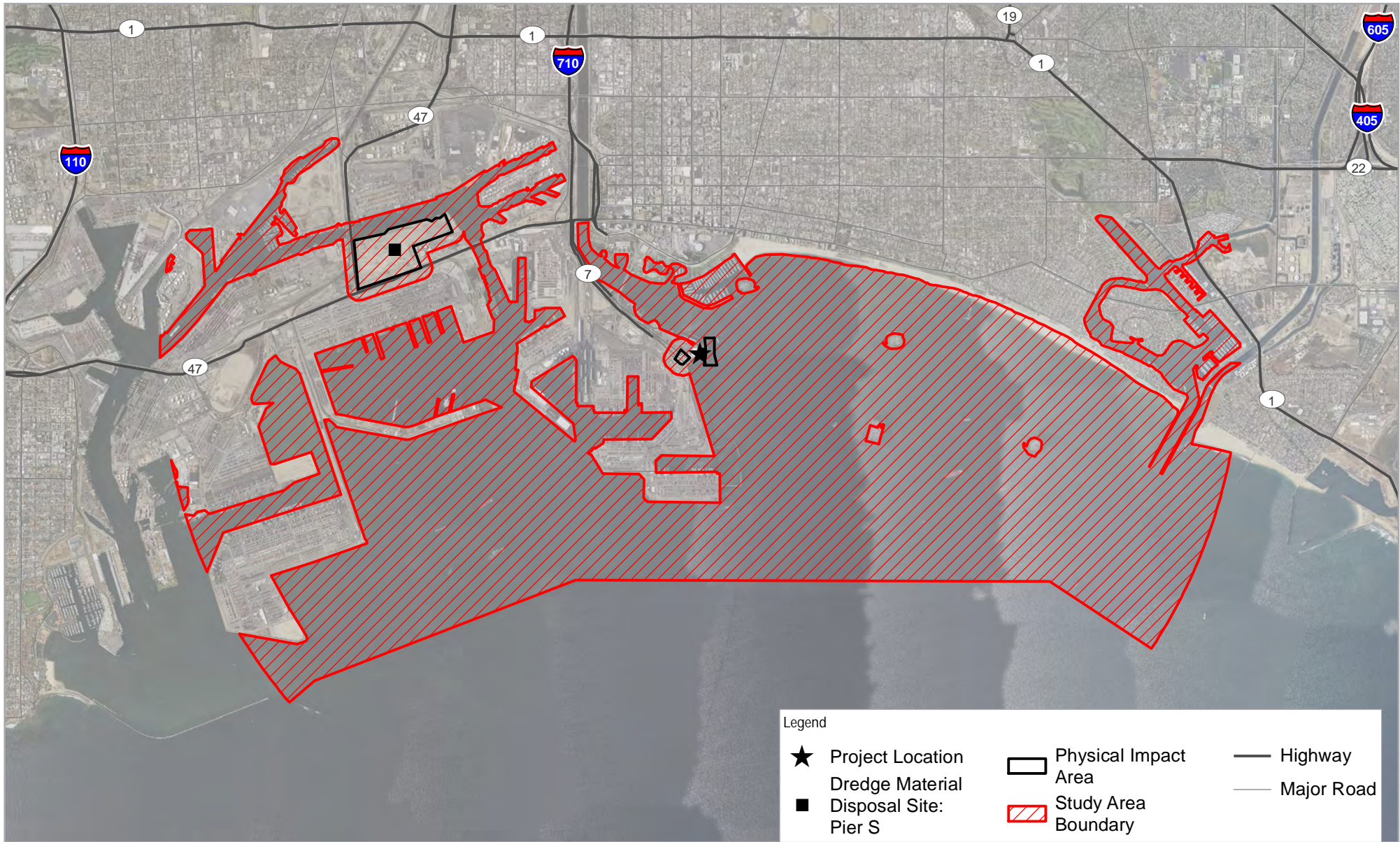
Project No. 11183495  
Revision No. -  
Date 11/20/2018

Vicinity Map

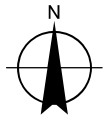
FIGURE 1

\\ghdnet\ghd\US\Sacramento\Projects\11111183495 Atkins Long Beach Cruz Terminal Imp\08-GIS\Maps\Deliverables\BIOResources\11183495\_001\_Vicinity.mxd  
Print date: 20 Nov 2018 - 15:55

Data source: Sources: Esri, USGS, NOAA. Created by: jclark2



Map Projection: Lambert Conformal Conic  
 Horizontal Datum: North American 1983  
 Grid: NAD 1983 StatePlane California V FIPS 0405 Feet



City of Long Beach  
 Port of Long Beach Carnival Cruise  
 Lines Terminal Improvement Project

