

# 3.3

## BIOLOGICAL RESOURCES

### 3.3.1 Introduction

This section identifies the existing conditions of biological resources within the proposed Project area and addresses potential impacts that could result from the proposed Project and its alternatives. The proposed Project includes construction of a crude oil tank farm on Pier 400 (Tank Farm Site 1), installation of piles at the edge of Pier 400 for a Marine Terminal, construction of a new tank farm on Terminal Island (Tank Farm Site 2), and construction of pipelines connecting proposed Project facilities on Pier 400 and Terminal Island to the Valero Refinery. The proposed Project would result in significant, but mitigable, impacts to the California least tern, and unavoidable significant impacts could occur from introduction of invasive species and from the unlikely event of an oil spill that would affect marine and avian resources (including the California least tern). All other impacts of the proposed Project on biological resources would be less than significant.

#### 3.3.1.1 Relationship to 1992 Deep Draft Final EIS/EIR

The Deep Draft Final Environmental Impact Statement/Environmental Impact Report (FEIS/FEIR) (USACE and LAHD 1992) included evaluations at a project-specific level and recommended mitigation, to the extent feasible, for all significant impacts on biological resources from navigation and landfill improvements required to create Pier 400. The improvements included those portions of the site associated with the current proposed Project that are located on Pier 400. In addition, that document evaluated at a general, or programmatic, level the foreseeable impacts of development and operation of terminal facilities planned for location on Pier 400, including a marine oil terminal and associated infrastructure. The Deep Draft FEIS/FEIR identified the primary biological resources impacts of terminal development and operation as potentially resulting from 1) increased vessel traffic and use of remaining anchorage areas; 2) pollutant input from runoff, vessel discharges and leaks or spills, and any facility discharges; and 3) increased noise and human presence near areas that previously would have been relatively isolated. However, that document concluded that biological resources impacts associated with development and operation of terminal facilities planned for location on Pier 400 would be unlikely to produce significant impacts beyond those associated with improvements at Pier 400. The Deep Draft FEIS/FEIR observed that, while

1 additional biological resources impacts could occur due to increased water pollutants  
2 from runoff, vessel discharges, leaks or spills, and facility leaks or discharges, those  
3 impacts would be adverse but less than significant assuming appropriate safety and  
4 handling procedures were implemented to minimize the risk of those impacts.  
5 However, the Deep Draft FEIS/FEIR recognized that an exception could occur if,  
6 during the nesting season for the California least tern (whose colonies within the Port  
7 of Los Angeles [Port] were then limited to a colony on Terminal Island/Pier 300),  
8 increased activity related to development and operation of planned terminal facilities  
9 resulted in a reduced nesting season or, in a worst-case scenario, abandonment of the  
10 nest site, either of which would be considered a significant impact. The Deep Draft  
11 FEIS/FEIR recommended two programmatic mitigation measures to protect  
12 California least tern nesting sites: 1) a long-term objective to construct a 15-acre least  
13 tern nesting site/island/peninsula elsewhere in the Port or the Los Cerritos Wetlands  
14 for relocation of the existing Terminal Island/Pier 300 colony; and 2) a requirement  
15 that the Port undertake modification or relocation of the existing Terminal Island/Pier  
16 300 colony, pursuant to the requirements of an existing Memorandum of Agreement  
17 (MOA) between the U.S. Fish and Wildlife Service (USFWS), the California  
18 Department of Fish and Game (CDFG), the U.S. Army Corps of Engineers  
19 (USACE), and the Los Angeles Harbor Department (LAHD) (City of Los Angeles et  
20 al. 2006).

21 New information of substantial importance concerning construction and operation of  
22 the marine oil terminal planned for Pier 400 has emerged since certification of the  
23 Deep Draft FEIS/FEIR, indicating the potential for previously unidentified or  
24 substantially more severe significant impacts to biological resources. In addition,  
25 circumstances surrounding marine oil terminal construction and operation on Pier  
26 400 have changed since certification of the Deep Draft FEIS/FEIR, in a manner that  
27 indicates the potential for previously unidentified or substantially more severe  
28 significant impacts to biological resources – particularly the fact that location of the  
29 least tern nesting site has changed and is now located on the southern tip of Pier 400,  
30 immediately east of proposed Tank Farm Site 1. Therefore, this Draft SEIS/SEIR re-  
31 evaluates, at a project-specific level of detail, the potential for significant impacts of  
32 the proposed Project on biological resources.

33 The approved Deep Draft FEIS/FEIR incorporated the mitigation measures listed  
34 below to address the potential for significant impacts on biological resources  
35 discussed above. Some of these mitigation measures are still applicable, while others  
36 have already been implemented or are not applicable to this proposed Project. New  
37 project-specific mitigation measures developed as part of this Supplemental  
38 document, as well as those that are applicable from the Deep Draft FEIS/FEIR would  
39 be enforced by inclusion in a Mitigation Monitoring and Reporting Plan (MMRP).

### 40 **Mitigation Measures from the 1992 Deep Draft Final EIS/EIR that** 41 **are Applicable to the Proposed Project**

42 The following Mitigation Measures (MMs), **4D-7** and **4D-9**, were developed in the  
43 Deep Draft FEIS/FEIR to reduce potential for significant impacts to endangered  
44 species and biological resources during construction. It should be noted that the  
45 measures identified relative to the California least tern were included as Terms and  
46 Conditions in the Biological Opinion prepared by the USFWS for the Deep Draft

1 Navigation Improvements Project (USFWS 1992). These measures remain  
2 applicable to the current proposed Project:

3 **MM 4D-7** stated that if California least tern nests are found outside of the designated  
4 nesting area, all construction activities in the immediate area shall be halted, and the  
5 least tern biologist shall be notified immediately. An appropriate buffer zone and  
6 protection shall be specified by the biologist in coordination with the CDFG and  
7 USFWS.

8 **MM 4D-9** required construction staging areas to be located at least 200 ft (61 m)  
9 away from the least tern nesting site from April to September.

### 10 **Mitigation Measures from the 1992 Deep Draft Final EIS/EIR that** 11 **are Not Applicable to the Proposed Project**

12 The following MMs were developed in the Deep Draft FEIS/FEIR, but are not  
13 applicable to the proposed Project for the reasons stated:

14 **MM 4D-1** required offsite development of coastal wetlands to offset deep soft  
15 bottom and water column losses due to landfill construction.

16 ***Reason No Longer Applicable:** This mitigation has been completed and does not*  
17 *apply because this proposed Project does not involve any in-water fill.*

18 **MM 4D-2** required placement of a relatively narrow corridor to access Pier 400 to  
19 minimize loss of shallow water.

20 ***Reason No Longer Applicable:** This mitigation was completed when Pier 400 and*  
21 *its connection to Terminal Island was built and does not apply to this proposed*  
22 *Project, which involves development of a portion of Pier 400.*

23 **MM 4D-3** required construction and maintenance of 136 acres of shallow water  
24 habitat in the Harbor.

25 ***Reason No Longer Applicable:** This mitigation was completed during construction*  
26 *of the original Deep Draft project. The construction of shallow water habitat would*  
27 *not be an appropriate mitigation for the biological resource impacts related to this*  
28 *proposed Project because no shallow water habitat would be lost as a result of the*  
29 *proposed Project.*

30 **MM 4D-4** stated that turbidity from dredge and fill activities would not be allowed to  
31 extend into the shallow water habitat to the east of Pier 300 during the least tern  
32 breeding season.

33 ***Reason No Longer Applicable:** This mitigation has been completed and does not*  
34 *apply to this proposed Project because no dredge or fill would occur for the*  
35 *proposed Project.*

36 **MM 4D-5** stated that no impact pile driving would be allowed along the access  
37 corridor to Pier 400 in shallow water during the least tern breeding season.

1           **Reason No Longer Applicable:** *This mitigation has been completed and does not*  
2           *apply to this proposed Project. The access corridor has already been constructed,*  
3           *and pile driving for the proposed Project berth would not occur in that area.*

4           **MM 4D-6** required the presence of a qualified least tern biologist to monitor and  
5           manage the least tern colony during nesting season in the year following proposed  
6           Project construction.

7           **Reason No Longer Applicable:** *This mitigation was for construction of Pier 400,*  
8           *which has been completed, and does not apply to this proposed Project. However, it*  
9           *should be noted that the Port has provided a least tern biologist to monitor and*  
10           *manage the least tern colony starting in the early 1970s and is continuing to do so.*

11           **MM 4D-8** required investigation of water quality consequences associated with  
12           removal of the rocky-dike groin in the Seaplane Lagoon.

13           **Reason No Longer Applicable:** *This mitigation has been completed and does not*  
14           *apply to this proposed Project because the proposed Project would not affect water*  
15           *circulation in the Seaplane Lagoon. It should be noted that during the permitting of*  
16           *the Pier 400, it was agreed to place an opening with a bridge in the transportation*  
17           *corridor leading to Pier 400 to help ensure water quality would be maintained in the*  
18           *Pier 300 Shallow Water Habitat and the Seaplane Lagoon.*

19           **MM 4D-10** stated that as a long-term objective, the Port may construct a permanent  
20           least tern nesting site for relocation of the colony in Los Angeles Harbor or to Los  
21           Cerritos Wetlands, in accordance with the specifications and guidelines of the  
22           existing least tern Memorandum of Agreement (MOA).

23           **Reason No Longer Applicable:** *This is still an objective of the Port, but to date no*  
24           *acceptable sites have been identified. Construction of an island in the Harbor is*  
25           *unacceptable due to cost, the need to remove marine resources to construct the*  
26           *island, management logistics, and because Cerritos Wetlands is not yet restored and*  
27           *available for a possible relocation. However, as addressed in this section, there is no*  
28           *need to relocate the nesting colony as a result of the proposed Project.*

29           **MM 4D-11** stated that the least tern nesting site on Pier 300 was to be relocated only  
30           as specified in the MOA for this species.

31           **Reason No Longer Applicable:** *The least tern nesting site on Pier 300 was relocated*  
32           *to Pier 400 following protocols identified in the terms of the MOA. Any relocation of*  
33           *the least tern site would be conducted in accordance with the MOA. However, as*  
34           *addressed in this section, there is no need to relocate the nesting colony as a result of*  
35           *the proposed Project.*

## 36           **3.3.2 Environmental Setting**

37           Marine biological resources in the Los Angeles/Long Beach Harbor (Inner and Outer  
38           Harbor areas) have been studied for at least 30 years and described in several  
39           environmental documents, including the Deep Draft Navigation Improvement  
40           FEIS/FEIR (USACE and LAHD 1992), Pier 400 (LAHD 1999), Channel Deepening

1 Project (USACE and LAHD 2000), and biological surveys conducted by MEC  
2 (1988) and MEC and Associates (2002). The following description of biological  
3 resources incorporates information from these previous environmental documents,  
4 including information from the most recent surveys. Biological resource sampling  
5 throughout the Harbor is not undertaken on an annual basis, with the most recent  
6 comprehensive surveys completed in 2000. The *Year 2000 Biological Baseline Study*  
7 *of San Pedro Bay* (MEC and Associates 2002) is incorporated by reference. The  
8 Executive Summary of that study is included in Appendix I.1, while the entire study  
9 is available for review at the Port's headquarters. Relevant parts of this document are  
10 summarized where used throughout Section 3.3 and incorporated by reference.

11 Over the years, the Ports of Los Angeles and Long Beach have worked with the State  
12 and Federal resource agencies to conduct periodic evaluations of Harbor conditions,  
13 which serve to define baseline conditions for habitat assessments associated with Port  
14 development projects. Based on these assessments, the resource agencies and the  
15 San Pedro Bay Ports establish appropriate Harbor habitat and habitat mitigation  
16 values. The last major assessment, which was conducted in 2000, resulted in  
17 modification of the mitigation values in the Harbor (LAHD 2004a). These  
18 modifications were indicative of a gradual increase in habitat value in the Harbor and  
19 resulted in an increase in mitigation requirements in the Main Channel from lower  
20 value Inner Harbor habitat to higher value Outer Harbor habitat. While still valuable,  
21 the remainder of the Inner Harbor was identified as having lower habitat values  
22 relative to the deep and shallow waters of the Outer Harbor (MEC and Associates  
23 2002, LAHD 2004a). In general, marine resource fluctuations along the California  
24 coast and in the Harbor can occur seasonally and annually based on general  
25 fluctuations in the environment including, but not limited to, the amount of rainfall  
26 and El Niño and La Niña events. However, substantial improvements in habitat  
27 quality associated with improved water quality in the Harbor occurred in the period  
28 between the 1970s and mid 1980s. Further improvements in marine resources have  
29 occurred since that time, though at a slower pace than during the previous 10-year  
30 period (MEC and Associates 2002). The types of habitats (shallow and deep pelagic,  
31 benthic, riprap, and piling) in the Inner Harbor and Outer Harbor and the species  
32 associated with them, have remained fairly predictable as described below for each  
33 habitat. Perhaps the most significant change has been the expansion of eelgrass  
34 habitat in the shallow soft bottom habitat of the Outer Harbor (MEC and Associates  
35 2002).

36 For these reasons, 2000 and earlier data (to about the mid 1980s) accurately reflect  
37 2004 environmental conditions in the Harbor because those conditions have remained  
38 about the same or even improved from 2000 to 2004. The 2002 MEC and Associates  
39 report included the first survey data which identified non-native taxa that have been  
40 introduced over-time to the San Pedro Bay Ports.

41 Marine habitats within Los Angeles Harbor near Pier 400 primarily comprise deep  
42 soft bottom, hard substrates (shallow and deep rock riprap and pilings), and the water  
43 column. Two designated shallow soft bottom habitats are also located near Pier 400:  
44 Cabrillo Shallow Water Habitat over 2,000 ft (610 m) to the southwest of the site and  
45 Pier 300 Shallow Water Habitat over 1,800 ft (549 m) to the north. Upland habitats  
46 on Pier 400 include developed terminal areas, undeveloped areas, and the California  
47 least tern nesting habitat. Upland habitats on Terminal Island in the proposed Project  
48 area include developed and undeveloped lands. The biological resources within each

1 of these habitat types are described below as well as the sensitive species present in  
2 the Harbor and that could occur at or adjacent to the Marine Terminal site.  
3 Information provided for the habitats is not always specific to Pier 400 because  
4 (1) many organisms can occur throughout the Harbor, particularly those in the water  
5 column; (2) data are only available from specific sampling locations; (3) proposed  
6 Project effects could extend beyond Pier 400 (e.g., oil spills or pollutant runoff); and  
7 (4) use of existing oil terminals under the No Federal Action/No Project Alternative  
8 could affect biological resources in the Main Channel and in Long Beach Harbor.

9 Beneficial uses in the Outer Harbor include marine habitat as defined in the Basin  
10 Plan (LARWQCB 1994). Biological resources baseline studies (MEC 1988, MEC  
11 and Associates 2002) have shown no depreciation in the quantity or quality of marine  
12 resources from 1987 through 2000 even though the Harbor has experienced  
13 commercial development that includes new facilities and increased vessel traffic.

### 14 3.3.2.1 Terrestrial Habitats

15 The proposed Project sites were assessed based on aerial photographs of the proposed  
16 Project area (Google Earth), baseline survey reports for the Harbor (MEC and  
17 Associates 2002), and site reconnaissance visits in February 2004 and November  
18 2007 by a biologist trained in terrestrial biology (SAIC 2004, 2007). Pier 400 is  
19 mostly paved, and contains facilities such as buildings, lights, roads, and paved  
20 container storage areas with little or no vegetation. The California least tern nesting  
21 habitat, located to the east of the proposed Tank Farm Site 1, is described below  
22 under “Special Status Species.” Tank Farm Site 1 is currently undeveloped. The soil  
23 is sandy with shell fragments. Vegetation is moderate and weedy. Common species  
24 present include sea rocket (*Cakile maritima*), tree tobacco, (*Nicotiana glauca*),  
25 Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), and sow  
26 thistle (*Sonchus oleraceus*), all of which are not native to North America (SAIC  
27 2004, 2007). Incidental pampas grass (*Cortaderia jubata*), a non-native, as well as  
28 the native mulefat (*Baccharis salicifolia*), telegraph weed (*Heterotheca grandiflora*),  
29 western ragweed (*Ambrosia psilostachya*), and horseweed (*Conyza canadense*) also  
30 occur on the site (SAIC 2007). Vegetation was removed from Tank Farm Site 1 in  
31 March 2003 and 2004 to allow additional area for least tern nesting (Keane  
32 Biological Consulting 2003, 2005a). The weedy vegetation growing there has not  
33 been removed since that time. No natural or sensitive plant communities are present.

34 Tank Farm Site 2 is located on Terminal Island (Chapter 2, Figure 2-1). Facilities at  
35 the site are scheduled to be removed as part of a separate project, and the unpaved  
36 portions of the site are barren or have predominantly non-native, weedy vegetation.  
37 Plant cover, where present, is low to moderately dense. The non-native species  
38 include smilo grass (*Piptatherum miliaceum*), fountain grass (*Pennisetum setaceum*),  
39 and tree tobacco. A few native plants are present at scattered locations. These  
40 include telegraph weed, mulefat, alkali heath (*Frankenia salina*), and a willow (*Salix*  
41 sp.) sapling (SAIC 2007). No natural or sensitive plant communities are present.

42 Most of pipeline segment 1 is located in paved or barren areas. On Pier 400 at the  
43 Marine Terminal and Tank Farm Site 1, the route passes through weedy vegetation as  
44 described above for Tank Farm Site 1. As it enters Terminal Island, the route passes  
45 through a disturbed site that is mostly barren, with telegraph weed and other weedy

1 species at the northwest corner. The location of the eastern bore pit for the Navy  
2 Way crossing includes an area that has landscape plants (palm trees and shrubs) as  
3 well as scattered native and non-native plants. The native species include telegraph  
4 weed, salt heliotrope (*Heliotropium curassavicum*), and evening primrose  
5 (*Oenothera* sp.). The short segment between Navy Way and Terminal Way is  
6 typified by landscape and weedy species. The area between Terminal Way and the  
7 railroad tracks is mostly barren with a few weedy species. West of the railroad tracks  
8 to Tank Farm Site 2, the area has moderate cover of predominantly weedy species. A  
9 few non-native shrubs are present, and a non-native saltbush (*Atriplex semibacata*)  
10 occurs scattered over the site. No natural or sensitive plant communities are present  
11 along this pipeline segment.

12 Pipeline segments 2a and 2b would pass through paved areas, a few landscape trees,  
13 and a strip of vegetation east of the U.S. Customs building that includes  
14 bougainvillea (*Bougainvillea* sp.), lantana (*Lantana* sp.), sweet clover (*Melilotis*  
15 *alba*), mulefat, rosea iceplant (*Drosanthemum floribundum*), and weedy annual  
16 species. Segment 2c would pass through street trees, represented by eucalyptus  
17 (*Eucalyptus* sp.) and bottlebrush (*Callistemon* sp.) along Pilchard Street with the  
18 remainder in paved areas. No natural or sensitive plant communities are present  
19 along this pipeline segment.

20 Most of pipeline segment 3 would be installed using horizontal directional drilling  
21 (HDD). The laydown area for the southern section on Mormon Island is in disturbed  
22 areas that are either paved or unpaved with sparse cover of non-native grasses and  
23 forbs. From Fries Avenue east to near Henry Ford Avenue, the east and west HDD  
24 laydown areas are paved. The pigging station on the west side of Henry Ford  
25 Avenue (Site A) is unpaved but covered in gravel with no vegetation. The alternative  
26 pigging station (Site B) has non-native trees around the perimeter and the remainder  
27 of the site is primarily barren. Pipeline segment 4 is in paved areas to the east side of  
28 the Valero Refinery, where it would then be in an unpaved, barren area to future Pier  
29 B Street, continuing in paved areas to the PT Manifold site. No natural or sensitive  
30 plant communities are present along this pipeline segment.

31 Staging area 408 is crossed by pipeline segments 2a and 2b, as described above for  
32 those pipelines (see Figure 2-12 for locations of construction staging areas). Staging  
33 areas 412 and 413 on Pier 400 are paved. The unpaved space between the pavement  
34 and the Pier 400 landfill containment riprap supports a sparse cover of horseweed,  
35 telegraph weed, tree tobacco, and mulefat. Staging area 417 is unpaved but has large  
36 piles of gravel and little to no vegetation except adjacent to the west and north fences  
37 where the plants are primarily telegraph weed and other non-native species. Staging  
38 area 420 is partly paved and partly unpaved. The unpaved areas are barren or have  
39 sparse weedy or landscape vegetation. Staging area 421 is paved and contains  
40 facilities that would be demolished as part of a separate project. Staging area 425 is  
41 paved with no vegetation. Staging area 427 is an existing berth adjacent to Staging  
42 area 420. No natural or sensitive plant communities are present in these staging  
43 areas.

44 Wildlife use of developed and undeveloped areas within the proposed Project area,  
45 such as Tank Farm Site 1 and Tank Farm Site 2, are generally limited to feral cats,  
46 rats and mice, and birds commonly associated with development in the region such as  
47 gulls (*Larus* spp.), American crow (*Corvus brachyrhynchos*), rock dove (*Columba*

1            *livia*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*),  
2            European starling (*Sturnus vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*),  
3            northern mockingbird (*Euphagus cyanocephalus*), and swallows. Numerous house  
4            finches were observed at Pier 400 in December and January during the 2000 baseline  
5            surveys (MEC and Associates 2002). In November 2007, one burrowing owl  
6            (*Athene cunicularia*) was observed on Tank Farm Site 1 (SAIC 2007). The weedy  
7            areas provide cover and forage for small animals (e.g., rodents, lizards, and birds).  
8            The burrowing owl is discussed further in Section 3.3.2.5.

### 9            3.3.2.2            Benthic Environments

#### 10            Soft Bottom Habitats

11            Organisms that live in (benthic infauna) and on (benthic epifauna) the bottom  
12            sediments provide a food source for fish, invertebrates, and other organisms. The  
13            density and species composition of these organisms are influenced by sediment grain  
14            size, nutrient levels, water depth, pollutant levels in the sediments and overlying  
15            water, and/or the time since dredging. Harbor-wide, the benthic infauna in 2000 was  
16            dominated by polychaete worms with crustaceans moderately abundant and  
17            mollusks, plus other taxa, least abundant. Since the 1950s, improvements in water  
18            quality have aided the establishment of diverse assemblages of benthic animals in  
19            previously disturbed Inner Harbor and channel areas (USACE and LAHD 1980,  
20            1984). Data from the 1970s show that the pollution-tolerant polychaete (*Tharyx*  
21            *parvus*) accounted for most of the benthic organisms in soft bottom samples (Soule  
22            and Oguri 1976; USACE and LAHD 1980). An assessment of dominant species in  
23            the Harbor indicates a gradient of increasing environmental stress  
24            (enrichment/contamination) from the Outer to Inner Harbor and from basins to slips  
25            (MEC and Associates 2002). Over time there has been an increasing tendency for  
26            movement of healthy Outer Harbor assemblages up the main channel and improved  
27            benthic indicators in the Inner Harbor areas (MEC and Associates 2002).

28            The mean annual abundance of infaunal organisms in deep open water of the Los  
29            Angeles Outer Harbor (southeast of Pier 400 and west of Pier 400 near the entrance  
30            to Main Channel) ranged from 175 to 299 organisms/0.1 m<sup>2</sup>, and biomass ranged  
31            from 1.87 to 1.91 g/0.1 m<sup>2</sup> in the 2000 baseline surveys. In the Main Channel, the  
32            number of organisms was 240/0.1 m<sup>2</sup> with a biomass of 8.5 g/ 0.1 m<sup>2</sup>. The mean  
33            annual number of species collected was 35 in the area southeast of Pier 400, 43 west  
34            of Pier 400, and 41 in the Main Channel. Statistical cluster analyses suggested that  
35            the Outer Harbor in this area has low pollutant concentrations. Annual and seasonal  
36            variations in density of infaunal organisms are to be expected as a result of variations  
37            in oceanographic (chemical and physical) conditions over time and human activities  
38            (USACE and LAHD 1992). The area near the mouth of the Main Channel had not  
39            been dredged in about 20 years prior to the 2000 surveys while the area southeast of  
40            Pier 400 had been dredged within about the past 10 years, which influenced the  
41            species diversity of the infaunal community. In Long Beach Harbor, the mean annual  
42            abundance of infaunal organisms in deep open water ranged from 225 to 347  
43            organisms/0.1 m<sup>2</sup>, and biomass ranged from 3.60 to 4.02 g/0.1 m<sup>2</sup> (MEC and  
44            Associates 2002). The mean number of species was 44 to 46. Abundance ranged  
45            from 198 to 515 organisms/0.1 m<sup>2</sup> in Cerritos Channel and Channel 2 (Inner Harbor  
46            locations) with biomass ranging from 3.95 to 16.40 g/0.1 m<sup>2</sup>. The number of species



1 ranged from 36 to 47. The Inner Harbor locations appear to have low to moderate  
2 pollutant concentrations based on cluster analyses.

3 Epifaunal invertebrates associated with, but not living in, soft-bottom sediments are  
4 generally larger than infaunal organisms and are also referred to as  
5 macroinvertebrates. These species are most commonly caught during trawl  
6 sampling. The most common epibenthic invertebrates collected in deep open water  
7 of the Los Angeles Outer Harbor, in the Main Channel, and in the Long Beach Inner  
8 Harbor were black spotted shrimp (*Crangon nigromaculata*) and tuberculate pear  
9 crab (*Pyromaia turberculata*). In the Long Beach Outer Harbor, the most common  
10 species were the black spotted shrimp, tuberculate pear crab, and spotwrist hermit  
11 crab (*Pagurus pilocarpus*). The annual mean density of epifaunal invertebrates  
12 southeast of Pier 400 was 16 organisms per trawl and ranged from 7 to 28 individuals  
13 per trawl (MEC and Associates 2002). The annual mean biomass was 0.03 kg/trawl  
14 with a range of 0.01 to 0.05 kg/trawl. In the Main Channel, the annual mean density  
15 was 32 individuals per trawl with an annual mean range of 17 to 60 per trawl. The  
16 annual mean biomass of these organisms was 0.14 kg/trawl with a range of 0.02 to  
17 0.28 kg/trawl. In Long Beach Outer Harbor, the annual mean density was 48  
18 individuals/trawl with an annual mean biomass of 2.60 kg/trawl. The annual mean  
19 range was 23 to 90 individuals/trawl with a biomass of 0.06 to 7.46 kg/trawl. In the  
20 Long Beach Inner Harbor, the annual mean density was 13 organisms/trawl with a  
21 range of 6 to 22 organisms/trawl. The annual mean biomass was 0.62 kg/trawl with a  
22 range of 0.20 to 1.01 kg/trawl (MEC and Associates 2002).

23 Surveys in the Outer Harbor in 1986-1987 (MEC 1988) collected a mean of 10  
24 individuals per trawl (adjusted for smaller trawl size) in three Outer Harbor locations.  
25 The number of individuals per trawl, however, varied considerably among the nine  
26 sampling dates (0 to 71 individuals per trawl). Surveys in the Outer Harbor in 1996-  
27 1999 by the City of Los Angeles indicated that the abundance of invertebrates  
28 collected by trawl decreased considerably during the 1997-1998 El Niño, but  
29 subsequently recovered (MEC and Associates 2002). These data and the 2000 data  
30 discussed above indicate that epifaunal invertebrate abundance can vary within a  
31 year, but has not decreased from 1987 to 2000.

32 Fish associated with soft bottoms are discussed under “Water Column Habitat”  
33 below. No shallow water habitat exists adjacent to the proposed Marine Terminal or  
34 any of the marine terminals that could be used in the No Federal Action/No Project  
35 Alternative. The Pier 300 Shallow Water Habitat is located over 2.3 mi (3.7 km) by  
36 water to the northeast of the proposed Marine Terminal, and the Cabrillo Shallow  
37 Water Habitat is located over 0.4 mi (0.6 km) to the southwest of the Marine  
38 Terminal site. The other marine terminals that could be used in the alternatives to the  
39 proposed Project are all at greater distances from these habitats, particularly the  
40 terminals in the Port of Long Beach.

### 41 **Hard Substrate Habitats**

42 Hard substrates provide surfaces for attachment of invertebrates and algae as well as  
43 shelter for mobile invertebrates and fish. Organisms growing on hard substrates in  
44 the Harbor show vertical zonation similar to that on rocky shores. Substrate type  
45 (e.g., vertical concrete or sloping rock riprap) as well as shading by wharves

1 influence the species composition and abundance present at specific locations.  
2 Species present include barnacles, mussels, crustaceans, polychaete worms, limpets,  
3 snails, anemones, and algae (MEC and Associates 2002). Two riprap locations were  
4 sampled in the Los Angeles Outer Harbor during the 2000 baseline surveys: Middle  
5 Breakwater (large boulders) and Berth 48 (large concrete blocks), across the Main  
6 Channel to the west. In Long Beach Harbor, sampling stations included one station  
7 in Middle Harbor (near the east end of the Naval Mole) and one station in the Inner  
8 Harbor (in Cerritos Channel).

9 The dominant species in the upper intertidal zone were acorn barnacles (*Balanus*  
10 *glandula* and *Chthamalus fissus*) along with a snail (*Littorina* sp.) and a limpet  
11 (*Collisella scabra*). In the lower intertidal zone, the same species were common as in  
12 the upper intertidal, along with the thatched barnacle (*Tetraclita rubescens*) (in Los  
13 Angeles Harbor only), Mediterranean mussel (*Mytilus galloprovincialis*), and a clam  
14 (*Lasaea subviridis*). On the breakwater, an anemone (*Anthopleura* sp.) was also  
15 common. In the subtidal zone, acorn barnacles, crustaceans (Tanaidae),  
16 Mediterranean mussel, anemones, and purple sea urchins (*Strongylocentrotus*  
17 *purpuratus*) were the most common species. Limpets, snails, polychaetes,  
18 crustaceans, and algae were also represented. The mean annual abundance in the  
19 quadrats was 60,356 organisms/m<sup>2</sup>, with 55 species on the breakwater and 39 species  
20 at Berth 48. In Long Beach Harbor, the Middle Harbor station had a mean annual  
21 abundance of 33,867 organisms/m<sup>2</sup> represented by 49 species on the Naval Mole and  
22 17,956 organisms/m<sup>2</sup> in 35 species in Cerritos Channel. The mean annual biomass  
23 was 12,800 g/m<sup>2</sup> on the breakwater, 11,822 g/m<sup>2</sup> at Berth 48, 29,545 g/m<sup>2</sup> on the  
24 Naval Mole, and 17,800 g/m<sup>2</sup> in Cerritos Channel (MEC and Associates 2002).

25 Surveys conducted in 2000 at four locations (San Pedro Breakwater, Pier 400,  
26 Reservation Point, and Berth 48) in Los Angeles Outer Harbor and three locations in  
27 Long Beach Outer Harbor (Middle Breakwater and Naval Mole) found 14 species of  
28 macroalgae. The San Pedro Breakwater supported the most species (11) and Berth  
29 48 and eastern Middle Breakwater the least (3). At four locations in Long Beach  
30 Inner Harbor (Cerritos Channel, Channel 2, and two in Channel 3), the surveys found  
31 six species of macroalgae. Species found on Pier 400 were *Colpomenia* sp., *Dictyota*  
32 sp., *Egrelia menziesii*, *Halymenia* sp., *Macrocystis pyrifera*, *Sargassum muticum*,  
33 *Taonia* sp., and *Ulva* spp. Depths of occurrence for these species ranged from 0 to -  
34 25 ft (0 to -7.6 m) MLLW. The non-native *Sargassum muticum* was present at all but  
35 four of the 20 locations sampled in the Los Angeles-Long Beach Harbor while the  
36 non-native *Undaria pinnatifida* was only found at one location in the Long Beach  
37 Inner Harbor (Channel 3) and one location in the Los Angeles Outer Harbor  
38 (Reservation Point) (MEC and Associates 2002). Several additional algal species  
39 were observed during the riprap surveys in Los Angeles and Long Beach Harbor.

### 40 3.3.2.3 Water Column Habitats

41 The water column provides habitat for plankton (small floating animals and plants)  
42 and fish. In the Outer Harbor, phytoplankton (plant) communities showed seasonal  
43 patterns of abundance with diatom blooms in the spring and more intense  
44 dinoflagellate-dominated blooms in the fall (Environmental Quality Analysts and  
45 MBC 1978; Soule and Oguri 1976, 1979). The most abundant phytoplankton species  
46 included *Chaetoceros* spp., *Asterionella japonica*, and *Skeletonema costatum*,

1 although red tides were dominated by *Gonyaulax polyhedra*. Phytoplankton tend to  
2 be less diverse in the Inner Harbor than in the Outer Harbor, but productivity can be  
3 higher in the former due to warmer water temperatures, nutrient inputs, and reduced  
4 circulation (HEP 1980). Zooplankton (animal) communities in the Outer Harbor  
5 were dominated by copepods and cladocerans such as *Acartia tonsa*, *A.*  
6 *californiensis*, *Paracalanus parvus*, *Corycaeus anglicus*, *Oithona* sp., *Evadne*  
7 *nordmanni*, *E. spinifera*, *Penilia avirostris*, and *Podon polyphemoides*. In the Inner  
8 Harbor, copepods that have seasonal peaks and declines are the dominant  
9 zooplankton species. In the Outer Harbor near Pier 300, the mean density of  
10 zooplankton was 3,000 to 4,000 per m<sup>3</sup> (USACE 1985). Phytoplankton and  
11 zooplankton communities were not sampled in the 2000 baseline study.

12 Ichthyoplankton (fish eggs and larvae) species and abundances vary on a spatial and  
13 temporal basis in the Harbor. The most abundant larvae collected in deep waters of  
14 the Outer Harbor during 2000 were bay goby (*Lepidogobius lepidus*), northern  
15 anchovy (*Engraulis mordax*), unidentified goby, and queenfish (*Seriphus politus*),  
16 while the most abundant fish eggs were unidentified croaker and unidentified fish. In  
17 shallow water habitats, the most abundant larvae were California clingfish (*Gobiesox*  
18 *rhessodon*), queenfish, unidentified goby, bay goby, northern anchovy, and blennies  
19 (*Hypsoblennius* spp.), with abundant fish eggs represented by unidentified fish,  
20 croaker, speckled sanddab (*Citharichthys stigmaeus*), and California tonguefish  
21 (*Symphurus atricauda*). In Long Beach Inner Harbor, the most abundant eggs were  
22 unidentified croaker and unidentified fish while the most abundant larvae were bay  
23 goby, unidentified goby, and white croaker. Larvae were most abundant in spring  
24 and summer (May and August) while fish eggs were most abundant in February and  
25 August. The species composition and abundance of ichthyoplankton in the Harbor  
26 has been shown to be similar to that of the juvenile and adult fish community  
27 (Brewer 1983), suggesting that the Harbor is a nursery for nearly all of the fish  
28 species found there as adults (MEC 1988, MBC 1984).

29 The Los Angeles-Long Beach Harbor complex is a habitat for over 130 species of  
30 juvenile and adult fish, some of them transient visitors and some permanent residents  
31 (Horn and Allen 1981, MEC 1988, USACE and LAHD 1980). Seventy-four species  
32 of juvenile/adult fish were collected in the Harbor during the 2000 baseline study  
33 (MEC and Associates 2002). Of these, northern anchovy, white croaker  
34 (*Genyonemus lineatus*), and queenfish were the dominant species. Abundance was  
35 greater in summer than in winter. Deep open water of the Outer Harbor was  
36 dominated by northern anchovy and white croaker in both otter trawl and lampara net  
37 samples, with Pacific sardine (*Sardinops sagax*) and queenfish also abundant in  
38 lampara samples. The mean catch per lampara haul was 279 fish, and the mean catch  
39 per trawl was 509 fish. White croaker, northern anchovy, and queenfish were the  
40 most abundant species in the trawl and lampara samples in the shallow water  
41 mitigation habitats, with shiner perch (*Cymatogaster aggregata*) also abundant in the  
42 lampara samples. The mean catch per lampara haul was 352 fish and per trawl was  
43 402 fish. Beach seine samples at Cabrillo Beach and the Pier 300 shallow water  
44 habitat found topsmelt (*Atherinops affinis*) to be the most abundant species. In Long  
45 Beach Inner Harbor, the most abundant species caught using the trawl and lampara  
46 was the northern anchovy, with white croaker, topsmelt, and specklefin midshipman  
47 (*Porichthys myriaster*) also common. Commercially important species such as the  
48 California halibut (*Paralichthys californicus*), barred sand bass (*Paralabrax*  
49 *nebulifer*), and California barracuda (*Synodus argentea*) were found in the Harbor.

### 3.3.2.4 Water Birds

Numerous water-associated birds use the Harbor as residents and as seasonal visitors. They use the water surface for resting and forage over or in the water. Some species also rest or roost on breakwaters and other man-made structures in the Harbor. The year 2000 baseline study found 69 species that are dependent on marine habitats and another 30 species that are not (MEC and Associates 2002). In the Outer Harbor near Pier 400 (north, west, and south sides), aerial foragers and gulls were the most abundant bird guilds with waterfowl also common. The western gull (*Larus occidentalis*) was common all year while Heermann's gull (*Larus heermanni*) was common from June through January. Western grebes (*Aechmophorus occidentalis*) were also present throughout the year. Four species of terns and black skimmers (*Rynchops niger*) were observed in the summer. The Caspian tern nesting season is approximately April through August (Shuford and Craig 2002). This species nested on Pier 400 just west of the California least tern nesting site (i.e., in the proposed Tank Farm Site 1) in 1997 through 2005 (Keane Biological Consulting 2005b). Great blue heron (*Ardea herodias*) were present along the riprap of Pier 400 all year but were more abundant in fall and winter. The California least tern (*Sternula antillarum browni*) and black skimmer are discussed below under Special Status Species. Birds observed on or adjacent to Tank Farm Site 1 in November 2007 included great blue heron, double-crested cormorant (*Phalacrocorax auritus*), and gulls (SAIC 2007).