Project No. 11183495  
 Revision No. -  
 Date 2/12/2019

Study Area Boundary

FIGURE 2

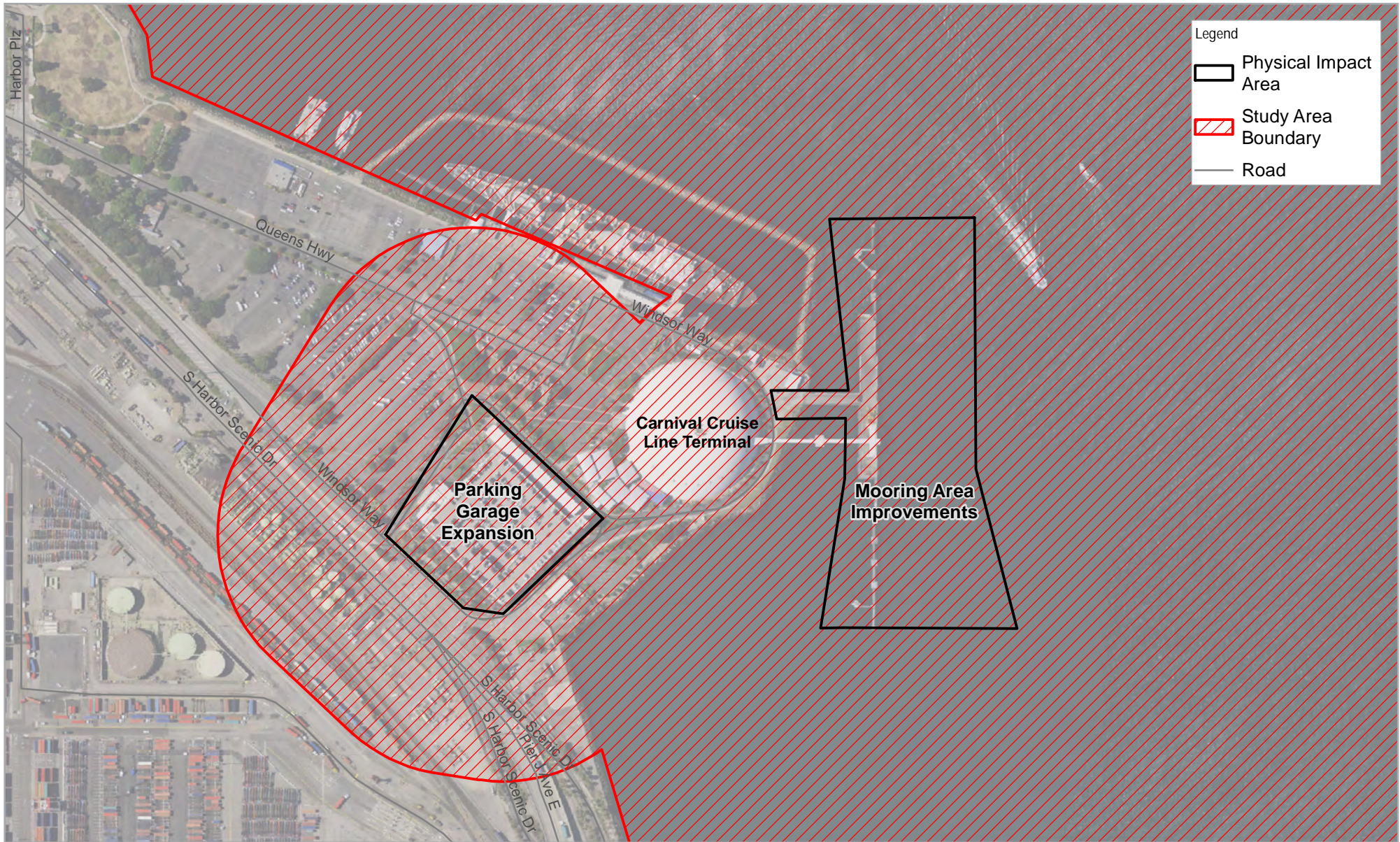


**Legend**




★ Project Location	Physical Impact Area
■ Dredge Material Disposal Site: Pier S	Study Area Boundary
▲ Dredge Material Disposal Site: LA2	Highway
	Major Road

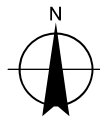
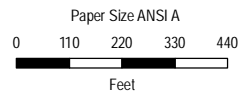
<p>Paper Size ANSIA</p> <p>0 0.55 1.1 1.65 2.2</p> <p>Miles</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California V FIPS 0405 Feet</p>			<p>City of Long Beach Port of Long Beach Carnival Cruise Lines Terminal Improvement Project</p>	<p>Project No. 11183495 Revision No. - Date 2/12/2019</p>
			<p><b>Disposal Sites</b></p>	<p><b>FIGURE 3</b></p>





Legend

-  Physical Impact Area
-  Study Area Boundary
-  Road



City of Long Beach  
Port of Long Beach Carnival Cruise  
Lines Terminal Improvement Project

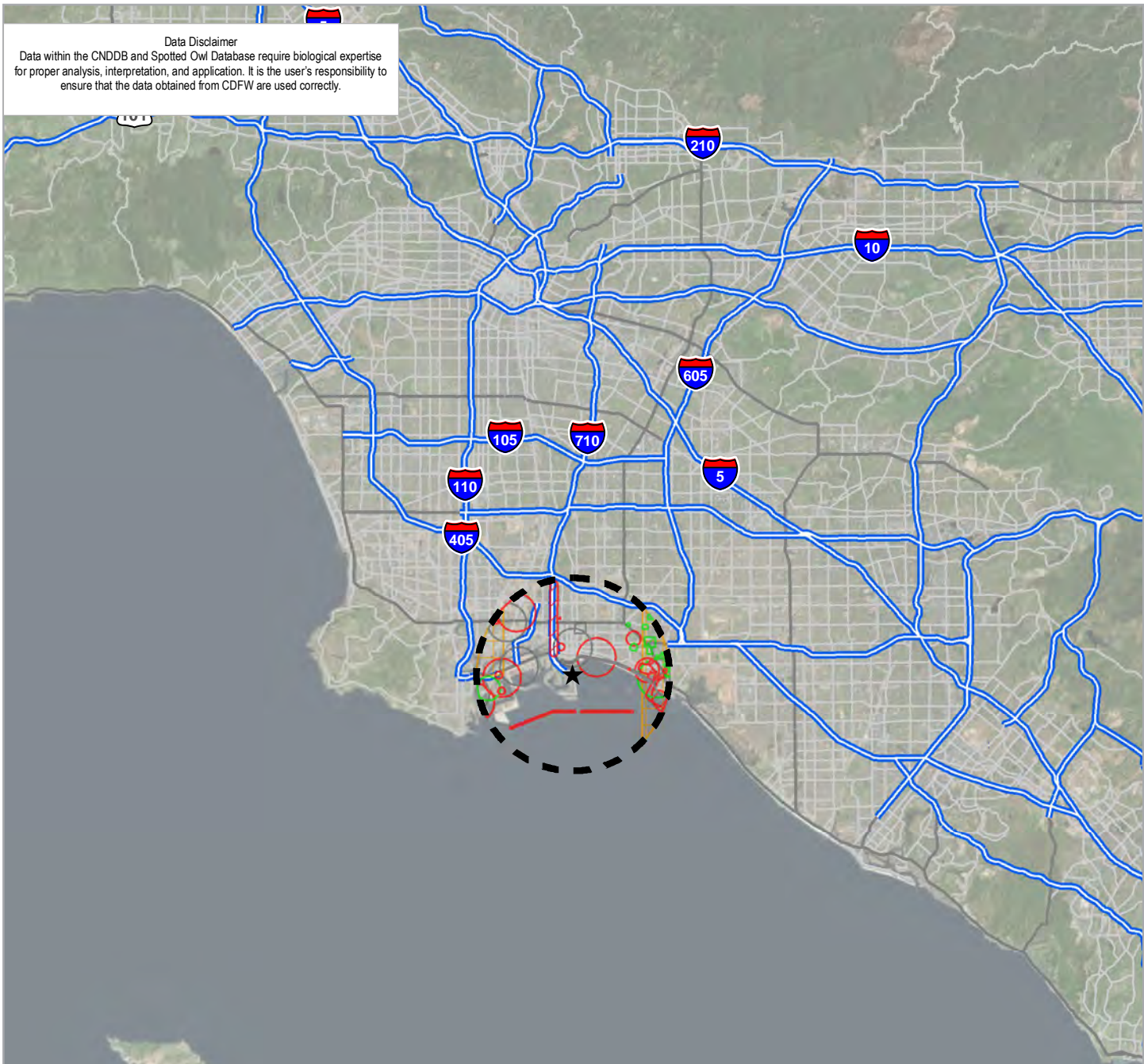
Project No. 11183495  
Revision No. -  
Date 11/21/2018