The elegant tern was present in the Harbor year round in 2000, but numbers were greatest during the summer nesting season from late April through August (MEC and Associates 2002). Elegant terns nest at five locations in North America: Pier 400 in the Port, Bolsa Chica, the San Diego saltworks, and two islands (Isla Raza and Isla Montague) in the Gulf of California, Mexico (Collins 2006a). Approximately 90 to 97 percent of the world population of this species nests on Isla Raza. Elegant terns, predominantly from Bolsa Chica (Collins 2006a), nested in the 12-acre (5-ha) area adjacent to the west side of the least tern nesting area in 1998 and 2000 through 2005, with observations of 166 nests in 2001 to 10,170 in 2004 (Keane Biological Consulting 2005b). This area is within proposed Tank Farm Site 1 and had been cleared of vegetation through 2004 to provide additional nesting habitat for the California least tern. Approximately 2,700 elegant tern nests were present in 2005, but the terns abandoned the site after a nocturnal predator visited the site, probably moving to Bolsa Chica (Keane Biological Consulting 2005b), and did not nest there in 2006 or 2007 (Keane Biological Consulting 2007a, 2007b). The number breeding at each of the southern California locations has shifted considerably between years, possibly due to local water conditions (Collins 2006a). In Long Beach Inner Harbor (Cerritos Channel, Channels 2 and 3, and Back Channel), gulls was the most abundant guild with waterfowl and upland birds also common (MEC and Associates 2002). The western gull was the most common species throughout the year with Heermann's gull commonly present from July through January. Rock doves were also abundant throughout the year. Other seasonally common species included double-crested cormorant, barn swallow (*Hirundo rustica*), great blue heron, western grebe, and California brown pelican (*Pelecanus occidentalis californicus*). The latter species is discussed below under Special Status Species.

### 3.3.2.5 Special Status Species

Several state- and federally-listed threatened or endangered bird species, along with other special status bird species, are known to be present at least seasonally in the Harbor (Table 3.3-1). The status of these birds was taken from the California Natural Diversity Data Base (CNDDDB 2008). Many birds are protected under the Migratory Bird Treaty Act. Those that are state- or federally-listed as threatened or endangered or state species of special concern are included in Table 3.3-1. Other migratory birds are discussed above in the sections on Water Birds and Terrestrial Habitats. A Biological Assessment has been prepared for the three federally-listed bird species and listed species of whales in offshore waters (Appendix J) for Section 7 consultation under the Endangered Species Act (ESA). In addition to special status bird species, several species of marine mammals and sea turtles are known to be present in or near the Harbor as discussed below.

#### California Least Tern

The California least tern was federally listed as endangered in 1970 and state listed as endangered in 1971. Loss of nesting and nearby foraging habitat due to human activities caused a decline in the number of breeding pairs (USFWS 1992). The biology of this species in the Harbor area has been described in the biological assessment for the Channel Improvement and Landfill Development Feasibility Study (USACE 1990), biological opinion for the Los Angeles Harbor Development Project (1-6-92-F-25), Channel Deepening EIS/EIR (USACE and LAHD 2000), and Deep Draft Navigation Improvement FEIS/FEIR (USACE and LAHD 1992). The following is a summary of information on least tern use of the Los Angeles Harbor.

The least tern is a migratory species that is present and breeds in California from April through August. The species has been nesting during the summer on Terminal Island (including Pier 300) since at least 1974 (Keane Biological Consulting 1999a). In 1979, the Los Angeles Harbor Department began providing nesting habitat for the species and entered into a MOA with the USFWS, the USACE, and CDFG for management of a 15-acre (6.1-ha) least tern nesting site in 1984. The MOA sets forth the responsibilities of the signing parties for management of the designated least tern nesting site within the Harbor, and it is renewed every three to five years. A new MOA was approved by the Board of Harbor Commissioners in June 2006. The MOA also allows the designated nesting site to be relocated under specific conditions. The location of this nesting site has changed over time due to port development activities and is now on the southern tip of Pier 400 (Keane Biological Consulting 2003), immediately east of proposed Tank Farm Site 1. In 1997, the only successful nesting occurred on the then newly constructed Pier 400 and in 1998 the Pier 300 nesting site was decommissioned (Keane Biological Consulting 1999a). Least tern nesting in the Harbor has been monitored annually since 1973 (Keane Biological Consulting 2003). The number of nests in the Harbor varied from 0 to 134 between 1973 and 1994 and then steadily increased, from 16 in 1995 to 565 in 2000, with decreases in 2001 and 2002 and increases to 963 in 2003, 1,071 in 2004, and 1,322 in 2005 (Keane Biological Consulting 2005b). The number of nests decreased to 906 in 2006 (Keane Biological Consulting 2007a) and further decreased to 710 in 2007 (Keane Biological Consulting 2007b). Most of the 2003, 2004, and 2005 nests were within the 15.7-acre (6.4-ha) fenced nesting site although 67 in

**Table 3.3-1. Special Status Bird Species in the Proposed Project Area**

| Common Name   | Scientific Name                            | Status <sup>1</sup> |       | Habitat Use   |
|---|--|---------------------|-------|---|
|   |  | Federal             | State |   |
| California least tern   | <i>Sternula antillarum browni</i>          | E                   | E, FP | Nests at designated site on Pier 400; forages over shallow water near nest site; present April-August   |
| California brown pelican  | <i>Pelecanus occidentalis californicus</i> | E                   | E     | Roosts on breakwaters; forages over open water; rests on water or structures; present all year  |
| American peregrine falcon   | <i>Falco peregrinus anatum</i>             | Delisted            | E, FP | Resident; nests in the Inner Harbor; forages throughout Harbor on birds   |
| Western snowy plover  | <i>Charadrius alexandrinus nivosus</i>     | T                   | CSC   | Several migrants at Pier 400 in the California least tern nesting site, but no nesting in 2003 through 2007   |
| Belding's savannah sparrow  | <i>Passerculus sandwichensis beldingi</i>  | --                  | E     | Inhabits pickleweed marsh; transient visitor to Harbor  |
| Black skimmer   | <i>Rynchops niger</i>                      | --                  | CSC   | Nested on Pier 400 in 1998-2000 and 2004; forages over water near nests; present all year   |
| Common loon   | <i>Gavia immer</i>                         | --                  | CSC   | Infrequent winter visitor to Harbor; a few observed in the Outer Harbor in 2000; does not nest in the Harbor  |
| Burrowing owl   | <i>Athene cunicularia hypugea</i>          | --                  | CSC   | One observed on riprap in Long Beach Outer Harbor in 2000; one trapped on Pier 400 in 2003 and 2004; observed on Pier 400 in 2005, 2006, and 2007; no known nesting in Project area |
| Loggerhead shrike   | <i>Lanuis ludovicianus</i>                 | --                  | CSC   | Primarily in Inner Harbor on riprap or dock/piling habitat; on Pier 400 in 2003; no nesting habitat at Project sites  |
| <p>Sources: MEC and Associates 2002; Keane Biological Consulting 2003, 2005b, 2007a, 2007b.</p> <p>Note: 1. E = endangered<br/>T = threatened<br/>CSC = California Species of Special Concern (nesting populations for birds in this table);<br/>FP = fully protected</p> |  |                     |       |   |

2 2003, 29 in 2004, and 25 in 2005 were located in the adjacent area to the west (part  
3 of proposed Tank Farm Site 1).

4 A comparison of the Los Angeles Harbor 1998 nesting success with that from other  
5 areas in Los Angeles and Orange counties showed that the Harbor produced 19  
6 percent of the total number of fledglings and the highest number of fledglings per  
7 pair (Keane Biological Consulting 1999a). In 2003, the Harbor produced 55 percent  
8 of the total number of fledglings in Los Angeles and Orange counties and 25 percent  
9 of the statewide fledglings (Keane Biological Consulting 2003). In 2005 these  
10 numbers increased to 71.4 percent of the total fledglings in Los Angeles and Orange  
11 counties and 45 percent of the statewide number of fledglings (Keane Biological  
12 Consulting 2005b). The number of fledglings produced on Pier 400 in 2006  
13 decreased to 44.3 percent of those in Los Angeles and Orange counties and 20  
14 percent of the state total (Keane Biological Consulting 2007a). In 2007, the number  
15 of fledglings at the Pier 400 nesting site decreased further to 20.8 percent of those in  
16 Los Angeles and Orange counties and 8 percent of the state total (Keane Biological

1 Consulting 2007b). Nesting success at the Pier 400 site is dependent on a number of  
2 factors, many of which are unrelated to Port activities. These factors include annual  
3 variations in abundance and distribution of prey (primarily anchovies) within and  
4 adjacent to the Harbor, as influenced by changes in oceanographic conditions (e.g.,  
5 water temperature and upwelling).

6 Several foraging studies have been conducted in the Harbor. The 1982, 1984, and  
7 1985 surveys found that least terns foraged over shallow water (generally less than 20  
8 ft [6 m] deep) in the Outer Harbor, especially near the Pier 400 least tern nesting site,  
9 but not in the Inner Harbor (Keane Biological Consulting 1997). Surveys using  
10 radio-telemetry and observations in 1986 and 1987 showed that the least terns  
11 foraged both inside and outside the Harbor during egg incubation. More foraging  
12 occurred near the breakwater than adjacent to Terminal Island during incubation but  
13 this reversed after the eggs hatched (Keane Biological Consulting 1997). Based on  
14 the 1994-1996 surveys, least terns foraged around the east and south sides of Pier 300  
15 with greater use of the Seaplane Lagoon in 1996 than in the other 2 years. After the  
16 south side of Pier 300 was dredged to deepen the water, use of this area by the terns  
17 declined. The Cabrillo Beach and Cabrillo Saltmarsh areas were used to varying  
18 degrees (Keane Biological Consulting 1997). A study in 1997 and 1998 found that  
19 least terns used the West Basin of Long Beach Harbor as well as the Pier 300  
20 Shallow Water Habitat, Seaplane Lagoon, and the Gap (area between Naval Mole  
21 and Pier 400 Transportation Corridor). The foraging frequency (dives per acre)  
22 varied among locations and between years. This variation may be related to changes  
23 in availability of prey and to distance from nest sites (Keane Biological Consulting  
24 1998). A foraging study in 2001-2003 in Los Angeles Harbor (Keane Biological  
25 Consulting and Aspen Environmental Group 2004) found that foraging varied among  
26 locations and between years. Both shallow and deep water areas were used, probably  
27 in response to localized fish abundance within the size range suitable for least terns.  
28 These studies showed that shallow water areas (less than 20 ft [6 m] deep) provide  
29 important foraging areas for the least tern.

30 Foraging by least terns at the Pier 300 Shallow Water Habitat increased even more  
31 than the number of nests in recent years. This suggests that least tern prey were more  
32 abundant over the period from 1994 to 1998. Thus, the increase in nesting may be  
33 related to increases in both the amount of suitable nesting habitat and prey. Foraging  
34 by least terns in 1998 also occurred in the shallow waters of the then incomplete Pier  
35 400 Phase 2 fill area to the north of the Phase 1 area (Keane Biological Consulting  
36 1999a). In 1999, least tern foraging was again very high in the Pier 300 Shallow  
37 Water Habitat with much of the activity in waters immediately adjacent to Pier 300  
38 (Keane Biological Consulting 1999b). Foraging was also very high there in 2001 and  
39 2003, but in 2002 the highest foraging was on the north side of Pier 400 adjacent to  
40 the causeway (west side) and near Cabrillo Beach (Keane Biological Consulting and  
41 Aspen Environmental Group 2004). Foraging showed three peaks in 2003: early to  
42 mid May (egg-formation period), mid June (chick hatching period), and early to mid  
43 July (fledging period). In 2003, foraging outside the Harbor increased relative to that  
44 of the previous two years.

### 45 California Brown Pelican

46 The California brown pelican was federally listed as endangered in 1970 and was  
47 state listed as endangered in 1971. The USFWS published a 90-day finding for the

1 California Brown Pelican delisting petition, initiated a status review to determine if  
2 delisting is warranted (see 71 FR 29908 dated 24 May 2006), and has now proposed  
3 to delist the species (USFWS 2008). Low reproductive success attributed to pesticide  
4 contamination that caused thinning of eggshells was the primary reason for their  
5 listing. After the use of DDT was prohibited in 1970, the population began to  
6 recover (USACE and LAHD 1992). Abundance of this species has increased to  
7 9.5 percent in 2000 (MEC and Associates 2002) since surveys in 1973 found they  
8 comprised only 3.8 percent of the total bird observations in the San Pedro Bay Ports  
9 (HEP 1980). The only breeding locations in the U.S. are at West Anacapa Island and  
10 Santa Barbara Island, although a few have begun nesting at the south end of the  
11 Salton Sea (CDFG 2005, Patten et al. 2003). Breeding also occurs at offshore islands  
12 and along the mainland of Mexico.

13 This species has been described in the Biological Opinion (1-6-92-F-25) for the Los  
14 Angeles Harbor Development Project (USFWS 1992), Biological Assessment for the  
15 Channel Improvement and Landfill Development Feasibility Study (USACE 1990),  
16 and Navigation Improvement EIS/EIR (USACE and LAHD 1992).

17 Brown pelicans use the Harbor year-round, but their abundance is greatest in the  
18 summer when post-breeding birds arrive from Mexico. The highest numbers are  
19 present between early July and early November, when several thousand can be  
20 present (MBC 1984). Pelicans use all parts of the Harbor, but they prefer to roost  
21 and rest on the Harbor breakwater dikes, particularly the Middle Breakwater (MBC  
22 1984, MEC 1988, MEC and Associates 2002). They forage over open waters for fish  
23 such as the northern anchovy, and accounted for 9.5 percent of the total number of  
24 birds observed in the Harbor during the 2000-2001 surveys. Brown pelicans were  
25 observed adjacent to Pier 400 throughout the year during the 2000 baseline surveys.  
26 The brown pelican does not breed in the Harbor area.

### 27 **Western Snowy Plover**

28 The Pacific coast population of the western snowy plover was federally listed as  
29 threatened in 1993 (USFWS 1993). This small shorebird nests on coastal beaches  
30 from southern Washington to southern Baja California and winters along the coast of  
31 California and Baja California (NatureServe 2005). The birds forage on invertebrates  
32 (crustaceans and worms) along the shore in or near shallow water (Bent 1929).  
33 Western snowy plovers were observed on Pier 400 during least tern nesting surveys  
34 in 2003 through 2007. The plovers were not nesting and appeared to be stopping  
35 during migration (Keane Biological Consulting 2003, 2005a). Western snowy  
36 plovers also use Cabrillo Beach during the winter non-breeding season (L. Chilton,  
37 personal communication 2008). Critical habitat was designated for this species in  
38 September 2005 (USFWS 2005) and included four locations within coastal Los  
39 Angeles County, none of which is in the Los Angeles-Long Beach Harbor area.

### 40 **American Peregrine Falcon**

41 Peregrine falcons have been removed from the federal endangered species list but are  
42 state-listed as endangered. The species nests in the Inner Harbor area (Vincent  
43 Thomas, Gerald Desmond, and Schuyler F. Heim bridges) and forages on birds.  
44 Although none were observed at Pier 400 during the 2000 baseline surveys,



1 individuals of this species could forage in the area, as noted during the least tern  
2 surveys in 2003 (Keane Biological Consulting 2003).

### 3 **Other Special Status Bird Species**

4 Belding's savannah sparrow inhabits pickleweed marshes exclusively (USACE and  
5 LAHD 1992). No suitable habitat for this species is present in the proposed Project  
6 area.

7 The black skimmer is a California Species of Special Concern (at nesting sites only)  
8 that was present in the Harbor all year in 2000, but numbers were greatest during the  
9 summer nesting season (MEC and Associates 2002). The species nests along the  
10 Atlantic and Gulf coasts to southern Mexico and along the coast of southern  
11 California, as well as at the Salton Sea (Collins 2006b). Black skimmers nested on  
12 Pier 400 in 1998 to 2000 (range of 10 to 170 nests) with poor success (Collins 2006b)  
13 and in 2004 (about 25 nests) (Keane Biological Consulting 2005b). The area used for  
14 nesting is within proposed Tank Farm Site 1.

15 The burrowing owl is a state Species of Special Concern at burrow sites. One or  
16 more burrowing owls were observed on Pier 400 during the least tern surveys in 2003  
17 through 2007 (Keane Biological Consulting 2003, 2005a, 2005b, 2007a, 2007b). In  
18 2003 one burrowing owl was trapped and relocated to a raptor rehabilitation center in  
19 Orange County (Keane Biological Consulting 2003). Another was trapped and  
20 relocated in 2004 (Keane Biological Consulting 2005a), and five were trapped and  
21 relocated in 2007 (Keane Biological Consulting 2007b). The individuals observed  
22 were likely present to prey on California least tern adults and chicks (Keane  
23 Biological Consulting 2007b). Although no evidence of nesting on Pier 400 has been  
24 observed during the California least tern monitoring, it is possible that nesting could  
25 occur (K. Keane, personal communication 2008). The nesting season for this species  
26 is February through August (California Burrowing Owl Consortium 2008), so the  
27 burrowing owls observed on Pier 400 could be nesting or post-nesting individuals.

28 Other special status bird species known to use the Harbor area include the loggerhead  
29 shrike and common loon. These species are designated as Species of Special  
30 Concern by CDFG for nesting locations only. Individuals of these species could be  
31 present, at least as visitors, in the vicinity of Pier 400. Loggerhead shrikes have been  
32 observed at Pier 400 (MEC and Associates 2002), but no breeding habitat for this  
33 species is present at the proposed Project sites on Pier 400 (SAIC 2007). Common  
34 loons have been observed in the Outer Harbor during winter (MEC and Associates  
35 2002), but no nesting occurs in the region (NatureServe 2008). Because these species  
36 are only of special concern at their breeding locations, non-breeding individuals in  
37 the proposed Project area are treated as common wildlife species in the impact  
38 analysis.

### 39 **Sea Turtles**

40 No sea turtles have been observed within the San Pedro Bay Ports during more than  
41 20 years of biological surveys (MEC 1988, MEC and Associates 2002). However,  
42 several species have regional distributions in southern California. Therefore, it is

1 possible that sea turtles may be occasional visitors to the offshore and Outer Harbor  
2 areas of the San Pedro Bay Ports.

3 Several turtle species are found in the eastern Pacific Ocean, including loggerhead,  
4 green, leatherback, and olive ridley sea turtles. Loggerhead sea turtles (*Caretta*  
5 *caretta*), federally listed as threatened, are found in all temperate and tropical waters  
6 throughout the world and are the most abundant species of sea turtle found in U.S.  
7 coastal waters (NMFS 2007a).

8 Green sea turtles (*Chelonia mydas*), federally-listed as threatened, are found in all  
9 temperate and tropical waters throughout the world. They primarily remain near the  
10 coastline and around islands and live in bays and protected shores, especially in areas  
11 with seagrass beds. In the eastern North Pacific, green turtles have been sighted from  
12 Baja California to southern Alaska, but most commonly occur from San Diego south  
13 (NMFS 2007a). They are rarely observed in the open ocean.

14 Leatherback sea turtles (*Dermochelys coriacea*), federally-listed as endangered, are  
15 the most widely distributed of all sea turtles and are found worldwide with the largest  
16 north and south range of all the sea turtle species. The Pacific Ocean leatherback  
17 population is generally smaller in size than that in the Atlantic Ocean (NMFS 2007a).