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Project Area

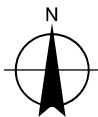
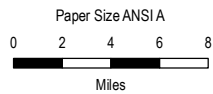
FIGURE 4

**Data Disclaimer**  
 Data within the CNDDDB and Spotted Owl Database require biological expertise for proper analysis, interpretation, and application. It is the user's responsibility to ensure that the data obtained from CDFW are used correctly.



**Legend**

★ Project Location	▨ Animal (non-specific)
⬜ 5 Mile Buffer (area of interest)	○ Animal (circular)
<b>Symbology</b>	▨ Multiple (non-specific)
▨ Plant (specific)	○ Multiple (circular)
▨ Plant (non-specific)	▨ Sensitive EO's (Commercial only)
▨ Plant (circular)	▨ Freeway
▨ Animal (80m)	▨ Highway
▨ Animal (specific)	▨ Major Road



City of Long Beach  
 Port of Long Beach Carnival Cruise  
 Lines Terminal Improvement Project

Project No. 11183495  
 Revision No. -  
 Date 2/12/2019

Map Projection: Lambert Conformal Conic  
 Horizontal Datum: North American 1983  
 Grid: NAD 1983 StatePlane California V FIPS 0405 Feet

CNDDDB  
 5 mile radius

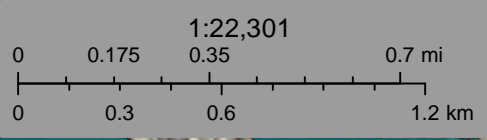
**FIGURE 5**

## Appendix C NWI Database Search Results

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### Appendix C: NWI Database Search Results



U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov

October 29, 2018

### Wetlands

- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Estuarine and Marine Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

## Appendix D Site Photographs

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## Appendix D: Site Photographs

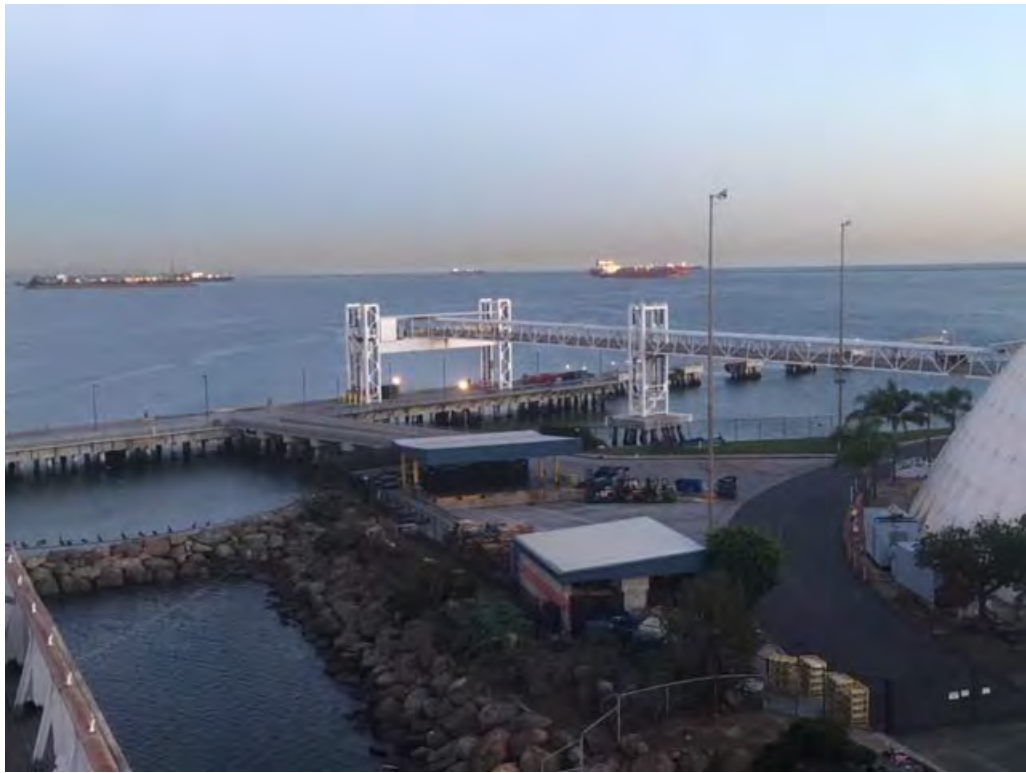


Photo 1: Facing southeast- View of passenger gangway for Long Beach Cruise Terminal.



Photo 2: Facing southeast- View of passenger gangway with cruise liner at berth for Long Beach Cruise Terminal.



## Appendix D: Site Photographs



Photo 3: Facing east- View of dock with cruise liner at berth for Long Beach Cruise Terminal.

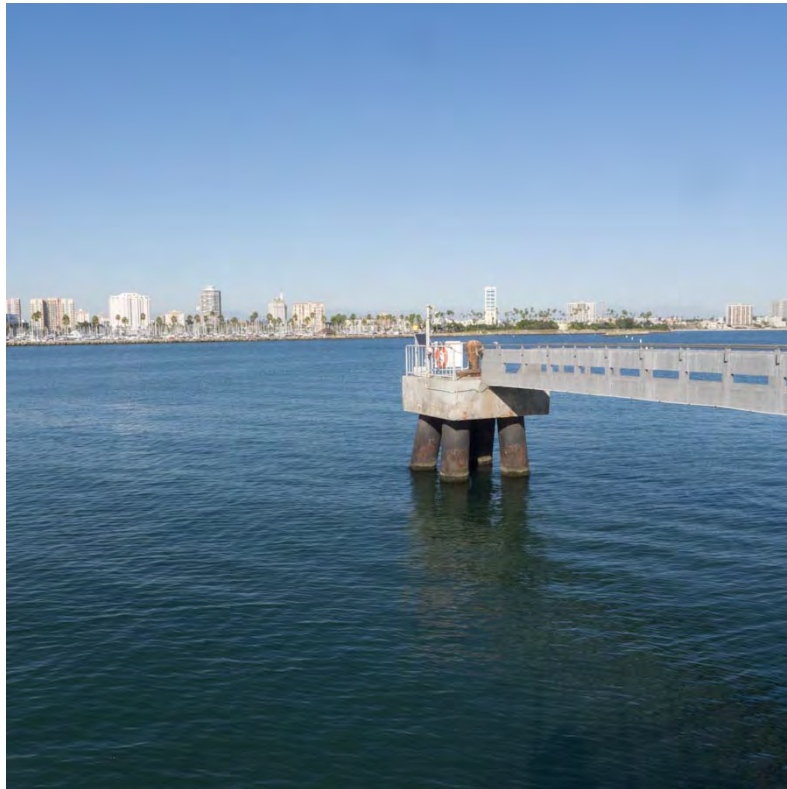


Photo 4: Facing northeast- View of northern mooring dolphin.



## Appendix D: Site Photographs



Photo 5: Facing southwest- View of Long Beach Cruise Terminal building seen from dock.



Photo 6: Facing north- View of catwalk to northern mooring dolphin.



## Appendix D: Site Photographs





Photo 7: Facing south- View of catwalk to passenger gangway.



Photo 8: Facing south- View of catwalk to passenger gangway.



## Appendix D: Site Photographs



Photo 9: Facing northwest- View from dock of Long Beach Cruise Terminal building and passenger gangway.



Photo 10: Facing north- View from dock of Long Beach Cruise Terminal building, passenger gangway and southern catwalk.



## Appendix D: Site Photographs

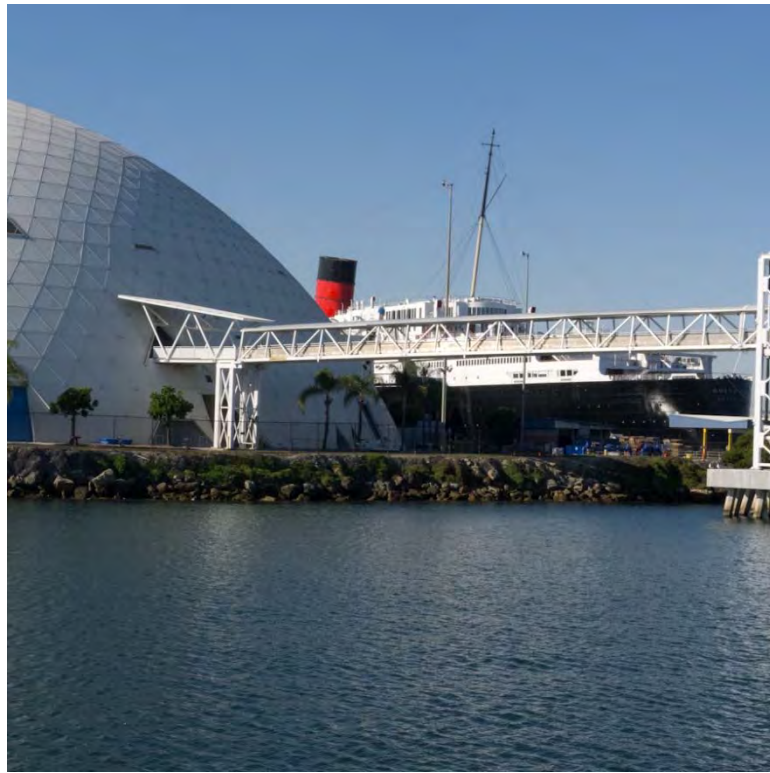


Photo 11: Facing northwest- Close-up view from dock of Long Beach Cruise Terminal building and passenger gangway.



Photo 12: Facing northwest- Close-up view from dock of passenger gangway.



## Appendix D: Site Photographs



Photo 13: Facing northwest- Close-up view of passenger gangway.



Photo 14: Facing north- Close-up view of passenger gangway.



## Appendix D: Site Photographs

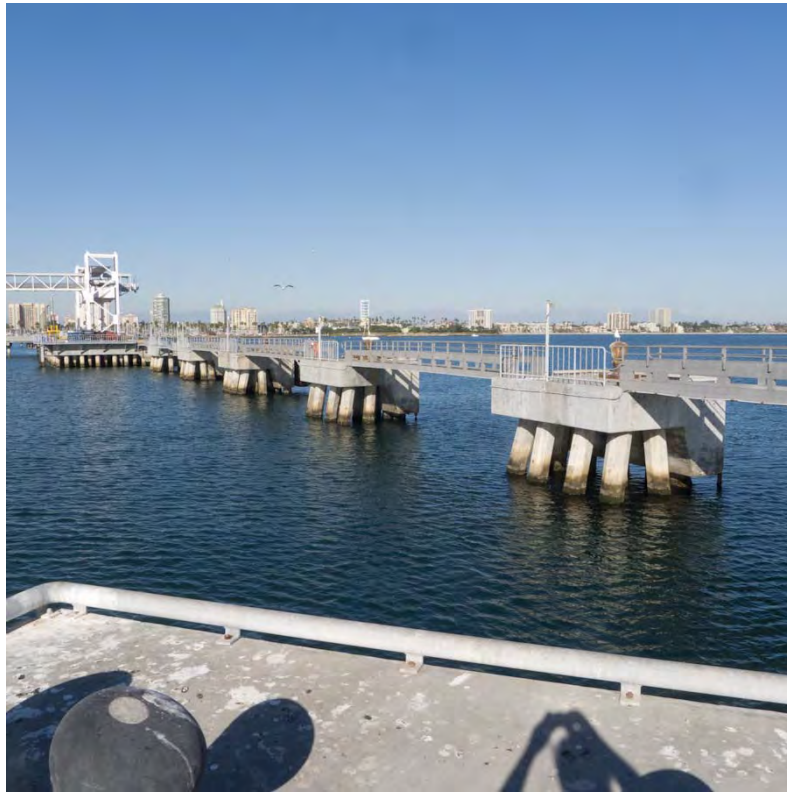


Photo 15: Facing northeast- View of southern catwalk to passenger gangway.