18 Olive ridley sea turtles (*Lepidochelys olivacea*), federally listed as threatened, are  
19 found in tropical regions of the Pacific, Indian and Atlantic Oceans. They typically  
20 forage off shore in surface waters or dive to depths of 500 feet (150 m) to feed on  
21 bottom dwelling crustaceans (NMFS 2007a).

## 22 **Marine Mammals**

23 All marine mammals are protected under the Marine Mammal Protection Act  
24 (MMPA) of 1972, and some are also protected by the ESA of 1973. No marine  
25 mammals breed in Los Angeles Harbor. The only marine mammals likely to be  
26 present near Pier 400 are the California sea lion (*Zalophus californianus*) and harbor  
27 seal (*Phoca vitulina*). Several of each species were observed on the riprap of or near  
28 Pier 400 during the 2000 baseline surveys, and a few sea lions were observed in Long  
29 Beach Inner Harbor (MEC and Associates 2002). California sea lions are the most  
30 commonly observed marine mammal in the Harbor and are especially numerous  
31 adjacent to the municipal fish market in the Main Channel and in Fish Harbor. They  
32 also haul out and rest on buoys in the Harbor. Harbor seals are present but in low  
33 numbers. In addition, a dead grey whale (*Eshrichtius robustus*) was observed in the  
34 Outer Harbor in April of 2000.

35 Outside the breakwater, a variety of marine mammals use nearshore waters. These  
36 include the gray whale that migrates from the Bering Sea to Mexico and back each  
37 year. This and other species of baleen whales generally are found as single  
38 individuals or in pods of a few individuals. Toothed whales and particularly dolphins  
39 can be found in larger groups of up to a thousand or more (Leatherwood and Reeves  
40 1983). Several species of dolphin and porpoise are commonly found in coastal areas  
41 near Los Angeles including the Pacific white-sided dolphin (*Lagenorhynchus*  
42 *obliquidens*), Risso's dolphin (*Grampus griseus*), Dall's porpoise (*Phocoenoides*  
43 *dalli*), bottlenose dolphin (*Tursiops truncatus*), northern right whale dolphin

(*Lissodelphis borealis*), and common dolphin (*Delphinus delphis*), with the common dolphin the most abundant (Forney et al. 1995).

### Vessel Collisions with Marine Mammals and Sea Turtles

Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for the following listed species in the eastern North Pacific: blue whale (*Balaenoptera musculus*), fin whale (*Balaenoptera physalus*), humpback whale (*Megaptera novaeangliae*), sperm whale (*Physeter macrocephalus*), southern sea otter (*Enhydra lutris*), loggerhead sea turtle, green sea turtle, olive ridley sea turtle, and leatherback sea turtle (NOAA Fisheries and USFWS 1998a, 1998b, 1998c, 1998d; Stinson 1984; Carretta et al. 2001). Ship strikes have also been documented involving gray, minke (*Balaenoptera acutorostrata*), and killer (*Orcinus orca*) whales. The blue whale, fin whale, humpback whale, sperm whale, gray whale, and killer whales are all listed as endangered under the ESA although the Eastern Pacific grey whale population was delisted in 1994. Determining the cause of death for marine mammals and sea turtles that wash ashore dead or are found adrift is not always possible, nor is it always possible to determine whether propeller slashes were inflicted before or after death. In the case of a sea otter, for example, wounds originally thought to represent propeller slashes were determined to have been inflicted by great white sharks (Ames and Morejohn 1980). In general, dead specimens of marine mammals and sea turtles showing injuries consistent with vessel strikes are not common.

### Whale Strikes

While vessel collisions with all marine mammals and sea turtles have been reported, the majority of incidents involve whales. The National Marine Fisheries Service (NMFS) has records of vessel strikes with whales in US coastal waters for 1982 through 2007 (NMFS 2007b). Of the recorded strikes in the NMFS database, most of the identified species were gray whales (42 percent) and blue whales (15 percent) with a few fin whales and humpback whales. The number of strikes per year ranged from none to seven and averaged 2.6, but the actual number is likely to be greater because not all strikes are reported. The type of vessel(s) involved often was not known but does include freighters/container vessels going to the Los Angeles-Long Beach Harbor.

In Southern California, potential strikes to blue whales are of the most concern due to the fact that the migration patterns of blue whales north and south along the California coast at times run perpendicular to the established shipping channels in and out of California ports and that blue whale population numbers are low relative to historic numbers. Blue whales normally pass through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds further north. Blue whales were historically a target of commercial whaling activities worldwide, but are now protected from whaling. In the North Pacific, the pre-whaling population size is estimated at approximately 4,900 blue whales, the current population estimate is approximately 3,300 blue whales with 1,700 in the eastern North Pacific (NMFS 2008). Along the California coast, blue whale abundance has increased over the past two decades (Calambokidis *et al.* 1990, Barlow 1995, and Calambokidis 1995). However, the increase is too large to be accounted for by population growth alone

1 and is more likely attributed to a shift in distribution. Incidental ship strikes and  
2 fisheries interactions are listed by NMFS as the primary threats to the California  
3 population. According to NMFS records, the average number of blue whale  
4 mortalities in California attributed to ship strikes was 0.2 per year from 1991-1995  
5 and from 1998-2002. September 2007, however, saw a large number (3) of blue  
6 whale mortalities. These mortalities were confirmed to be caused by ship strikes in  
7 the Santa Barbara Channel but declared to be part of an “Unusual Mortality Event”  
8 (Working Group on Marine Mammal Unusual Mortality Events 2007). The cause(s)  
9 of the unusual mortality event is undeclared at this time but may have associated with  
10 biotoxins from harmful algal blooms along the Southern California Coast.

11 Vessel speed does seem to influence whale/ship collision incidents. The Jensen and  
12 Silber Whale Strike Database (Jensen and Silber 2003) reports that there are 134  
13 cases of known vessel strikes in U.S. coastal waters. Of these 134 cases, 14.9 percent  
14 (20) involved container/cargo ships/freighters, and 6.0 percent (8) involved tankers.  
15 The remaining incidents involved Navy vessels (17.1 percent or 23 cases), whale-  
16 watching vessels (14.2 percent or 19 cases), cruise ships/liners (12.7 percent or 17  
17 cases), ferries (11.9 percent or 16), Coast Guard vessels (6.7 percent or 9 cases),  
18 recreational vessels (5.2 percent or 6 cases), and fishing vessels (3.0 percent or 4  
19 cases) with one collision (0.75 percent) reported from each of the following: dredge  
20 boat, research vessel, pilot boat, and whaling catcher boat. Of the 134 cases, vessel  
21 speed was known for 58 cases. Of these 58 cases, most vessels were traveling in the  
22 ranges of 13–15 knots, followed by speed ranges of 16–18 knots and 22-24 knots.

23 According to a report from NOAA which was based on information in the Jensen and  
24 Silber (2003) whale strike database and Laist et al. (2001), the majority of vessel  
25 collisions with whales occurred at speeds between 13-15 knots. Specifically, NOAA  
26 recommends:

27 *“Overall, most ship strikes of large whale species occurred when ships were*  
28 *traveling at speeds of 10 knots or greater. Only 12.3% of the ship strikes in the*  
29 *Jensen and Silber database occurred when vessels were traveling at speeds of 10*  
30 *knots or less. While vessel speed may not be the only factor in ship/whale*  
31 *collisions, data indicate that collisions are more likely to occur when ships are*  
32 *traveling at speeds of 14 knots or greater. This strongly suggests that ships*  
33 *going slower than 14 knots are less likely to collide with large whales.*  
34 *Therefore, NOAA Fisheries recommends that speed restrictions in the range of*  
35 *10-13 knots be used, where appropriate, feasible, and effective, in areas where*  
36 *reduced speed is likely to reduce the risk of ship strikes and facilitate whale*  
37 *avoidance”.* (NOAA Undated).

### 38 **3.3.2.6 Wildlife Movement Corridors**

39 The Conservation Element of the City of Los Angeles General Plan addresses  
40 wildlife corridors. These are for movement of animals between large habitat areas.  
41 The Harbor does not provide any such terrestrial wildlife movement corridors.  
42 However, some marine fish species move into and out of the Harbor for spawning or  
43 nursery areas. Marine mammals, such as the gray whale, migrate along the coast,  
44 and migratory birds are visitors to the Harbor.

### 3.3.2.7 Invasive Species

At least 46 invasive aquatic species have become established in waters of the Los Angeles/Long Beach Harbor (Gregorio and Layne 1997). These include a Japanese brown alga (*Sargassum muticum*), bubble snail (*Philine auriformis*), Japanese mussel (*Musculista senhousia*), an isopod (*Sphaeroma quoyanum*), and yellowfin goby (*Acanthogobius flavimanus*). The primary source of these organisms is likely to have been discharges of ballast water from cargo vessels using the San Pedro Bay Ports (NRC 1996; USCG 1998). Other potential vessel sources include hulls, anchors and chains, piping and tanks, propellers, and suction grids, while other non-vessel sources include aquarists and restaurant live fish trade. A total of 33 non-native species were identified in the 2000 surveys (MEC and Associates 2002). Eight invasive invertebrate species have been found in the sediments of Los Angeles Outer Harbor near Pier 400, another 10 species were found in riprap samples, and one species was collected in trawl samples. These species include *Theora lubrica*, *Aricidea catherinae* and *A. horikoshii*, *Levinsenia gracilis*, *Sigambra tentaculata*, *Dipolydora socialis* and *D. girardi*, *Pseudopolydora paucibranchiata*, *Sinocorophium heteroceratum*, Mediterranean mussel, *Boccardiella hamata*, *Nicolea gracilibranchis*, *Polydora lingi* and *P. websteri*, and *Syllis gracilis* and *S. fasciata*. The non-native alga, sargassum (*Sargassum muticum*), was recorded at three of the four sampling transects in Los Angeles Outer Harbor but at none of the three Long Beach Outer Harbor transects, and the alga *Undaria pinnatifida* was found at one location during the 2000 baseline kelp and macroalgae surveys (MEC and Associates 2002). Sargassum was also found at the four Long Beach Inner Harbor locations, and *Undaria* was found at one of those locations. Another non-native sargassum (*S. filicinum*) has recently been found in Long Beach Harbor (Miller 2006) and has the potential to be present in the vicinity of Pier 400. Invasive species can compete with or prey upon native species and thus alter the local ecology, which can have economic effects as well.

The Mediterranean strain of Caulerpa (*Caulerpa taxifolia*) is an invasive alga that is listed as a federal noxious weed under the Plant Protection Act. This species has never been identified in San Pedro Bay, but is of particular concern because it is a fast growing green alga native to tropical waters where it typically grows in isolated patches. However, in areas outside its native range, Caulerpa grows rapidly and quickly overtakes native species. In the Mediterranean, Caulerpa has caused ecological devastation by overwhelming local seaweed species and altering fish distributions. Its rampant growth has also resulted in huge economic losses by harming tourism, pleasure boating, fishing, and the diving industry. Species of Caulerpa are used in the aquarium trade and can enter coastal marine waters through disposal of the plants or aquarium water into storm drains or coastal waters. Currently, Caulerpa has been found in two southern California locations. Due to its potential to create severe ecological and economic losses, a Caulerpa survey must be completed in accordance with the Caulerpa Control Protocol (NMFS 2008b, Appendix I.2) prior to any underwater disturbance (defined as bulkhead repair, pile driving, dredging, placement of navigational aids, etc).

1           **3.3.2.8       Significant Ecological Areas**

2           The County of Los Angeles has established Significant Ecological Areas (SEAs) to  
3           preserve a variety of biological communities for public education, research, and other  
4           non-disruptive outdoor uses. SEAs do not preclude limited development that is  
5           compatible with the biological community. Policies and regulations for SEAs,  
6           however, do not apply within city boundaries. The only designated SEA in Los  
7           Angeles Harbor is Pier 400, Terminal Island for the California least tern nesting site  
8           (County of Los Angeles 2005). Since California least terns are listed as endangered  
9           both federally and by the state, potential impacts are addressed as a special status  
10          species issue.

11          **3.3.2.9       Essential Fish Habitat**

12          In accordance with the 1996 amendments to the Magnuson-Stevens Fishery  
13          Conservation and Management Act, an assessment of Essential Fish Habitat (EFH)  
14          has been prepared (see Appendix K). The proposed Project Berth 408 at the Marine  
15          Terminal would be located within an area designated as EFH for two Fishery  
16          Management Plans (FMPs): Coastal Pelagics Plan, and Pacific Coast Groundfish  
17          Management Plan. The pipeline route from Pier 400 to Terminal Island would be  
18          located adjacent to EFH. Of the 94 fisheries management species federally managed  
19          under these plans, 19 are known to occur in the Outer Harbor near Pier 400 or near  
20          the 42-inch pipeline corridor and could be affected by the proposed Project  
21          (Table 3.3-2). One of the five species in the Coastal Pelagics FMP (northern  
22          anchovy) is well represented in the proposed Project area, with both adults and larvae  
23          present. Pacific sardine is also common. Both species support a commercial bait  
24          fishery in the Outer Harbor. Adult jack mackerel are present and likely prey upon  
25          small northern anchovy. Adult Pacific mackerel are also fairly common throughout  
26          the Harbor. Only 2 of the 15 Pacific Groundfish FMP species (Pacific sanddab and  
27          California scorpionfish) are relatively common in the Outer Harbor (MEC and  
28          Associates 2002; MEC 1999, 1988; SAIC and MEC 1997) (Table 3.3-2).

29          **3.3.2.10     Wetlands and Other Special Habitats**

30          **Wetlands**

31          Wetlands are regulated under the Clean Water Act (CWA). The definition of  
32          wetlands varies among state and federal agencies, but the USACE uses a three-  
33          parameter method that includes assessing vegetation, hydrology, and soils. Wetlands  
34          commonly present in estuarine to marine habitats are salt marshes dominated by  
35          pickleweed (*Salicornia virginica*) and other salt tolerant plant species. No wetlands  
36          under the USACE jurisdiction are present at or near the proposed Project site based  
37          on baseline survey reports for the Harbor (MEC and Associates 2002) and a site  
38          reconnaissance visit in November 2007 by a biologist trained in wetland delineation  
39          (SAIC 2007). The closest via water are at Cabrillo Beach in the Outer Harbor, over  
40          two miles (3.2 km) from the proposed Project.

**Table 3.3-2. Fisheries Management Plan Species in the Proposed Project Area**

| <i>Common Name</i>  | <i>Scientific Name</i>            | <i>Notes</i>  |
|---|-----------------------------------|---|
| <b>Coastal Pelagics Fishery Management Plan</b>   |                                   |   |
| Northern anchovy  | <i>Engraulis mordax</i>           | Abundant throughout Harbor in 2000 <sup>1</sup>   |
| Pacific sardine   | <i>Sardinops sagax</i>            | Common throughout in Harbor in 2000 <sup>1</sup>  |
| Pacific (chub) mackerel   | <i>Scomber japonicus</i>          | Common throughout Harbor in 2000 <sup>1</sup>   |
| Jack mackerel   | <i>Trachurus symmetricus</i>      | Common in Inner to Middle Harbor and uncommon in Outer Harbor, primarily in deep water <sup>1</sup> |
| <b>Pacific Coast Groundfish Fishery Management Plan</b>                                     |                                   |   |
| English sole  | <i>Parophrys vetulus</i>          | Rare, 2 collected in Outer Harbor in 2000 <sup>1</sup>  |
| Pacific sanddab   | <i>Citharichthys sordidus</i>     | Common, primarily Outer Harbor deep water areas in 2000 <sup>1</sup>                                |
| Leopard shark   | <i>Triakis semifasciata</i>       | Rare, 3 collected, all in shallow water <sup>1</sup>  |
| California skate  | <i>Raja inornata</i>              | Uncommon, Outer Harbor in shallow water <sup>1</sup>  |
| Big skate   | <i>Raja binoculata</i>            | Uncommon, primarily in shallow water <sup>1</sup>   |
| Black rockfish  | <i>Sebastes melanops</i>          | Uncommon, primarily in Cabrillo Shallow Water Habitat <sup>1</sup>                                  |
| Kelp rockfish   | <i>Sebastes atrovirens</i>        | Rare, in kelp along breakwater <sup>2</sup>   |
| Calico rockfish   | <i>Sebastes dalli</i>             | Rare, 1 collected in Long Beach Harbor <sup>4</sup>   |
| Vermillion rockfish   | <i>Sebastes miniatus</i>          | Rare, 4 collected in deep Inner to Middle Harbor waters <sup>1</sup>                                |
| California scorpionfish   | <i>Scorpena guttata</i>           | Common in rock dikes and breakwaters, also on soft bottom at night <sup>1-4</sup>                   |
| Grass rockfish  | <i>Sebastes rastrelliger</i>      | Rare, 2 collected in Pier 300 Shallow Water Habitat and 1 in Long Beach Harbor <sup>1</sup>         |
| Olive rockfish  | <i>Sebastes serranoides</i>       | Common, juveniles in kelp around breakwater <sup>2</sup>  |
| Bocaccio  | <i>Sebastes paucispinis</i>       | Uncommon, juveniles in kelp around breakwater <sup>2</sup>  |
| Cabezon   | <i>Scorpaenichthys marmoratus</i> | Rare, shallow water <sup>1</sup>  |
| Lingcod   | <i>Ophiodon elongatus</i>         | Rare, shallow water <sup>1</sup>  |
| <i>Sources: 1. MEC and Associates 2002; 2. MEC 1999; 3. MEC 1988; 4. SAIC and MEC 1997.</i> |                                   |   |

## Eel Grass Beds

Eelgrass beds are considered a special aquatic site (vegetated shallows) under the Clean Water Act. Eelgrass (*Zostera marina*) is a rooted aquatic plant that inhabits shallow soft bottom habitats in quiet waters of bays and estuaries as well as sheltered coastal areas (Dawson and Foster 1982). It can form dense beds that provide substrate, food, and shelter for a variety of marine organisms. Most eelgrass beds in bays or estuaries are found in water less than 20 ft (6 m) deep, with light being the primary limiting factor. Surveys of the Harbor in 2000 found eel grass beds along Cabrillo Beach and on the east side of Pier 300, including the Seaplane Lagoon (MEC and Associates 2002). No eelgrass beds were present along Face C of Pier 400, where the Marine Terminal would be built, due to water depth and rocky substrate in shallow water. No eelgrass beds are known to be present in Long Beach Harbor, although a few plants were observed in Cerritos Channel during the riprap surveys (MEC and Associates 2002). Eelgrass beds along Cabrillo Beach are 1.4 mi

1 (2.3 km) from the proposed Berth 408, and those in the Pier 300 Shallow Water  
2 Habitat are 2 mi (3.2 km) away.

### 3 **Kelp Beds**

4 Kelp plants are algae that attach to hard substrate with a holdfast and are not rooted  
5 plants, so they are not considered special aquatic sites under the Clean Water Act.  
6 However, well-developed kelp beds are very productive coastal marine habitats that  
7 support diverse benthic and water column communities. Small kelp beds and  
8 scattered kelp plants are present in the Outer Harbor along the breakwaters, on the  
9 containment dike for the Cabrillo Shallow Water Habitat, at Reservation Point, along  
10 the eastern sides of Pier 400, near Cabrillo Beach, and along the Naval Mole (MEC  
11 and Associates 2002). The algal species comprising these kelp beds are  
12 predominantly feather boa kelp (*Egregia menziesii*) and the giant kelp (*Macrocystis*  
13 *pyrifera*). A narrow band of kelp plants extends along the riprap adjacent to staging  
14 areas 412 and 413 (SAIC 2007).