Photo 16: Facing east- View of southern catwalk.



## Appendix D: Site Photographs



Photo 17: Facing southeast- View of southern catwalk to southern mooring dolphin.



Photo 18: Facing west- View of parking garage.



## Appendix D: Site Photographs



Photo 19: Facing northwest- View of parking garage proposed expansion area.



Photo 20: Facing southwest- View of parking garage and street (expansion area).



## Appendix D: Site Photographs



Photo 21: Facing northwest - Overview of parking expansion area and Queen Mary.



Photo 22: Facing north- Overview of study area and Queen Mary.



## Appendix D: Site Photographs



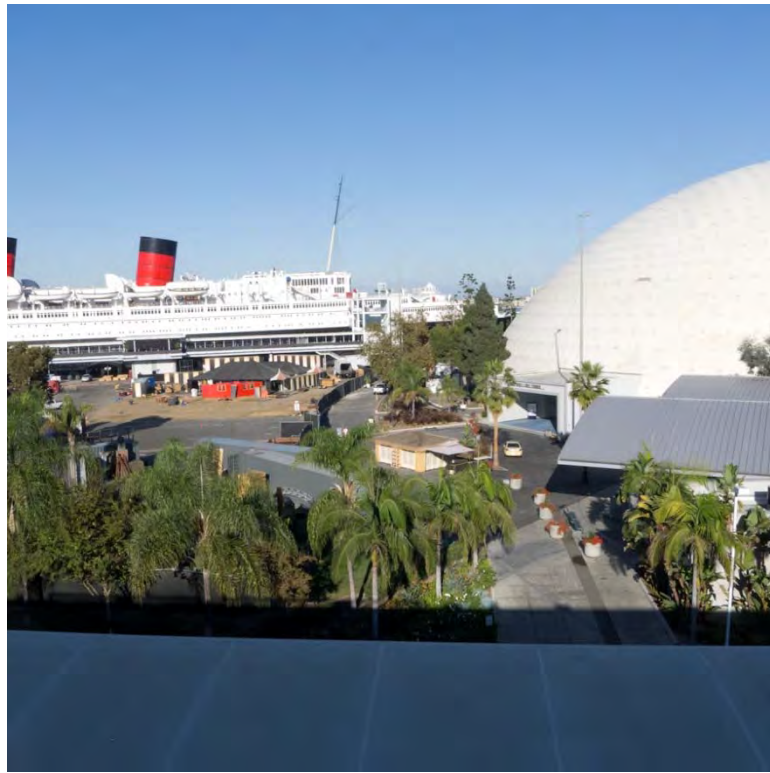


Photo 23: Facing northeast- Overview of study area, Long Beach Cruise Terminal building and Queen Mary.



Photo 24: Facing northwest- Overview of study area and parking lots.



## Appendix D: Site Photographs



Photo 25: Facing west- Overview of study area and parking lots.



Photo 26: Facing west- Overview of study area and electrical station.



## Appendix D: Site Photographs



Photo 27: Facing east- Overview of study area, Long Beach Cruise Terminal building and southern catwalk.



Photo 28: Facing east- View of passenger gangway and southern catwalk.



## Appendix D: Site Photographs

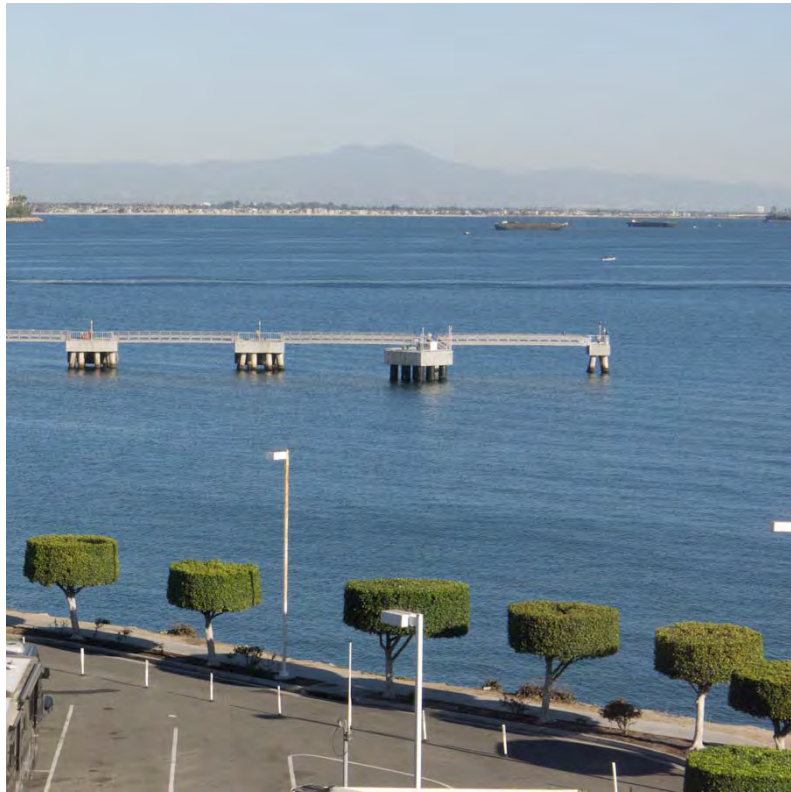


Photo 29: Facing east- View of southern catwalk.

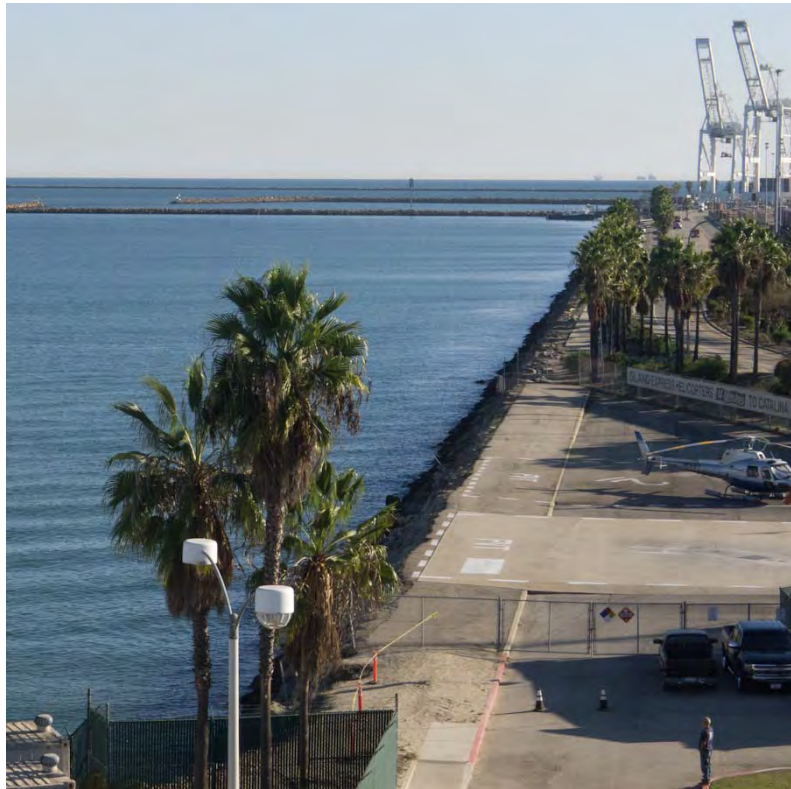


Photo 30: Facing southeast- View of coastline and helipad.



## Appendix D: Site Photographs

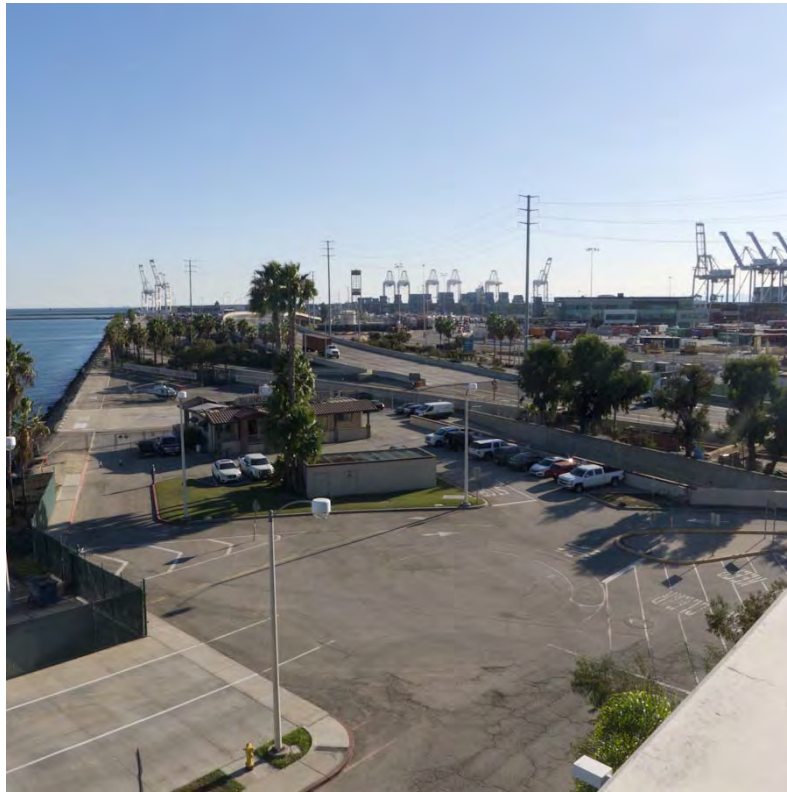


Photo 31: Facing south- View of surrounding area.

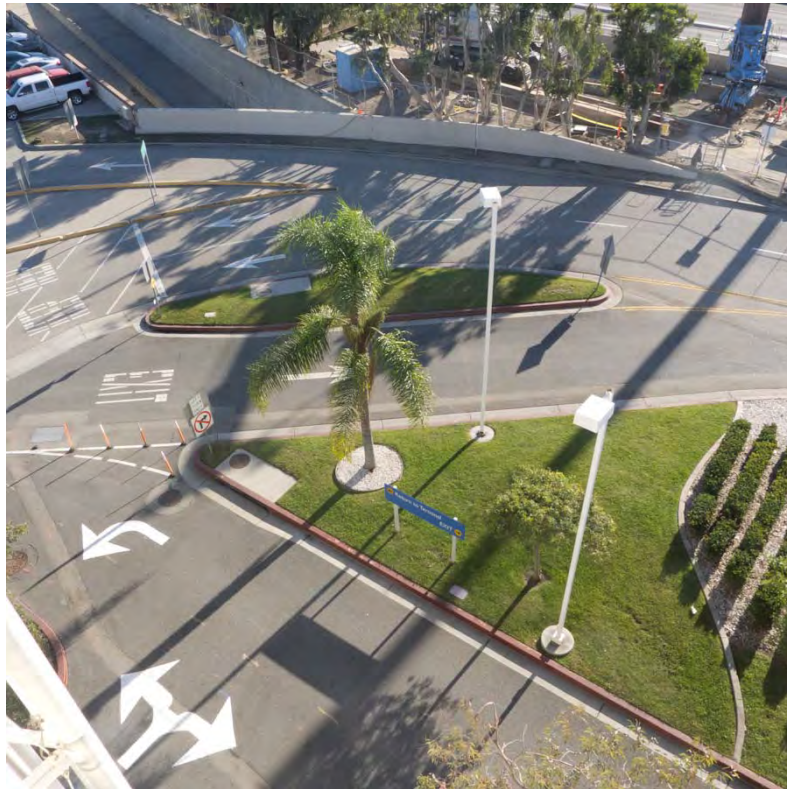


Photo 32: Facing south- View of study area streets.



## Appendix D: Site Photographs



Photo 33: Facing southwest- View of study area streets.