### 15 **Mudflats**

16 The shoreline at and near the proposed Project site is rock riprap, and no mudflats are  
17 present. The closest mudflats are at Berth 78 along the Main Channel. Mudflats are  
18 considered a special aquatic site under the Clean Water Act.

## 19 **3.3.3 Applicable Regulations**

20 This section describes regulations, permits, and agreements that may be applicable  
21 under associated natural resource laws and regulations.

### 22 **Clean Water Act**

23 This Act (33 U.S.C. §1251 *et seq.*) provides for the restoration and maintenance of  
24 the physical, chemical, and biological integrity of the nation's waters. Discharges of  
25 pollutants must be authorized through National Pollutant Discharge Elimination  
26 System (NPDES) permits. The act sets up a system of water quality standards,  
27 discharge limitations, and permit requirements. Activities that have the potential to  
28 discharge dredge or fill materials into waters of the U.S., including wetlands, are  
29 regulated under Section 404 of the Act, as administered by the USACE. A Section  
30 404(b)(1) alternatives analysis must be conducted for disposal of dredge or fill  
31 material into waters of the U.S. In this analysis, impacts to special aquatic sites  
32 (sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and  
33 riffle and pool complexes) must be minimized to the maximum extent practicable. A  
34 Section 401 Water Quality Certification or waiver from the Los Angeles Regional  
35 Water Quality Control Board (LARWQCB) is also necessary for issuance of a  
36 Section 404 permit.

37 Additional water quality permitting requirements may include compliance with the  
38 Section 402 NPDES General Permit for Storm Water Discharges Associated with  
39 Construction Activity (including the development of a Storm Water Pollution  
40 Prevention Plan [SWPPP]) from the State Water Resources Control Board (SWRCB)  
41 for projects that would disturb 1 acre (0.4 ha) or more and a General Industrial



1 Activities Stormwater Permit that requires dischargers to develop and implement a  
2 SWPPP, eliminate unauthorized non-storm discharges, and conduct visual and  
3 analytical stormwater discharge monitoring to verify the effectiveness of the SWPPP.  
4 An Industrial Waste Permit from the City of Los Angeles, Bureau of Sanitation, is  
5 required if the project will dispose groundwater in the sewer system.

### 6 **Rivers and Harbors Act of 1899**

7 Sections 9 and 10 of the Act (33 U.S.C. §401 *et seq.*) regulate development in  
8 navigable water, including dredging, filling, and bridges. Section 9 relates to bridges  
9 and causeways and is administered by the U.S. Coast Guard (USCG). Under Section  
10 10, the USACE issues permits for construction of piers, wharves, weirs, jetties,  
11 outfalls, aids to navigation, docks, and other structures. In coastal areas, it is typical  
12 for permits issued by the USACE to reference their Section 10 and Section 404  
13 authorities.

### 14 **Federal Endangered Species Act**

15 The Federal Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 *et seq.*) protects  
16 threatened and endangered species, and their designated critical habitat, from  
17 unauthorized take. Section 9 prohibits such take and defines take as to harm, harass,  
18 pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in  
19 any such conduct. Take incidental to otherwise lawful activities can be authorized  
20 under Section 7 when there is federal involvement and under Section 10 when there  
21 is no federal involvement. The USFWS and National Marine Fisheries Service  
22 (NMFS) (the Services) share responsibilities for administering the ESA.

23 Whenever actions authorized, funded, or carried out by federal agencies could affect  
24 listed species, the lead agency must conduct consultation under Section 7 of the ESA  
25 with the appropriate Service. If formal consultation is required, the Biological  
26 Opinion issued at the conclusion of that process, depending on the outcome of the  
27 consultation, will include a statement authorizing any take that may occur incidental  
28 to an otherwise legal activity. Initially, federal action agencies make a determination  
29 as to whether the action will have “no effect” or “may affect” a listed species or  
30 designated critical habitat. If a “may effect” determination is made, the action  
31 agency consults informally with the Services to determine if the effect will be  
32 adverse or not, and the Services then provide a concurrence letter to the action  
33 agency if the action is not likely to adversely affect the species. If the Service  
34 determines the action is likely to adversely affect the species, formal consultation is  
35 required.

### 36 **Magnuson-Stevens Fishery Conservation and Management Act**

37 The 1996 amendments to the Magnuson-Stevens Fishery Conservation and  
38 Management Act (16 U.S.C. §1801 *et seq.*) require federal agencies that fund, permit,  
39 or carry out activities that may adversely impact EFH to consult with NMFS  
40 regarding potential adverse effects of their actions on EFH and respond in writing to  
41 the recommendations of NMFS. In addition, NMFS is required to comment on any  
42 state agency activities that would impact EFH.

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### **Migratory Bird Treaty Act**

This Act (16 U.S.C. §703 *et seq.*), as amended, provides for the protection of migratory birds by making it illegal to possess, pursue, hunt, capture, or killing any migratory bird species, unless specifically authorized by a regulation implemented by the Secretary of the Interior, such as designated seasonal hunting. The Act also applies to removal of nests occupied by migratory birds during the breeding season. Under certain circumstances, a depredation permit can be issued to allow limited and specified take of migratory birds.

### **Marine Mammal Protection Act**

The MMPA (16 U.S.C. §1361 *et seq.*) prohibits the taking (including harassment, disturbance, capture, and death) of any marine mammals, except as set forth in the act. NMFS and the USFWS administer the MMPA. Marine mammal species found in the Harbor are under the jurisdiction of NMFS.

### **California Fish and Game Code, Section 1600**

Section 1600 *et seq.* of the Fish and Game requires notification of the CDFG before activities that would substantially alter the bed, bank, or channel of a stream, river, or lake, including obstructing or diverting the natural flow. This applies to all perennial, intermittent, and ephemeral water bodies as well as the associated riparian vegetation that are used by fish and wildlife resources. CDFG may or may not assert jurisdiction of coastal or port areas including shipping channels. Activities that have the potential to affect jurisdictional areas can be authorized through issuance of a Streambed or Lake Alteration Agreement (SAA/LAA). The SAA/LAA specifies conditions and mitigation measures that will minimize impacts to riparian or aquatic resources from proposed actions.

### **California Endangered Species Act**

The California Endangered Species Act (California Fish and Game Code Section 2050 *et seq.*) provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the CDFG, and prohibits the taking of such species without authorization by CDFG under Section 2081 of the Fish and Game Code. State lead agencies must consult with CDFG during the California Environmental Quality Act (CEQA) process if state-listed threatened or endangered species are present and could be affected by the project.

For projects that could affect species that are both state- and federal-listed, compliance with the federal ESA will satisfy the state Act if CDFG determines that the federal incidental take authorization is consistent with the state Act under Fish and Game Code Section 2080.1.

### **Ballast Water Management for Control of Nonindigenous Species Act**

California PRC Section 71200 *et seq.* (enacted January 1, 2000), and as amended by AB 433 in September 2003, requires ballast water management practices for all

vessels, domestic and foreign, carrying ballast water into waters of the state after operating outside the Exclusive Economic Zone (EEZ). Specifically, the regulation prohibits ships from exchanging ballast water within port waters, and requires that exchange occurs outside the EEZ in deep, open ocean waters. Alternatively, ships may retain water while in port, discharge to an approved reception facility, or implement other similar protective measures. Each ship must also develop a ballast water management plan to minimize the amount of ballast water discharged in the Port. The statewide compliance with ballast water reporting was 92 percent for the period January 2000 to June 2002. Of the vessels reporting, 96 percent indicated that they complied with the mandatory management requirements, either through retaining ballast water on board or by exchanging ballast water prior to discharge. At the port zone level, the San Pedro Bay Ports collectively received the greatest percentage of the California ballast water reporting forms (10,810 forms, 73 percent of total) between January 1, 2000, and June 30, 2002. The Act also requires an analysis of other vectors for release of non-native species from vessels. Rules for vessels originating within the Pacific Coast Region took effect in March 2006. Ships must now exchange ballast water on coast-wise voyages. Regulations currently under consideration for future years (2009-2022) would require phase-in of ballast water treatment performance standards, first for newly constructed ships and then for existing ships.

### **Spill Prevention, Control, and Countermeasure**

The Oil Spill Prevention, Control, and Countermeasure (SPCC) regulations require that the Port have in place measures that help ensure oil spills do not occur, but if they do, that there are protocols in place to contain the spill, and neutralize the potential harmful impacts. An SPCC Plan and an Oil Spill Contingency Plan (OSCP) would be prepared that would be reviewed and approved by the Regional Water Quality Control Board (SPCC) or the California Department of Fish and Game Office of Spill Prevention and Response, in consultation with other responsible agencies. The SPCC and OSCP plans would detail and implement spill prevention and control measures.

## **3.3.4 Impacts and Mitigation Measures**

### **3.3.4.1 Methodology**

Impacts on biota were assessed by using literature and information related to responses of organisms to pollutants, the results of analyses in Sections 3.12 (Risk of Upset/Hazardous Materials) and 3.14 (Water Quality, Sediments, and Oceanography), and preparer expertise and judgment in evaluating existing information on the species and habitats present and how the proposed Project components interact with the environment. The assessment of impacts is based on the assumption that the proposed Project will include the following:

- An individual NPDES permit for construction stormwater discharges or coverage under the General Permit for Storm Water Discharges Associated with Construction Activity will be obtained for the onshore portions of the proposed Project;

- 1 • A sound wall around the shipping pumps at Tank Farm Site 1;
- 2 • Containment berms around all oil storage tanks;
- 3 • Oil spill containment booms to be deployed around tankers during offloading
- 4 of crude oil;
- 5 • Agency approval and implementation by the tenant of appropriate stormwater
- 6 discharge permits for operation of the sites;
- 7 • Compliance by the tenant with the Port Marine Oil Terminal lease conditions
- 8 that include provisions for the inspection, control, and cleanup of leaks from
- 9 aboveground tank and pipeline sources; and
- 10 • Compliance with requirements under SPCC regulations to develop plans that
- 11 would detail and implement spill prevention and control measures.

#### 12 **3.3.4.1.1 CEQA Baseline**

13 Section 15125 of the CEQA Guidelines requires EIRs to include a description of the  
14 physical environmental conditions in the vicinity of a project that exist at the time of  
15 the NOP. These environmental conditions would normally constitute the baseline  
16 physical conditions by which the CEQA lead agency determines whether an impact is  
17 significant. For purposes of this Draft SEIS/SEIR, the CEQA Baseline for  
18 determining the significance of potential impacts under CEQA is June 2004. CEQA  
19 Baseline conditions are described in Section 2.6.2. However, since regular surveys of  
20 birds nesting at and adjacent to the California least tern nesting site on Pier 400 have  
21 been conducted since June 2004 under the MOA, information from these surveys has  
22 been considered in this analysis.

23 The CEQA Baseline represents the setting at a fixed point in time, with no project  
24 growth over time, and differs from the “No Federal Action/No Project” Alternative  
25 (discussed in Section 2.5.2.1) in that the No Federal Action/No Project Alternative  
26 addresses what is likely to happen at the site over time, starting from the baseline  
27 conditions. The No Federal Action/No Project Alternative allows for growth at the  
28 proposed Project site that would occur without any required additional approvals.

#### 29 **3.3.4.1.2 NEPA Baseline**

30 For purposes of this Draft SEIS/SEIR, the evaluation of significance under NEPA is  
31 defined by comparing the proposed Project or other alternative to the No Federal  
32 Action scenario (i.e., the NEPA Baseline and No Federal Action Alternative are  
33 equivalent for this project). Unlike the CEQA Baseline, which is defined by  
34 conditions at a point in time, the NEPA Baseline/No Federal Action is not bound by  
35 statute to a “flat” or “no growth” scenario; therefore, the USACE may project  
36 increases in operations over the life of a project to properly analyze the NEPA  
37 Baseline/No Federal Action condition.

38 The NEPA Baseline condition for determining significance of impacts is defined by  
39 examining the full range of construction and operational activities that are likely to  
40 occur without a permit from the USACE. As documented in Section 2.6.1, the  
41 USACE, the LAHD, and the applicant have concluded that no part of the proposed  
42 Project would be built absent a USACE permit. Thus, for the case of this project, the

1 NEPA Baseline is identical to the No Federal Action/No Project Alternative (see  
2 Section 2.6.1). Elements of the NEPA Baseline include:

- 3 • Paving, lighting, fencing, and construction of an access road at Tank Farm Site  
4 1 to allow intermittent temporary storage of chassis-mounted containers on the  
5 site by APM;
- 6 • Paving, fencing, and lighting at Tank Farm Site 2 to allow intermittent  
7 temporary wheeled container storage by APL or Evergreen; and
- 8 • Additional crude oil deliveries at existing crude oil terminals in the San Pedro  
9 Bay Ports.

10 Significance of the proposed Project or alternative is defined by comparing the  
11 proposed Project or alternative to the NEPA Baseline (i.e., the increment). The  
12 NEPA Baseline conditions are described in Section 2.6.1 and 2.5.2.1.

### 13 3.3.4.2 Thresholds of Significance

14 Significance criteria were developed using the *L.A. CEQA Thresholds Guide* (City of  
15 Los Angeles 2006) as modified to better assess impacts of the proposed Project.  
16 Consequently, criterion **BIO-2** was modified to delete locally-designated species  
17 since none are present and to include state and federally designated habitats (e.g.,  
18 EFH, mudflats, and wetlands); criterion **BIO-3** was modified to cover species other  
19 than sensitive species; and criterion **BIO-4** has been deleted because it is now  
20 included in **BIO-2**. **BIO-5** is now **BIO-4** and was modified to only address  
21 disruption of local biological communities. Consequently, the proposed Project  
22 would have a significant impact on biological resources if it would result in any of  
23 the following:

- 24 **BIO-1:** The loss of individuals, or the reduction of existing habitat, of a state- or  
25 federally-listed endangered, threatened, rare, protected, or candidate  
26 species, or a Species of Special Concern or the loss of federally listed  
27 critical habitat.
- 28 **BIO-2:** A substantial reduction or alteration of a state-, federally-, or locally-  
29 designated natural habitat, special aquatic site, or plant community,  
30 including wetlands.
- 31 **BIO-3:** Interference with wildlife movement/migration corridors that may  
32 diminish the chances for long-term survival of a species.
- 33 **BIO-4:** Substantial disruption of local biological communities (e.g., from  
34 construction impacts or the introduction of noise, light, or invasive  
35 species).

1       **3.3.4.3       Project Impacts and Mitigation**

2           **3.3.4.3.1     Proposed Project**

3           **3.3.4.3.1.1   Construction Impacts**

4           **Impact BIO-1.1: Construction of proposed Project facilities could affect**  
5           **individuals of or habitat for the California least tern and other special**  
6           **status species.**

7           ***Marine Terminal, Tank Farm Site 1, 42-inch Pipeline Route, and Staging***  
8           ***Area 412***

9           *California Least Tern*

10          *Marine Terminal.* Construction of the Marine Terminal facilities on land at Face C  
11          of Pier 400 would be at least 2,400 feet (730 m) from the least tern nesting site. This  
12          includes the operators' office building and the administration building. Construction  
13          activities at that distance from the nesting site are unlikely to affect least terns while  
14          at the nesting site. Least tern flights to the Cabrillo Shallow Water Habitat and Pier  
15          300 Shallow Water Habitat for foraging would be unlikely to pass over the  
16          construction site, although some individual terns could fly over the construction site  
17          en route to other areas in the Harbor.

18          Noise and vibration from pile driving for construction of the Marine Terminal could  
19          affect least terns directly through startle responses and indirectly through changes in  
20          the distribution or abundance of fish prey species in response to the vibration. Pile  
21          driving for the Marine Terminal would occur more than 2,400 ft (730 m) from the  
22          western edge of the least tern nesting site. Peak noise levels from Project pile driving  
23          would range from 95 to 107 A-weighted decibels [dB(A)] at a distance of 50 ft (15  
24          m) (City of Los Angeles 2006). Using the maximum value for the proposed Project  
25          pile driving (largest steel piles), the noise level at the western edge of the California  
26          least tern nesting site would be less than approximately 74 dB due to attenuation of  
27          the sound by more than 33 decibels (dB) over the 2,400-ft (732-m) distance between  
28          the work and the western edge of the nesting site. The ambient noise measured at the  
29          western edge of the nesting site averaged 50 dB(A) during the day, with a maximum  
30          of 88 dB(A) (Navcon Engineering 2005b – see Appendix L.2). Pile driving would  
31          not increase the maximum noise level at the least tern nesting site but would increase  
32          the average noise level by up to 24 dB(A) while the steel piles were being driven.  
33          The increase in noise would be less for the smaller concrete piles. Because pile  
34          driving noise would be less than existing maximum noise levels at the nesting site,  
35          noise (in air) from the pile driver for the steel pilings would have a low potential to  
36          startle least terns at the nesting site.

37          Pile driving also causes sound pressure waves in the water that could result in the  
38          dispersal of fish schools, at least temporarily, and consequently could affect the  
39          ability of least terns to find and feed on small schooling fish. The size (diameter and  
40          length) and type of piles, type and maximum energy level of the hammer, and  
41          specific site characteristics influence the level of sound produced and its attenuation  
42          with distance from the pile driving. Results from a study site in Canada indicated

1 that driving closed-end steel piles 36 inches (91 cm) in diameter resulted in mortality  
2 of several species of fish at an unspecified distance from the noise source (Vagle  
3 2003). In contrast, for large hammers driving steel piles over 8 ft (2.4 m) in  
4 diameter, only temporary behavioral effects on juvenile salmonids were predicted at  
5 distances greater than 575 ft (175 m) from the noise source (NMFS 2003). In  
6 comparison, the 110 (Option 1) or 74 (Option 2) steel piles planned for Berth 408  
7 would range from 48 to 54 inches (122 to 137 cm) in diameter. In addition, 40  
8 (Option 1) or 184 (Option 2) 24-inch (61-cm) diameter concrete piles would be  
9 installed in the water for the berth. (As indicated in Section 2.4.2.1, at the current  
10 design stage it is not certain whether the mooring dolphins would require steel or pre-  
11 stressed concrete piles; "Option 1" as used in this section corresponds to the use of steel  
12 piles for the mooring dolphins, while "Option 2" corresponds to the use of pre-stressed  
13 concrete piles for the mooring dolphins.) Another 34 concrete piles would be installed  
14 on land. As noted in Section 2.4.2.1, the number of piles includes those needed to  
15 support the Alternative Marine Power (AMP) system and a platform for potential  
16 future installation of an Advanced Cleanup Technologies, Inc. Advanced Maritime  
17 Emissions Control System (ACTI AMECS).

18 Shallow water foraging areas for the least tern at the Cabrillo Shallow Water Habitat  
19 are located more than 2,000 ft (610 m) from the Marine Terminal, and effects of pile-  
20 driving sound on fish are expected to be minimal. This is because the distance from  
21 the berth to the foraging area would be more than twice the 575-ft (175-m) distance  
22 at which effects on fish behavior would be expected and because the size of piles  
23 would be smaller. These effects also would be of short duration and greatest along  
24 Face C of Pier 400, representing deep water habitat that is not heavily used for least  
25 tern foraging. Further, the area affected by pile-driving sound pressure waves would  
26 be a small portion of Harbor waters, and installation of the piles may or may not  
27 occur when the least terns are present.

28 *Tank Farm Site 1.* Proposed Project facilities on Tank Farm Site 1 and the necessary  
29 utility line extensions at Pier 400 would be constructed adjacent to the California  
30 least tern nesting area. Temporary construction yard (staging area) 412 would also  
31 be located adjacent to the northeast corner of the least tern nesting area and could be  
32 used for delivery and storage of stone column gravel. Construction activities within  
33 about 200 ft (61 m) of the nesting area would have the potential to adversely affect  
34 the reproductive success of least terns if these activities occurred during the nesting  
35 season. The 200-ft distance has historically been accepted as an appropriate set-back  
36 from the least tern nesting site for construction lay-down areas (USACE and LAHD  
37 1992.) This distance is not an exclusion zone or an absolute distance that prohibits  
38 all activities, but rather is a reasonable buffer distance that would apply to  
39 construction activities that have the potential to adversely affect the California least  
40 tern. This distance can be modified through consultation with the CDFG and  
41 USFWS under the MOA for the California Least Tern Nesting Site (City of Los  
42 Angeles et al. 2006), but is assumed to be 200 ft (61 m) for this analysis.

43 Construction activities that would occur within 200 ft (61 m) of the nesting site  
44 include most of the 50,000 barrel (bbl) surge tank, the motor control building and  
45 transformers, an access road, the eastern portion of the 8-ft (2.4-m) high containment  
46 dike, an 8-ft (2.4-m) security fence, approximately five 30-ft (9-m) high light poles, a  
47 24-inch water line, a 34.5-kV electrical line, a communication line, a gas line, a storm  
48 drain line, and a portion of Pipeline Segment 1 (see Figure 2-4 and Figure 2-6 in

1 Chapter 2). Temporary piles would be driven adjacent to staging area 412 as a  
2 mooring for ships delivering stone column gravel. The eastern side of the 50,000 bbl  
3 surge tank would be 120 ft (36.6 m) from the security fence adjacent to the least tern  
4 nesting site. For the impact analysis, it is assumed that some of these facilities would  
5 be constructed during the nesting season. Construction of the other tanks (excluding  
6 stone column installation discussed below), the remaining containment dikes and  
7 security fence, parking, and perimeter access road; other equipment; operator  
8 building and administrative building; and the Marine Terminal facilities would occur  
9 at a distance greater than 200 ft (61 m) from the least tern nesting site.

10 Noise from at least some of the construction equipment and human presence adjacent  
11 to (within approximately 200 ft, 61 m of) nesting least terns could cause adults to  
12 abandon nests or to leave the nests long enough that the eggs or chicks become  
13 chilled or are preyed upon. Because the western side of the least tern nesting site is  
14 at a higher elevation than Tank Farm Site 1, human presence alone within 200 ft (61  
15 m) is not likely to adversely affect the least terns. However, temporary lighting,  
16 equipment, stockpiles of materials, or large pieces of equipment could provide  
17 perches for predatory birds near the nesting site during construction. Food wastes  
18 from construction workers that are not placed in sealed trash receptacles and lighting  
19 could attract predators that would disturb or prey upon least terns. Construction near  
20 the least tern nesting site would occur during two nesting seasons.

21 Stone columns made from compacted gravel would be installed for support under the  
22 tanks (prior to tank construction) at Tank Farm Site 1 and Tank Farm Site 2. This  
23 would involve the use of a vibrating probe to penetrate into the ground and to install  
24 the gravel columns. Testing to determine if the stone columns have sufficiently  
25 strengthened the soil would also occur. Both noise and vibration are produced by  
26 these activities. Installation of stone columns at Tank Farm Site 1, particularly those  
27 closest to the nesting site when the least terns are nesting, has the potential to disturb  
28 or stress the birds and thereby reduce reproductive success. A study of existing noise  
29 levels at the west edge of the least tern nesting site in August 2005 (Appendix L.2)  
30 found noise to be directly related to activities at the existing terminals on Pier 400.  
31 The average noise level at the northwest corner of the nesting site was approximately  
32 50 dB(A) with the maximum level exceeding 88 dB(A). At the southwest corner of  
33 the nesting site the average noise level was approximately 48.5 dB(A) with the  
34 maximum level above 83 dB(A). Construction activities at the proposed Project  
35 Marine Terminal and Tank Farm Site 1 would add to those noise levels, particularly  
36 when proposed Project noise is more than 10 dB(A) higher than the background noise  
37 level. The California least tern would not be affected, if the stone column installation  
38 is scheduled for September through March when the least terns would not be present.  
39 Stone column installation would take six months and, thus, could occur when the  
40 least terns are present. Noise and vibration from stone column construction at Tank  
41 Farm Site 1 during the least tern nesting season would have the potential to adversely  
42 affect this species. Installation of stone columns at Tank Farm Site 2 would not  
43 affect the least tern due to distance from the nesting area.

44 Runoff of sediment and pollutants from construction activities at the proposed Project  
45 facility sites has the potential to adversely affect water quality, particularly at storm  
46 drain outlets. Such runoff would most likely occur during the rainy season (October  
47 through April) when the least tern is not present. Runoff of pollutants such as  
48 concrete wash water, especially during the least tern nesting season, has the potential



1 to cause mortality of forage fish used by least terns. The proposed Project would be  
2 required to comply with the NPDES General Permit for Storm Water Discharges  
3 Associated with Construction Activity, which includes preparation of a SWPPP and  
4 implementation of Best Management Practices (BMPs) to control stormwater runoff of  
5 pollutants. Measures assumed to be in the SWPPP are described in **Impact WQ-1.1**.  
6 In addition, Port construction specifications (Section 01410) require containment of  
7 all concrete wastes and other pollutants so that no runoff occurs. Thus, no reduction  
8 in forage fish availability for California least terns would occur.

9 *Pipeline Segment 1 Route.* No construction activities would take place in shallow  
10 water foraging habitat for the least tern, but Pipeline Segment 1 in the causeway  
11 bridge from Pier 400 to Terminal Island would pass near the shallow water habitat on  
12 the east side of Pier 400 and the Pier 300 Shallow Water Habitat. The potential for  
13 effects on the least tern would depend on the timing of the construction activities. If  
14 all construction within approximately 200 ft (61 m) of the nesting site and foraging  
15 areas was completed when least terns were not present, then no effects to that species  
16 would occur. Construction when least terns are present (April through August)  
17 would have the potential to adversely affect some individuals, depending on the type  
18 of activity and its location and duration.

19 *Staging and Storage Areas.* Staging area 412 on Pier 400 just north of the California  
20 least tern nesting site could be used for delivery and storage of gravel for stone  
21 column installation. Staging area 412 is paved and, thus, would not provide any  
22 suitable nesting habitat for the California least tern. Installing and removing  
23 temporary mooring piles at this location within 200 ft (61 m) of the nesting site  
24 would have the potential to disturb least tern nesting if these activities occurred  
25 between April and late August. Unloading, stock piling, and transport of gravel to  
26 the tank construction locations at Tank Farm Site 1 would also have the potential to  
27 disturb least tern nesting in the northeast portion of the nesting site if such activities  
28 occurred during the nesting season (April to September). The construction schedule  
29 (see Figure 2-11) shows stone column work would take six months, which could  
30 overlap with the least tern nesting season. These activities would be unlikely to  
31 adversely affect least tern nesting because they would be similar to activities that  
32 currently occur at the adjacent container terminal (e.g., vehicle movement, human  
33 presence, and noise associated with those activities). Activities at the container  
34 terminal occur as close as 120 ft (37 m) to the least tern nesting site while staging  
35 area 412 extends over 800 ft (244 m) away from the nesting site, allowing space for  
36 activities away from the nesting site. Storage and movement of rock at any of the  
37 other potential staging areas would not affect the California least tern due to distance  
38 from the nesting site.

### 39 *California Brown Pelican*

40 Construction activities at the proposed Project sites on Pier 400 (Marine Terminal,  
41 Tank Farm Site 1, and Pipeline Segment 1 route) are unlikely to adversely affect  
42 California brown pelicans. This species appears to have adapted to harbor activities  
43 because there has been no decline in abundance as harbor activity has increased. No  
44 roosting areas on the breakwaters would be directly or indirectly affected by the  
45 proposed Project, and the species does not nest in the Harbor area. The Middle  
46 Breakwater, where the pelicans prefer to roost, is located about one-half mile (0.8

1 km) or more from the proposed Project sites. Furthermore, much of the construction  
2 activity would occur during the day when the pelicans are not roosting.

3 Foraging by brown pelicans can occur throughout Harbor and nearshore waters. The  
4 only construction activity that would occur in or immediately adjacent to the water  
5 would be construction of the Marine Terminal and installation/removal of temporary  
6 mooring piles at staging area 412, if this site is used for delivery of stone column  
7 gravel. However, this would only affect a small area of potential brown pelican  
8 foraging habitat, relative to the amount of comparable habitat present in the Outer  
9 Harbor and nearby nearshore waters, for a short time. Brown pelicans may avoid this  
10 project region during construction, although some may continue to forage in that  
11 area. No adverse effects to the species would result due to the small area affected,  
12 the short duration of the disturbance, and availability of other foraging areas nearby.

13 *Western Snowy Plover*

14 Western snowy plovers are not known to nest in the Harbor, so there would be no  
15 potential for impacts to nesting by this species. Additionally, since construction  
16 activities associated with the proposed Project would not directly affect the California  
17 least tern nesting site and Cabrillo Beach, western snowy plovers that occasionally  
18 visit the least tern nesting site and those that winter at Cabrillo Beach also would not  
19 be affected. Further, noise from construction associated with the Marine Terminal  
20 and Tank Farm Site 1 would not adversely affect snowy plovers migrating through  
21 the area and stopping at the least tern nesting site. This is because current peak noise  
22 levels can be as high as 88 dB(A) and the construction would not increase that peak  
23 level.

24 *Other Special Status Species*

25 Construction of Tank Farm Site 1 on Pier 400 would permanently eliminate an area  
26 that was used by nesting black skimmers just west of the least tern nesting area in  
27 1998-2000 and in 2004. Only a few black skimmers nested there in 2004. However,  
28 that site was suitable for black skimmer nesting only in the years when vegetation  
29 was cleared from the site to provide additional area for California least tern nesting.  
30 The Tank Farm Site 1 area was not cleared of vegetation in 2005, 2006, or 2007, and  
31 this made the site less attractive for black skimmer nesting. No black skimmers  
32 attempted to nest there in 2006 or 2007 (Keane Biological Consulting 2006, 2007a,  
33 b). Such clearing is not required or planned to occur in the future, and therefore,  
34 nesting by black skimmers is not expected to occur prior to Tank Farm Site 1  
35 construction activities, so no nesting habitat would be lost. Vegetation clearing for  
36 construction activities prior to the black skimmer nesting season, however, could  
37 allow nesting to occur again. If this were to occur, construction activities would have  
38 the potential to injure or kill nesting birds, and could cause them to abandon the site.

39 Burrowing owls have been observed at and near the California least tern nesting site  
40 from 2003 through 2007 and appear to be preying on the California least terns. No  
41 observations of owl pairs or other indications of nesting have been observed during  
42 the least tern monitoring (K. Keane, personal communication 2008). However, since  
43 individuals are present during the owl nesting season (February through August), it is  
44 assumed that nesting could occur on Pier 400. Construction activities could injure

1 nesting birds or cause them to abandon their nests. Any reduction in the number of  
2 burrowing owls present, however, would be a benefit to the least terns.

3 Construction activities on Pier 400 would have little or no effect on other listed and  
4 special status species because they do not breed on-site and the few individuals of  
5 those species that could be present on or near the proposed Project site would be  
6 expected to avoid the construction activities.

7 Construction activities would be a minimum of 2,700 to 3,500 ft (823 to 1,062 m)  
8 from the closest breakwater. Pile driving, stone column installation, and other  
9 construction noise in the air and water could cause some sea lions and harbor seals to  
10 temporarily move farther away from these activities, such as to other areas of the  
11 breakwater, although the animals are expected to adapt to the noise and continue to  
12 haul out on the breakwaters and buoys during construction. Breeding would not be  
13 affected because neither species breeds in the Harbor. Sound pressure waves in the  
14 water caused by pile driving could affect the hearing of marine mammals (primarily  
15 sea lions) swimming in the Outer Harbor. Pile driving produces noise levels of 177  
16 to 220 dB (re 1  $\mu$ Pa) at 33 ft (10 m) depending on the material and size of the piles  
17 (Hastings and Popper 2005). In comparison, an underwater sound level of 180 dB<sub>rms</sub>  
18 (re 1  $\mu$ Pa) has been designated as the level A harassment level (Federal Register  
19 2005), representing a potential effect level for marine mammals occurring close to  
20 construction noise sources in the Outer Harbor. Observations during pile driving for  
21 the San Francisco-Oakland Bay Bridge East Span seismic safety project showed  
22 minimal response in harbor seals while sea lions swam rapidly out of the area  
23 (Caltrans 2001). Thus, sea lions would be expected to avoid areas where sound  
24 pressure waves could affect them. A few individual harbor seals could be affected,  
25 but the number would be low since few are present (5 were observed near Pier 400 in  
26 2000) (MEC and Associates 2002) and the effect would be of short duration (during  
27 individual pile driving).

28 Gravel for the stone columns under the tanks at Tank Farm Site 1 would be  
29 transported to staging area 412 (preferred) or 427 by ship from sources as far away as  
30 Canada. Two Panamax vessels would be needed to supply the gravel. This small  
31 number of vessel trips would be unlikely to adversely affect marine mammals  
32 because few, if any, individuals would be present in the vessel traffic routes from the  
33 rock source to Pier 400 due to their sparse distribution in the open ocean (whales,  
34 porpoises/dolphins, seals, and sea lions) and in the Outer Harbor (sea lions and  
35 harbor seals only), and because the animals are typically agile and have the ability to  
36 avoid damage by vessels. The number of ships (2) would represent a small  
37 percentage of large vessels that transit into the Harbor on an average yearly basis,  
38 corresponding to a low probability of collision with marine mammals. Delivery of  
39 other construction materials by barge, such as pilings, would be unlikely to adversely  
40 affect marine mammals due to the slow speed of the barges.

### 41 **Tank Farm Site 2**

42 Construction activities at Tank Farm Site 2 are unlikely to adversely affect any listed  
43 or other special status species because none are expected to be present at or near that  
44 location. Peregrine falcon nest sites on the Vincent Thomas and Schuyler F. Heim  
45 bridges are located more than 0.6 mi (1 km) and 1.3 mi (2.1 km) from Tank Farm  
46 Site 2, respectively. Transport of gravel for stone columns at this site would require

1 two Panamax ships, and effects on marine mammals would be as described above for  
2 Tank Farm Site 1. The ships would deliver the gravel to staging area 427 (preferred)  
3 or 412.

#### 4 **Pipeline Segments 2-4 and Other Staging Areas**

5 Noise and human presence during construction of pipeline segments 2-4 would occur  
6 in land areas that are not used by special status species. Construction activities for  
7 pipeline segment 2 (a-c) would be at least 2,000 ft (610 m) from potential peregrine  
8 falcon nesting sites on the Vincent Thomas Bridge and over 8,000 ft (2,438 m) from  
9 the Schuyler F. Heim Bridge, while construction of pipeline segments 3 and 4 would  
10 be at least 2,000 ft (610 m) from the Vincent Thomas Bridge and 4,000 ft (1,219 m)  
11 from the Schuyler F. Heim bridge. In this industrial area, construction disturbances  
12 would not affect peregrine falcon nesting on either bridge due to the distance and the  
13 existing nature of intervening industrial noise and port-related activities. Temporary  
14 use of the staging areas, other than 412 as discussed above for the California least  
15 tern, would not have any adverse effect on special status species because no suitable  
16 habitat for these species is present at these sites.

#### 17 **Accidents**

18 Accidental spills of pollutants during construction on land would be unlikely to result  
19 in runoff of pollutants into the storm drain system that discharges into the Harbor.  
20 This is because large quantities of such material would not be used during  
21 construction and any spills would be contained by implementation of runoff control  
22 measures and cleaned up with no runoff to Harbor waters, as described for **Impact**  
23 **WQ-1.1**. Spills on land would not affect the California least tern nesting site because  
24 it is at a higher elevation than Tank Farm Site 1, and no habitat for other special  
25 status species is present within the construction areas for the proposed Project.

26 Accidental spills of fuel, lubricants, or hydraulic fluid into Harbor waters from the  
27 equipment used for construction of Berth 408 and a temporary mooring at staging  
28 area 412 are unlikely to occur during the proposed Project (Section 3.14 **Impact**  
29 **WQ-1.1**). Any small spills that occurred would not adversely affect special status  
30 species because no individuals of those species would be using the water surface  
31 during the work. In addition, any such spills would be small and cleaned up  
32 immediately (see Section 3.12, Hazards, **Impact RISK-1**), so that the spilled material  
33 would not move away from the work area into areas that could be used by special  
34 status species.

#### 35 **ESA Preliminary Determination**

36 The ESA Preliminary Determination for construction and operation of the proposed  
37 Project is summarized below under BIO-1.2 (Section 3.3.4.3.1.2).

#### 38 **CEQA Impact Determination**

39 California least tern. Impacts would be less than significant for construction  
40 activities that are more than 200 ft (61 m), or other established buffer distance, from  
41 the nesting site when the terns are present, except for stone column installation and  
42 temporary lighting at Tank Farm Site 1, for the reasons described above.

1 Construction activities closer than approximately 200 ft (61 m) to the nesting site  
2 when the terns are present could have significant impacts. Stone column installation  
3 at Tank Farm Site 1 and construction lighting while the terns are nesting could have  
4 significant impacts as described above.

5 California brown pelican. As described above, impacts of construction activities  
6 would be less than significant under CEQA.

7 Western snowy plover. As described above, construction would have no impacts.

8 Other special status species. Since Tank Farm Site 1 would not be cleared for  
9 construction and would be left vacant at the beginning of the nesting season, black  
10 skimmers would be unlikely to use this area for nesting, resulting in no impacts to  
11 this species. If vegetation clearing at Tank Farm Site 1 for construction resulted in  
12 black skimmer nesting at the site, injury to nesting birds and disruption of nesting  
13 would be a significant impact. If burrowing owls were nesting at the Tank Farm Site  
14 1 and nesting was disrupted, impacts would be significant. Impacts to other special  
15 status species, including marine mammals, would be less than significant as  
16 described above.

#### 17 *Mitigation Measures*

18 **MM 4D-7** and **MM 4D-9** from the Deep Draft FEIS/FEIR are applicable to the  
19 proposed Project impacts. However, the more project-specific measures below cover  
20 the intent of **MM 4D-7** and **MM 4D-9**, so the latter are not included in the list of  
21 mitigation measures below.