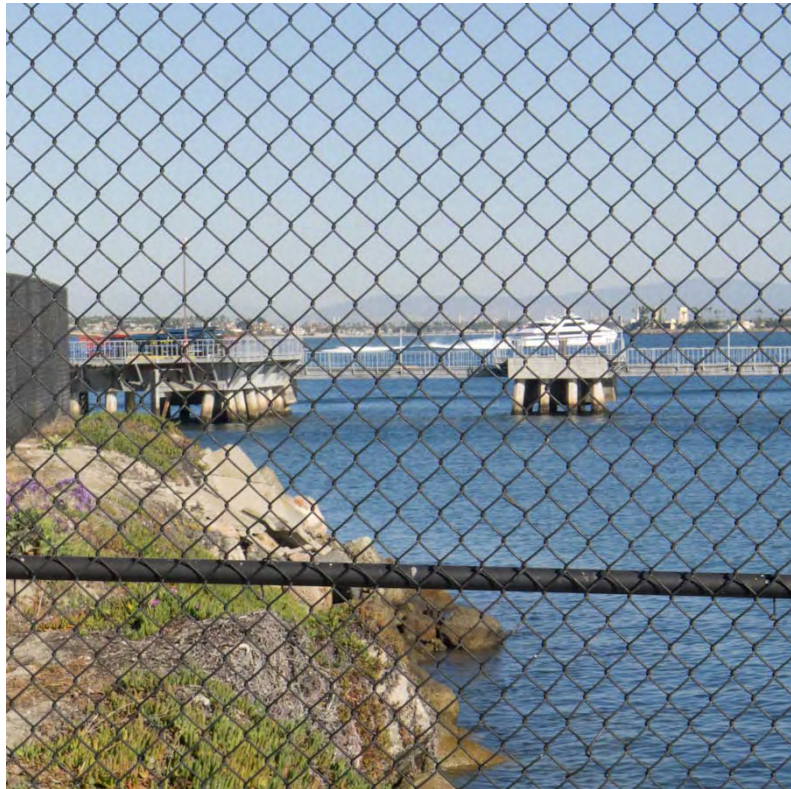


Photo 34: Facing northeast - View of catwalks and coastline.



## Appendix D: Site Photographs



Photo 35: View of rip rap environment near project area.

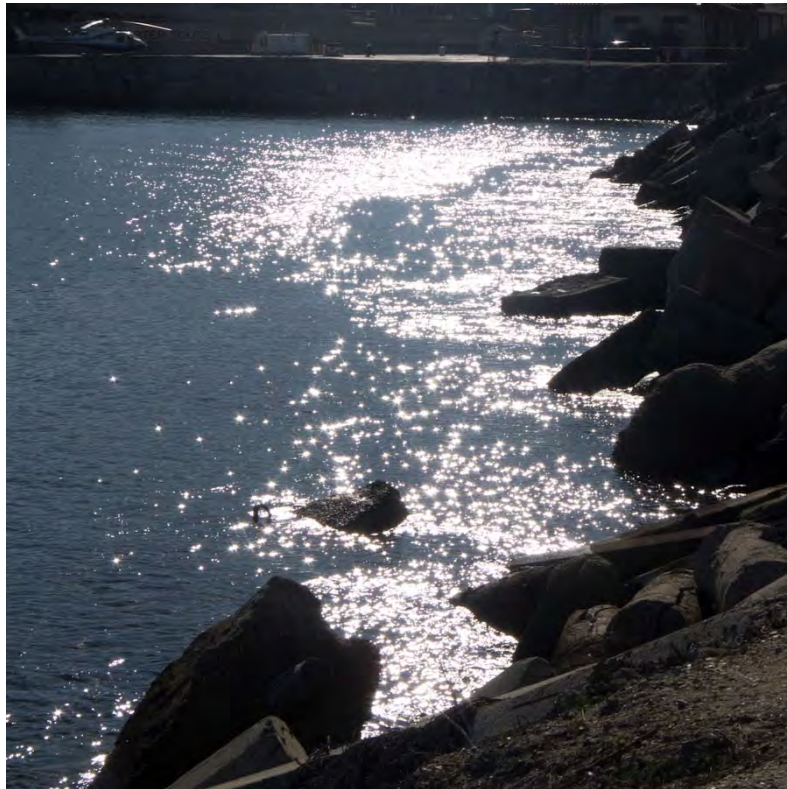


Photo 36: Facing south - View of rip rap environment.



## Appendix D: Site Photographs

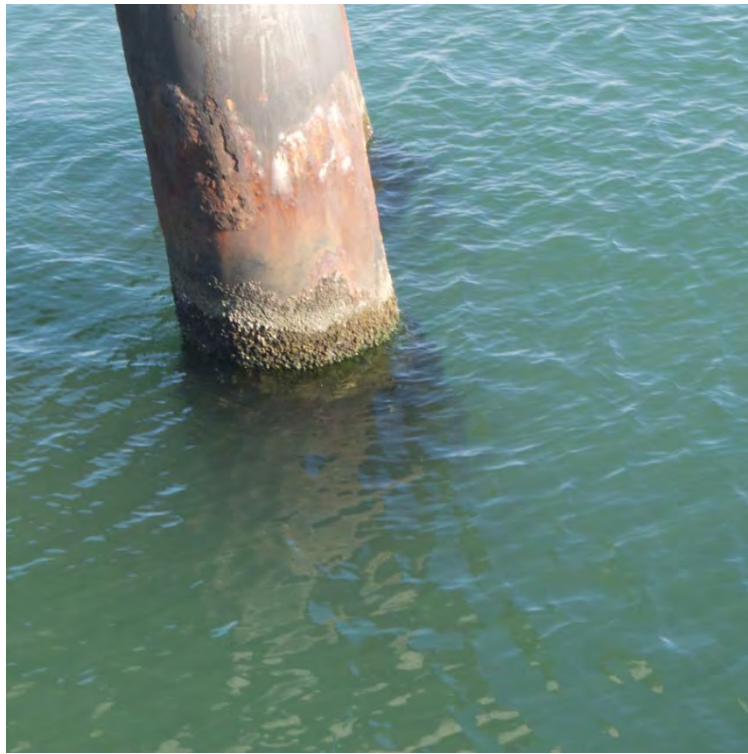


Photo 37: View of a mooring dolphin piling.



Photo 38: Facing northeast- View of mooring dolphin pilings.