22 **MM BIO-1.1a: Monitor the California Least Tern and Other Bird Nesting.** A  
23 qualified biologist shall monitor least tern and other special status bird nesting during  
24 construction activities on Pier 400, including installation of Pipeline Segment 1 to  
25 Tank Farm Site 2 and use of staging area 412 that would occur from April through  
26 August. In the event of an imminent threat to nesting special status species and the  
27 Construction Manager is not immediately available, the monitor shall have the  
28 authority to redirect construction activities. If construction activities need to be  
29 redirected to prevent impacts to special status birds, the monitor shall immediately  
30 contact the LAHD Environmental Management Division, Port Inspector, and  
31 Construction Manager. The Construction Manager has the authority to halt  
32 construction if determined to be necessary.

33 **MM BIO-1.1b: Stone Column Installation Monitoring.** At Tank Farm Site 1, no  
34 stone column construction shall occur at night (sunset to sunrise), and if possible,  
35 stone column construction during daytime hours should be conducted outside the  
36 least tern nesting season. If stone column installation is unavoidable during the  
37 nesting season, the work shall be phased so that installation nearest the nesting site is  
38 conducted prior to or after the nesting season, and a qualified biologist shall monitor  
39 the least terns at the nesting site during stone column installation to identify adverse  
40 reactions of the birds to this activity. If the terns react adversely to work at any of  
41 these sites, work will be temporarily stopped. The LAHD Environmental  
42 Management Division, least tern biologist, and Construction Manager shall confer  
43 with the USFWS and CDFG regarding necessary further actions.

1           **MM BIO-1.1c: Construction Schedule.** All construction activities that are within  
2           200 ft (61 m) of the California least tern nesting site and foraging areas shall be  
3           scheduled to occur between September and March, unless otherwise approved by the  
4           USFWS and CDFG. This includes installation and removal of mooring piles as well  
5           as gravel delivery at staging area 412 (see Port brochure in Appendix J).

6           **MM BIO-1.1d: Construction Contractor Environmental Training.** The Port  
7           shall provide environmental training by a qualified biologist to all construction  
8           contractor personnel working at the site. This shall include, but not be limited to,  
9           information about the California least tern (e.g., seasonal presence, pictures of the  
10          birds, and regulatory protections) and other special status species (e.g., black  
11          skimmer and burrowing owl) and measures required to avoid or minimize the  
12          potential for impacts to these species. The latter measures shall include placement of  
13          food in sealed containers and daily disposal of all food wastes in sealed containers,  
14          with off-site disposal at regular intervals during construction; prohibition of pets or  
15          animals of any kind during work on Pier 400; limiting activities within 200 ft (61m),  
16          or other established buffer distance, of the nesting site from March through August,  
17          to the extent feasible; and scheduling construction activities that would be near the  
18          nesting site for the period between September and March.

19          **MM BIO-1.1e: Perches.** When California least terns are present at the nesting site,  
20          idle construction equipment and stockpiles of materials exceeding approximately 8 ft  
21          (2.4 m) in height shall be placed so that they do not provide perches for birds that  
22          could prey on least terns.

23          **MM BIO-1.1f: Lighting.** Night time construction at Tank Farm Site 1 and  
24          construction staging area 412 during the least tern nesting season should be avoided.  
25          All lighting (temporary and security) shall be directed away from the California least  
26          tern nesting site and shielded to minimize increased light in the nesting area.

27          **MM BIO-1.1g: Vegetation Clearing.** Vegetation growing at Tank Farm Site 1  
28          shall only be cleared immediately prior to construction activities occurring from  
29          April through August to discourage and protect least terns and black skimmers from  
30          nesting within the work area. Areas cleared at other times of the year will not be left  
31          barren and vacant during the nesting season.

32          **MM BIO-1.1h: Protection of Special Status Species Nesting Birds.** To avoid  
33          impacts to nesting special status species, such as the California least tern, black  
34          skimmer, and burrowing owl, that might nest within Tank Farm Site 1, a  
35          preconstruction survey shall be conducted by a qualified biologist if construction  
36          commences during the normal nesting season for most bird species (February 1 to  
37          August 1) to determine if any are nesting there. If any nesting is found, a buffer area  
38          of 200 ft (61 m) shall be established and protective measures shall be finalized in  
39          coordination with USFWS and CDFG. Nesting birds shall be protected until nesting  
40          is complete or young have fledged as determined by a qualified biologist.

41          **MM BIO-1.1i: Protection of California Least Tern Nesting.** During construction,  
42          no unauthorized vehicles or persons shall be allowed within 100 ft (30 m) of the east  
43          side and northeast corner of the least tern nesting site (the “at grade portion”) during  
44          the nesting season. Signs shall be posted, and barriers (e.g., temporary fencing) shall  
45          be provided if signage is not adequate.

1 **MM BIO-1.1j: Noise Buffer.** Construction of the north-south oriented containment  
2 dikes at Tank Farm Site 1 should occur early in site development to aid as noise  
3 buffers during construction.

4 No mitigation measures are required for the less than significant impacts to marine  
5 mammals.

#### 6 *Residual Impacts*

7 With implementation of **MM BIO-1.1a** through **MM BIO-1.1j**, residual impacts on  
8 the California least tern and other special status species as a result of proposed  
9 Project construction activities would be less than significant.

#### 10 **NEPA Impact Determination**

11 California least tern. Impacts would be less than significant for construction  
12 activities that are more than 200 ft (61 m), or other established buffer distance, from  
13 the nesting site when the least terns are present, except for stone column installation  
14 and temporary lighting at Tank Farm Site 1, for the reasons described above.  
15 Construction activities closer than approximately 200 ft (61 m) to the nesting site  
16 when the least terns are present could have significant impacts. Stone column  
17 installation at Tank Farm Site 1 and construction lighting while the terns are nesting  
18 could have significant impacts as described above.

19 California brown pelican. As described above, impacts of construction activities also  
20 would be less than significant under NEPA.

21 Western snowy plover. As described above, construction would have no impacts.

22 Other special status species. Because black skimmers currently do not nest at Tank  
23 Farm Site 1 and are not expected to nest there prior to the time when proposed Project  
24 facilities would be built, no loss of black skimmer nesting habitat would occur. Since  
25 Tank Farm Site 1 would not be cleared for construction and would be left vacant at  
26 the beginning of the nesting season, black skimmers would be unlikely to use this  
27 area for nesting, resulting in no impacts to this species. Vegetation clearing prior to  
28 their nesting season could allow nesting to occur again, and construction activities  
29 could then have a significant impact to this species through injury to nesting birds or  
30 by causing them to abandon the nest site. If burrowing owls are nesting at the Tank  
31 Farm Site 1 and nesting is disrupted, impacts would be significant. Impacts to  
32 marine mammals would be less than significant as described above.

#### 33 *Mitigation Measures*

34 **MMs BIO-1.1a** through **BIO-1.1j** would apply for the California least tern,  
35 burrowing owl, and black skimmer.

36 No mitigation measures are required for the less than significant impacts to marine  
37 mammals.

1 *Residual Impacts*

2 With implementation of **MM BIO-1.1a** through **MM BIO-1.1j**, residual impacts on  
3 the California least tern and other special status species as a result of proposed  
4 Project construction activities would be less than significant.

5 **Impact BIO-2.1: Construction of proposed Project facilities would not**  
6 **substantially reduce or alter a state-, federally-, or locally-designated**  
7 **natural habitat or plant community, including wetlands.**

8 *Natural Habitats*

9 The only state-, federally-, or locally-designated natural habitat or plant community  
10 present at or adjacent to the proposed Project sites, including the Pier 400 Marine  
11 Terminal site and Tank Farm Site 1, Tank Farm Site 2, or along the pipeline routes is  
12 the least tern nesting site SEA on Pier 400. Impacts to special status species,  
13 including the California least tern and its nesting habitat (SEA), are discussed above  
14 in **Impact BIO-1.1**.

15 Marine algae growing on the riprap at the Berth 408 site did not include giant kelp,  
16 based on the 2000 baseline surveys (MEC and Associates 2002), and does not form a  
17 kelp bed. Some of the algae present could be removed during installation of the  
18 pilings, but this would affect a very small proportion of the algae on Pier 400.  
19 Marine algae, including giant kelp, is present along the south and east faces of Pier  
20 400 (MEC and Associates 2002), and installation/removal of temporary mooring  
21 piles for delivery of gravel to staging area 412 would result in removal of a few  
22 plants. The resulting changes in the algal community would be minor, would be of  
23 short duration due to rapid regrowth, and would not result in a substantial reduction  
24 of a locally-designated plant community. No eelgrass beds, wetlands, or mudflats are  
25 present near the Berth 408 site or staging area 412. The closest such habitats are 1.4  
26 mi (2.3 km) from the Berth 408 site, and they would not be affected due to distance  
27 from Berth 408 and staging area 412. This includes the eelgrass beds at Cabrillo  
28 Beach, in the Pier 300 Shallow Water Habitat, and in the Seaplane Lagoon.

29 *Essential Fish Habitat*

30 The impacts of proposed Project construction on EFH and fish listed in the FMPs are  
31 addressed below and in Appendix K.

32 Proposed Project construction of the Marine Terminal berth on the southwest side of  
33 Pier 400 would potentially affect EFH and fish listed in the FMPs through turbidity,  
34 temporary displacement of individuals due to construction activities, release of  
35 contaminants to the water column, temporary lighting, and underwater sound from  
36 the pile driving (Appendix K). Installation of piles during construction of the berth  
37 structures would result in vibration in the water, as well as a small amount of  
38 turbidity.

39 Sound pressure waves in the water from pile driving can affect fish, particularly those  
40 with a swim bladder, with the level of effect influenced by factors such as species,  
41 size of fish (smaller fish are affected more), physical condition of fish, peak sound



1 pressure and frequency, shape of the sound wave, depth of water at the piles, location  
2 of fish in the water column, amount of air in the water, size and number of waves on  
3 the water surface, bottom substrate composition and texture, tidal currents, and  
4 presence of predators (NMFS 2003; NMFS 2004). Types of effects on fish can  
5 include mortality from swim bladder rupture or internal hemorrhaging, changes in  
6 behavior, and hearing loss (permanent or temporary) (Vagle 2003). The most  
7 common behavioral changes include temporary dispersal of fish schools. As  
8 described for **Impact BIO-1.1**, sound pressure waves caused by the steel pile driving  
9 could affect fish near the piles with mortality of some individuals. The four species  
10 in the Coastal Pelagics FMP (northern anchovy, Pacific sardine, Pacific mackerel,  
11 and jack mackerel) are common water-column species in the Harbor that could be  
12 affected by pile driving. The only common Pacific Coast Groundfish species, Pacific  
13 sanddab, likely to be present near construction activities could also be affected by  
14 pile driving. The number of fish affected would depend on the distribution and  
15 abundance of these species near the construction site at the time of construction.  
16 However, there have been no documented cases of fish mortality as a result of pile  
17 driving in the Harbor. Fish in the Groundfish FMP, other than the Pacific sanddab,  
18 are generally not very abundant in the Harbor, and most occur in habitats away from  
19 the Marine Terminal work area. Fish would generally avoid the work area while  
20 construction activities were under way. Thus, few individuals would be present in or  
21 near the work area, and those present would likely move out of the work area.

22 Effects of proposed Project construction activities would be of short duration (a few  
23 weeks to months) and would occur in a small area. A small amount of the benthic  
24 infauna and the epibenthic macroinvertebrates found near Pier 400 would be lost  
25 within the footprint of the piles being driven and the rock placed around the base of  
26 these piles. The turbidity generated by driving each pile would be localized  
27 immediately adjacent to the pile and would dissipate rapidly with minor effects on  
28 invertebrates and fish at the pile locations. The small loss of prey for managed fish  
29 species would not adversely affect their populations within the Harbor due to the  
30 large amount of undisturbed foraging area available and the small number of  
31 individuals of managed groundfish species that feed on benthic organisms in the  
32 Harbor. Construction disturbances such as turbidity would have negligible effects on  
33 eggs and larvae of managed species, located primarily in the water column and  
34 moving with water currents, due to their brief exposure to the disturbances and the  
35 small number that could be affected in the construction area relative to those present  
36 in all marine habitats in the Harbor. These limited effects would not result in a  
37 substantial reduction or alteration to essential fish habitat. Adult and juvenile fish of  
38 managed species would likely avoid the disturbance area during construction  
39 activities and would not be adversely affected.

40 The sound pressure waves from pile driving could cause mortality of a few fish in the  
41 Coastal Pelagics FMP, but these species are abundant in the Harbor and loss of a few  
42 individuals would not cause a substantial reduction of their populations. A total of  
43 110 steel piles that are 48 to 54 inches (122 to 137 cm) in diameter and 40 concrete  
44 piles would be installed for Berth 408 in Option 1. For Option 2, a total of 72 steel  
45 piles and 184 concrete piles would be installed in the water. A small amount of water  
46 column habitat (0.04 acre, 0.02 ha) would be converted to hard substrate (piles) due  
47 to Berth 408 construction, and the addition of rock around the base of the piles  
48 installed in soft sediments would convert a small amount of soft bottom to hard

1 substrate (0.1 acre, 0.04 ha). These effects on EFH would result in no loss of  
2 sustainable fisheries.

3 Construction of a temporary mooring adjacent to staging area 412 on Pier 400 would  
4 result in short-term disturbances from driving piles, mooring of vessels to unload  
5 gravel for the stone columns, and subsequently removing those piles. These  
6 disturbances would be less than for Berth 408 construction and would have no  
7 adverse effects on EFH and individuals of managed species.

8 Construction activities (e.g., tank farms, pipelines, and staging areas) on land would  
9 have no direct effects on EFH, which by definition is located in the water. Runoff of  
10 sediments from such construction could enter Harbor waters. However, as discussed  
11 in Section 3.14, implementation of sediment control measures (e.g., sediment barriers  
12 and sedimentation basins) would minimize such runoff and result in minimal effects  
13 on water quality that could affect EFH.

#### 14 ***EFH Preliminary Determination***

15 The USACE has preliminarily determined the proposed Project will have adverse,  
16 but less than significant impacts on EFH based on the above analysis and Appendix  
17 K, and will initiate consultation with NMFS pursuant to the Magnuson-Stevens  
18 Fishery Conservation and Management Act.

#### 19 **CEQA Impact Determination**

20 Natural Habitats. Construction would have no impacts on natural habitats such as  
21 eelgrass beds, mudflats, or wetlands because none are present at or near the proposed  
22 Project site. The small amounts of marine algae affected by construction of Berth  
23 408 and a temporary mooring at staging area 412, if the latter is used, would have  
24 less than significant impacts to kelp beds because a small area would be affected, the  
25 sparse algal cover that is present does not form a kelp bed, and rapid recovery would  
26 occur after the temporary mooring is removed. Impacts to the least tern SEA would  
27 be less than significant with mitigation, as discussed for **Impact BIO-1.1**.

28 Essential Fish Habitat. Temporary disturbances in the water during Berth 408 and  
29 temporary mooring construction would cause no substantial alteration of EFH or loss  
30 of fish in managed species as described above, including conversion of a small  
31 amount of soft bottom to hard substrate habitat, and impacts would be less than  
32 significant under CEQA. Construction activities at the tank farm sites and for new  
33 pipeline installation would have no direct impacts on EFH because none is present at  
34 those sites. Indirect impacts through runoff of sediments during storm events would  
35 be less than significant because such runoff would be controlled as described for  
36 water quality in Section 3.14 (e.g., project-specific SWPPP with BMPs such as  
37 sediment barriers and sedimentation basins). In addition, the work would be  
38 conducted in compliance with applicable permits, such as USACE's Section 10  
39 (Rivers and Harbors Act) and LARWQCB's 401 certification.

#### 40 ***Mitigation Measures***

41 No mitigation is required. Mitigation for impacts on the California least tern SEA are  
42 addressed in **Impact BIO-1.1** above.

### *Residual Impacts*

Residual impacts would be less than significant.

### **NEPA Impact Determination**

Natural Habitats. Construction would have no impacts on natural habitats such as eelgrass beds, mudflats, or wetlands because none are present at or near the proposed Project site as described for the CEQA analysis. The small amounts of marine algae that would be affected by construction of Berth 408 and a temporary mooring at staging area 412, if the latter is used, would have less than significant impacts to kelp beds because a small area and few plants would be affected, the sparse algal cover does not form a kelp bed, and rapid recovery would occur after the temporary mooring is removed. Impacts to the least tern SEA would be less than significant with mitigation as discussed under **Impact BIO-1.1**.

Essential Fish Habitat. Temporary disturbances in the water, such as from pile driving and conversion of a small amount of soft bottom to hard substrate habitat, during Berth 408 and temporary mooring construction would cause no substantial alteration of EFH or loss of fish in managed species as described above, and impacts would be less than significant under NEPA. Construction activities at the tank farm sites and for new pipeline installation would have no direct impacts on EFH because none is present at those sites. Indirect impacts through runoff of sediments during storm events would be less than significant because such runoff would be controlled as described for water quality in Section 3.14 (e.g., project-specific SWPPP with BMPs such as sediment barriers and sedimentation basins).

### *Mitigation Measures*

No mitigation is required. Mitigation for impacts on the California least tern SEA are addressed in **Impact BIO-1.1** above.

### *Residual Impacts*

Residual impacts would be less than significant.

### **Impact BIO-3.1: Construction of proposed Project facilities would not interfere with any wildlife migration/movement corridors.**

No known terrestrial wildlife or aquatic species migration corridors are present in the proposed Project area, including the tank farm and staging area sites. Although the California least tern is a migratory bird species that nests on Pier 400 adjacent to the Tank Farm Site 1, construction of proposed Project facilities on Pier 400 and at Tank Farm Site 2 on Terminal Island would not interfere with the aerial migration of this species because the birds would be able to fly over or around the construction sites. Movement to and from foraging areas in the Harbor would also not be affected by construction at any of the proposed Project facility sites. Direct flights of least terns from the nesting area to the Pier 300 Shallow Water Habitat for foraging would not pass over any of the proposed Project construction sites, although some individual terns could fly over Tank Farm Site 1 and the Marine Terminal to reach the Cabrillo Shallow Water Habitat for foraging. Other construction-related effects of the

1 proposed Project on this species are as addressed for **Impact BIO-1.1**. The western  
2 snowy plover is also a migratory species, but few migrating individuals have been  
3 observed at the least tern nesting site in recent years. Breeding individuals of  
4 California brown pelican move to breeding sites in Mexico and on offshore islands  
5 for part of the year. Construction activities on Pier 400 and at Tank Farm Site 2 on  
6 Terminal Island would not interfere with migration or movement of either species  
7 because the birds would be able to fly over or around the construction sites, and the  
8 disturbance areas represent a small portion of the Harbor where the birds occur.  
9 Marine mammal migrations along the coast would not be affected by construction  
10 activities within the Harbor.

11 **CEQA Impact Determination**

12 No wildlife movement or migration corridors would be affected by the proposed  
13 Project during construction activities on land and in the water as described above,  
14 thereby resulting in no impacts under CEQA.

15 *Mitigation Measures*

16 No mitigation is required.

17 *Residual Impacts*

18 No impact.

19 **NEPA Impact Determination**

20 No wildlife movement or migration corridors would be affected by the proposed  
21 Project during construction activities on land and in the water as described above,  
22 resulting in no impacts under NEPA.