## Appendix D: Site Photographs



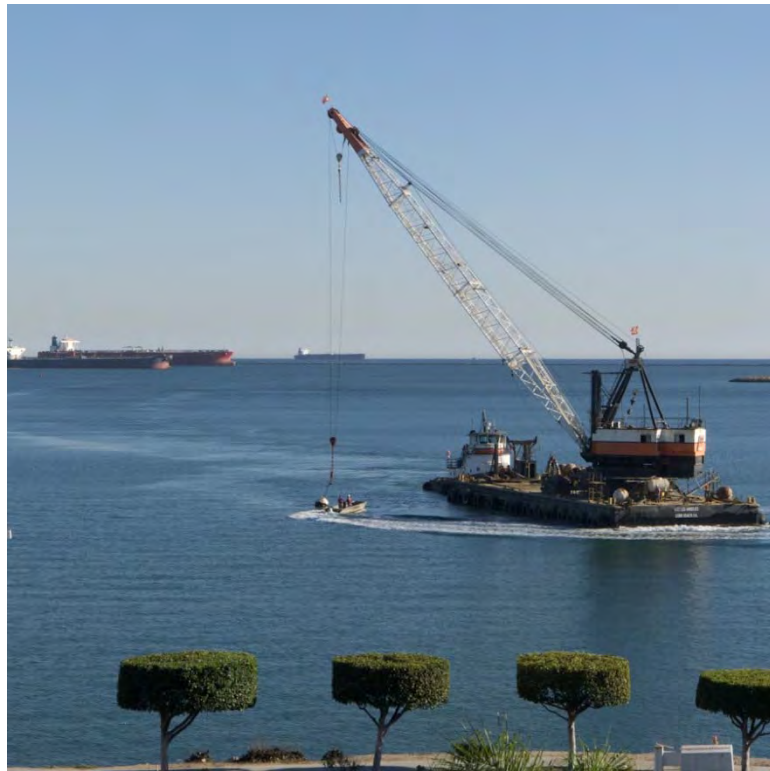


Photo 39: Barge conducting Port maintenance activity during recon visit.

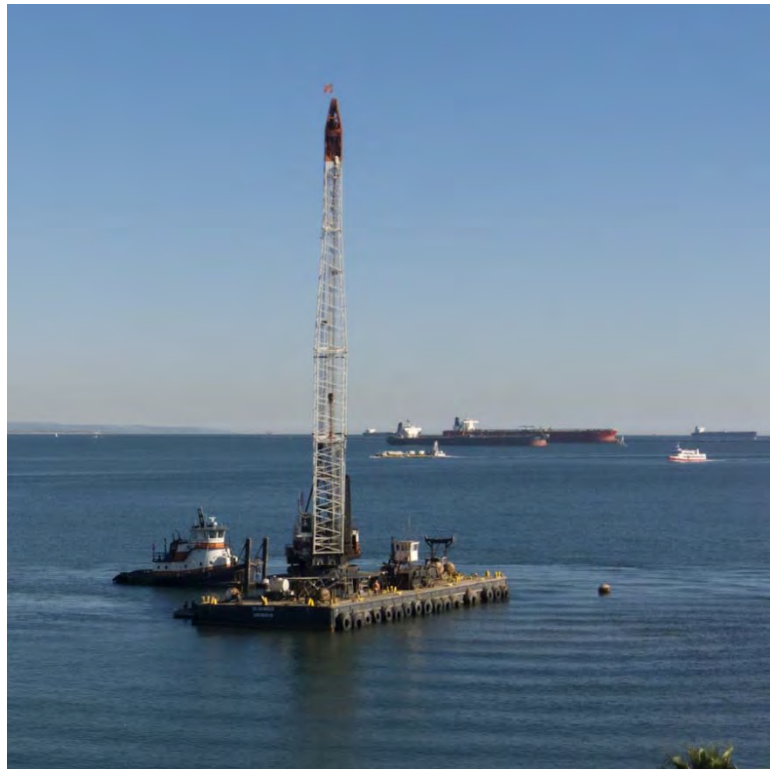


Photo 40: Barge conducting Port maintenance activity during recon visit.



## Appendix D: Site Photographs

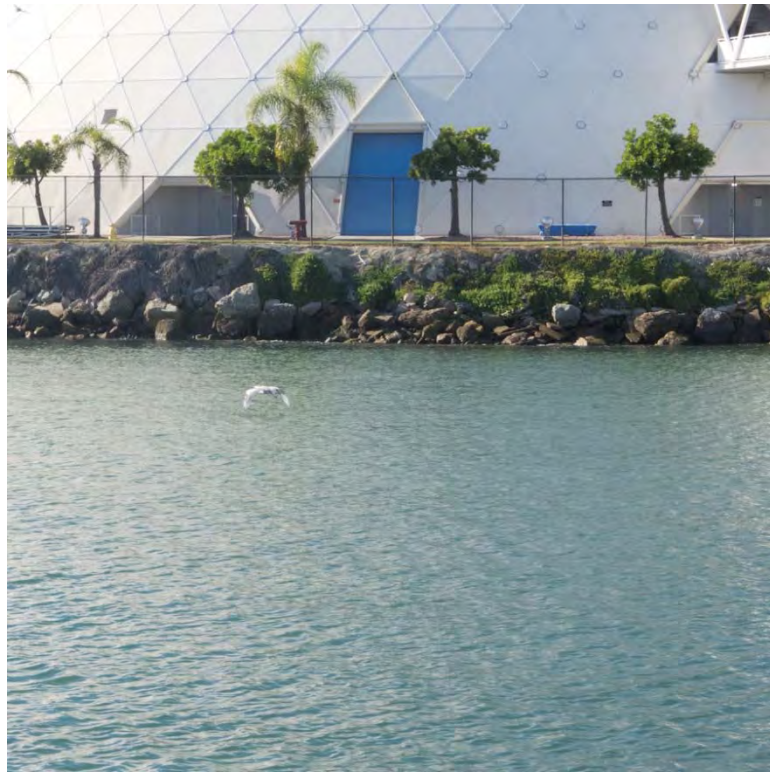


Photo 41: Facing northwest- View of rip rap environment near Long Beach Cruise Terminal Building.



Photo 42: Facing north- View of rip rap environment and birds near Queen Mary (Double-crested Cormorants and Snowy Egrets).



## Appendix D: Site Photographs



Photo 43: Facing northwest- View of adjacent Queen Mary (north of project area).



Photo 44: Facing north- View of adjacent Queen Mary (north of project area).



## Appendix D: Site Photographs