23 *Mitigation Measures*

24 No mitigation is required.

25 *Residual Impacts*

26 No impact.

27 **Impact BIO-4.1: Proposed Project construction activities could**  
28 **substantially disrupt local biological communities.**

29 ***Noise, Vibration, and Pollutants***

30 Turbidity, noise, and vibration from berth construction would likely cause most fish  
31 and birds to temporarily leave the immediate construction area. Installation, use, and  
32 removal of a temporary mooring at staging area 412 on Pier 400 (Figure 2-12) would  
33 have similar but smaller magnitude effects on fish and birds. Disturbances to these  
34 marine species would be temporary, and the animals could move to other nearby  
35 areas for the duration of the disturbance, as described for fish in **Impact BIO-2.1** and  
36 Appendix K. Driving the larger steel piles for Berth 408 construction would have the

1 potential to result in mortality of a few fish in the immediate vicinity of the work due  
2 to sound pressure waves. The species most likely to be affected would be northern  
3 anchovy due to their small size (see **Impact BIO-1.1**) and abundance in the Outer  
4 Harbor. Fish and bird populations would not be adversely affected due to the small  
5 number of individuals affected, the small numbers of individuals moving into other  
6 areas, the short duration of the disturbance, and the small proportion of the Harbor  
7 affected. Upon completion of construction, the displaced individuals would be able  
8 to return, resulting in no substantial disruption of Outer Harbor biological  
9 communities.

10 The temporary disturbances resulting from construction activities would not  
11 substantially reduce the abundance of food organisms available to predatory species,  
12 such as some species of fish and birds. Further, the temporary movement of mobile  
13 species away from the construction area would not substantially disrupt local  
14 biological communities at the site or areas into which the displaced organisms would  
15 move. Sediments suspended during pile installation would affect a small area at each  
16 pile location, but would dissipate rapidly with no substantial effects on biological  
17 communities (e.g., benthos, plankton, and fish).

18 Construction activities would not affect the Cabrillo Shallow Water Habitat and Pier  
19 300 Shallow Water Habitat due to their distance from construction activities. Some  
20 sound pressure waves from pile driving would reach the Cabrillo Shallow Water  
21 Habitat, but at over 2,000 ft (610 m) from the piles the effects would not disrupt local  
22 fish communities. Sound pressure waves would not reach the Pier 300 Shallow  
23 Water Habitat due to distance and no direct line of travel in water from Berth 408 to  
24 that habitat.

25 Caspian and elegant terns, which have used a portion of the Tank Farm Site 1 area for  
26 nesting in the past, would not be expected to nest there prior to Project construction.  
27 In 2003 and 2004, vegetation was cleared from a portion of Tank Farm Site 1  
28 adjacent to the least tern nesting site to provide additional area for California least  
29 tern nesting, and both Caspian and elegant terns used that area with approximately  
30 10,000 elegant tern nests in 2004. Caspian and elegant terns began nesting adjacent  
31 to the least tern site in 2005 but abandoned the area in May and have not nested there  
32 since (Keane Biological Consulting 2007a,b). This area was not cleared in 2005  
33 through 2007, and this made the site less attractive for nesting by Caspian, elegant,  
34 and least terns. (Elegant terns are presently nesting at Bolsa Chica wetlands.) If,  
35 however, vegetation were cleared in advance of Tank Farm Site 1 construction and  
36 prior to the nesting season, and if elegant and Caspian terns were in the area, they  
37 could use the site again, and construction activities could injure or kill nesting birds  
38 or cause them to abandon their nests. Nesting by both species is protected under the  
39 Migratory Bird Treaty Act.

40 Marine Terminal, tank farm, pipeline, and staging area construction activities would  
41 have minimal effects on terrestrial vegetation because plant cover is sparse to absent  
42 at the construction sites and the plant species present are primarily non-native.  
43 Wildlife species, other than birds are also primarily non-native and/or adapted to use  
44 of developed sites. Both non-native and native birds are present in the proposed  
45 Project area, and those that frequent the sites proposed for Project construction are  
46 adapted to use developed areas. Consequently, local biological communities in this

1 industrial area would not be substantially disrupted. Impacts to the California least  
2 tern and other special status species are as addressed for **Impact BIO-1.1**.

3 As described in Section 3.14, Water Quality, Sediments and Oceanography under  
4 **Impact WQ-1.1** and **WQ-5.1**, runoff of pollutants such as concrete washwater and  
5 sediments during construction would be contained on site using BMPs and would not  
6 significantly affect water quality in the Harbor at storm drain discharge locations.  
7 The small amount of pollutants that could pass the BMPs would not substantially  
8 affect marine organisms in Harbor waters and on hard substrate at these locations due  
9 to expected low concentrations, relative to ambient conditions. Implementation of  
10 BMPs required by the Port (contract specifications, Section 01410) and applicable  
11 Project permits (e.g., NPDES General Permit for Discharges of Storm Water  
12 Associated with Construction Activities) during construction to control pollutant and  
13 sediment runoff would also reduce the potential for, and amount of, such runoff to  
14 levels below thresholds that could substantially affect marine organisms.

### 15 **Accidents**

16 Accidental spills of pollutants during construction on land would be unlikely to result  
17 in runoff of pollutants into the storm drain system that discharges into the Harbor.  
18 This is because large quantities of such material would not be used during  
19 construction and any spills would be contained by implementation of runoff control  
20 measures and cleaned up with no runoff to Harbor waters, as described for **Impact**  
21 **WQ-1.1**.

22 Accidental spills of fuel, lubricants, or hydraulic fluid into Harbor waters from the  
23 equipment used for construction of Berth 408 and a temporary mooring at staging  
24 area 412 are unlikely to occur during the proposed Project (Section 3.14 **Impact**  
25 **WQ-1.1**). Any small spills that occurred would not adversely affect aquatic biota to  
26 the degree that local biological communities are substantially disrupted. Any such  
27 spills would be small and cleaned up immediately (see Section 3.12, Hazards,  
28 **Impact RISK-1**) in compliance with SPCC requirements, resulting in the potential  
29 for loss of only a few common marine organisms and causing no adverse effects on  
30 biological communities as a whole.

### 31 **Invasive Species**

32 Vessel traffic would be increased slightly during proposed Project construction.  
33 Construction of all proposed Project facilities would be land-based, with the  
34 exception of the Marine Terminal berth. For that activity, barge-mounted cranes and  
35 a pile driver would be required for installation of pilings associated with the berth  
36 breasting dolphin, berth platform, mooring dolphins, walkways, floating dock, and  
37 trestles. These vessels would not likely originate from outside the Port (i.e., the  
38 barge would likely be permanently moored within the Port) and, therefore, would not  
39 introduce non-native species in ballast water or from the ship hulls. The 1-inch  
40 crushed rock planned for use in the stone columns would be delivered by ship and  
41 would originate from outside the Port. This would have a low potential to transport  
42 non-native species into the Port because the material would likely come from West  
43 Coast (Canada to southern California) quarry sources that are able to supply the  
44 required material at the time of construction and because unloading ships would be  
45 taking on ballast water rather than discharging it. Use of Panamax class ships (as

1 defined in Section 2) would require only four to bring in the amount of gravel needed  
2 for Tank Farm Site 1 and Tank Farm Site 2.

### 3 **Habitat Alteration**

4 Marine open water as well as benthic soft bottom and hard substrate habitats are  
5 present adjacent to the proposed Project site. All proposed Project construction  
6 activities are land-based, with the exception of the proposed Marine Terminal berth  
7 on Pier 400 and a temporary mooring at staging area 412 (Figure 2-12 in Chapter 2).  
8 Construction of Berth 408 would result in a change of aquatic habitat. Installation of  
9 150 pilings (110 of which are steel piles 48 to 54 inches in diameter) for Option 1 or  
10 258 pilings (74 of which are steel) for Option 2 in the water to support the berth  
11 structures would replace a small amount of water column habitat (about 0.04 acre,  
12 0.02 ha) with 1.9 acres (0.8 ha) of hard substrate habitat in Option 1, or 2.4 acres (1.0  
13 ha) if the mooring dolphins use concrete piles in Option 2. Rock placed around the  
14 base of the larger piles would replace approximately 0.1 acre (0.04 ha) of soft bottom  
15 with hard substrate habitat. The underwater surface area of the pilings and rock at  
16 their base would function as additional hard substrate (compared with existing  
17 armoring), and would be colonized by marine organisms. The breasting dolphins and  
18 connections to shore along with the wharf would place solid structures above the  
19 water that would cause shading of the water surface, but much less than for a typical  
20 wharf. The platform constructed for the AMP system and the platform that may  
21 eventually support part of the ACTI AMECS would add a small amount of shading  
22 as well. Only a few (probably two) pilings would be needed for the temporary  
23 mooring at the staging area, and these would be removed after the rock is delivered.  
24 This would cause a negligible change in habitat.

25 Construction of the tank farm sites and pipeline segments as well as use of the  
26 unpaved staging areas would remove small amounts of vegetation that are dominated  
27 by weedy species or native species that colonize disturbed areas. In most locations,  
28 the vegetation is sparse. This vegetation provides habitat for the few individuals of  
29 common wildlife species found in this industrial area as a result of the low amount of  
30 cover and food present. At Tank Farm Site 2, any vegetation remaining after the  
31 existing facilities are demolished would be replaced by landscape plantings. The  
32 vegetation at Tank Farm Site 1 would be permanently lost, while the few mostly non-  
33 native plants at the Marine Terminal site would be replaced by landscaping. The  
34 landscape areas planted would provide habitat for wildlife species adapted to  
35 industrial areas. The small areas of vegetation removed during pipeline installation  
36 by trenching and at work areas for directional drilling would return to pre-project  
37 conditions within a year or two, and any landscape trees removed would be replaced.

### 38 **CEQA Impact Determination**

39 Impacts of pollutant runoff, noise and vibration, turbidity, and introduction of  
40 invasive species to most local biological communities would be less than significant  
41 under CEQA for the reasons described above. Since Tank Farm Site 1 would not be  
42 cleared for construction and would be left vacant at the beginning of the nesting  
43 season, elegant terns and Caspian terns would be unlikely to use this area for nesting,  
44 resulting in no impacts to these species. If vegetation clearing at Tank Farm Site 1  
45 for construction resulted in elegant tern and/or Caspian tern nesting at the site, injury  
46 to nesting birds and disruption of nesting would be a significant impact. The small

1 amount of water column habitat replaced with hard substrate marine habitat would  
2 not represent a permanent loss of aquatic habitat, and proposed Project construction  
3 impacts would be less than significant. Accidental spills of pollutants during in-  
4 water construction would be unlikely to occur and would have less than significant  
5 impacts if any did occur. Loss or alteration of terrestrial habitats would result in less  
6 than significant impacts because the areas affected would be small with minimal  
7 value to wildlife, and project-related landscaping at the Marine Terminal and Tank  
8 Farm Site 2 would replace the low values lost.

9 *Mitigation Measures*

10 **MM BIO-1.1g** and **MM BIO-1.1h** would be implemented to reduce the potentially  
11 significant impacts to elegant terns, Caspian terns, and other nesting birds at Tank  
12 Farm Site 1. No mitigation is required for the less than significant impacts.

13 *Residual Impacts*

14 Residual impacts would be less than significant.

15 **NEPA Impact Determination**

16 Impacts of pollutant runoff, noise and vibration, turbidity, and introduction of  
17 invasive species to most local biological communities would be less than significant  
18 under NEPA for the reasons described above. Since Tank Farm Site 1 would not be  
19 cleared for construction and would be left vacant at the beginning of the nesting  
20 season, elegant terns and Caspian terns would be unlikely to use this area for nesting,  
21 resulting in no impacts to these species. If vegetation clearing at Tank Farm Site 1  
22 for construction resulted in elegant tern and/or Caspian tern nesting at the site, injury  
23 to nesting birds and disruption of nesting would be a significant impact. The small  
24 amount of water column habitat replaced with hard substrate marine habitat would  
25 not represent a permanent loss of aquatic habitat, and proposed Project construction  
26 impacts would be less than significant. Accidental spills of pollutants during in-  
27 water construction would be unlikely to occur and would have less than significant  
28 impacts if any did occur. Loss or alteration of terrestrial habitats would result in less  
29 than significant impacts because the areas affected would be small with minimal  
30 value to wildlife, and project-related landscaping at the Marine Terminal and Tank  
31 Farm Site 2 would replace the low values lost. The vegetated area at Tank Farm  
32 Site 1 would not be lost compared to the NEPA Baseline because that area would be  
33 paved.

34 *Mitigation Measures*

35 **MM BIO-1.1g** and **MM BIO-1.1h** would be implemented to reduce the potentially  
36 significant impacts to elegant terns, Caspian terns, and other nesting birds at Tank  
37 Farm Site 1. No mitigation is required for the less than significant impacts.

38 *Residual Impacts*

39 Residual impacts would be less than significant.



### 3.3.4.3.1.2 Operational Impacts

**Impact BIO-1.2: Operation of proposed Project facilities could affect individuals of or habitat for the California least tern and other special status species.**

#### ***California Least Tern***

*Noise and Vibration.* Operation of the proposed Project tank farm facilities at Site 1 on Pier 400 would locate noise and vibration sources (i.e., pumps and transformers) near the least tern nesting area. However, the locations of noise-generating equipment have been sited to minimize effects on the California least tern. Large transformers would be located on the east side of the Motor Control Building. Air conditioning units would be located on the west side of the Motor Control Building, smaller VFD transformers would be located on the north and south sides of that building, and shipping pumps would be just west of that location. The shipping pumps would be 200 ft (61 m) or more from the western edge of the least tern nesting area. These pumps would run continuously for 20 to 30 hours while tankers are unloading at the berth (about four times a week) and then run intermittently, except for a 24-hour period when the transfer tank would be cleared. A noise contour study showed that noise from the shipping pumps and other proposed Project equipment would extend into the least tern nesting area, resulting in noise levels ranging from 45 to 70 dB(A) (Navcon Engineering 2005a – see Appendix L.1). The highest noise levels were in the northwest part of the nesting area. Placement of a 26-ft (7.9-m) high sound wall barrier with a roof around the east and south sides of the shipping pumps and a 6-ft (1.8-m) block wall around the large transformers are part of the Project to reduce noise at the California least tern nesting site (Navcon Engineering 2006 – see Appendix L.3). Noise estimates from the large transformers were included in the noise contour study (Navcon Engineering 2005a). The VFD transformers produce a low level of sound that is not expected to increase the overall noise from the proposed Project in the least tern nesting area.

Ambient noise was measured at one-hour intervals over a seven-day period in August 2005 at the north and south ends of the western least tern nesting site boundary (Navcon Engineering 2005b – see Appendix L.2). These measurements showed the average noise levels varied between 50 and 60 dB(A) during the day (about 7 AM to 12 AM) and between 40 and 45 dB(A) at night. The maximum noise recorded was 88.2 dB(A).

A 3D noise modeling study (Navcon Engineering 2006 – see Appendix L.3) combined the ambient and predicted proposed Project noise levels, and noise contour maps were generated using the Community Noise Exposure Level (CNEL). The results of this modeling showed that operation of facilities at Tank Farm Site 1 would increase ambient noise at the least tern nesting site by less than 1 dB(A) over most of the site and by less than 2 dB(A) in a small area along the western side of the nesting site. When the shipping pumps are not running, the terns would be exposed only to background ambient noise. Short term noise events at the existing adjacent marine container terminal currently exceed the average ambient noise level of 50 to 60 dB(A). Noise from container loading and unloading and trucks (including horns and gate activities) does not deter least tern nesting at Pier 400. The small, intermittent increase in noise resulting from operation of Tank Farm Site 1 would not adversely

1 affect the California least tern. The species has continued to nest at this location,  
2 even with periodic high noise levels associated with existing activities on Pier 400.

3 *Lighting.* Lighting along the eastern security fence would be adjacent to the  
4 California least tern nesting area. These lights would have directional beams  
5 pointing away from the nesting area but would add an increment to the general night  
6 light levels at the nesting site from the existing lighting for the APM Container  
7 Terminal to the north. Tank stairs, platforms, and instrument locations would have  
8 lights with shields and deflectors to direct light at the work area only. These lights  
9 would be smaller, located at distances of 120 ft (36.6 m) or greater from the nesting  
10 site, and unlikely to affect light levels at the nesting site. Proposed Project lighting  
11 along the eastern side of Tank Farm Site 1 would result in an increase in nighttime  
12 light levels in the western part of the nesting site that would range from negligible in  
13 the north where the larger container terminal lights are located to small in the south  
14 near the Pier 400 Face D dike. This small increase in light levels would only extend  
15 a short distance into the least tern nesting site, primarily at the southwestern corner.  
16 The nesting site is approximately 850 ft (259 m) wide, and a low level of increased  
17 light along the western edge would have a low potential to disturb least tern roosting  
18 at night or to increase predation on the least terns.

19 *Predation.* The buildings, containment dikes, security fence, light poles, sound  
20 barrier wall, and the closest tanks (50,000 bbl and one 250,000 bbl) could provide  
21 perches for birds, such as American crow, common raven, American kestrel, black-  
22 crowned night heron, and gulls, that may prey on least tern eggs, young, or adults  
23 (Keane Biological Consulting 2003). The locations of structures that could be used  
24 as perches have been discussed with biological resource agencies during the proposed  
25 Project planning process and some structures were relocated to minimize impacts.  
26 The least tern nesting site is approximately 7.5 ft (2.3 m) higher (elevation 23.5 ft  
27 MSL) than the ground surface at Tank Farm Site 1 (elevation 16 ft MSL), and the  
28 tanks would have a height of 51.5 ft (15.7 m) above ground level (elevation 67.5 ft  
29 MSL at top). The closest of these tanks would be 120 ft (36.6 m) from the least tern  
30 nesting site and 44 ft (13.4 m) higher than the nesting site. The light poles would be  
31 30 ft (9.1 m) tall, making them 22.5 ft (6.9 m) higher than the nesting site.  
32 Approximately five of these poles would be within 200 ft (61 m) of the nesting site.  
33 The Motor Control Building would be 16 ft (4.9 m) high, or 8.5 ft (2.6 m) higher than  
34 the nesting site. The sound barrier wall around the pumps would be 20 ft (6 m) tall,  
35 and only a portion of it would provide potential vantage points for viewing of the  
36 least tern nesting site by perching predators (Motor Control Building and 50,000 bbl  
37 tank are between the wall and the nesting site). Thus, the proposed project could  
38 increase predation on the least tern that could affect their population size. The  
39 security fence and containment dikes would be only 0.5 ft (0.2 m) higher than the  
40 least tern nesting site and, thus, would not provide perching vantage points for  
41 predators, considering that the chick fence is about 3 ft (0.9 m) high along the  
42 western edge of the nesting site.

43 *Human Presence.* During operations of the Marine Terminal and Tank Farm Site 1,  
44 the level of human presence would be low with little activity near the least tern  
45 nesting site. Vehicular traffic on the perimeter access road in Tank Farm Site 1  
46 would be infrequent. Plains personnel would periodically inspect the tanks, but this  
47 activity would be of short duration (a few hours at the most) and would be over 120 ft  
48 (61 m) away from the nesting site. This level and location of human activity is

1 unlikely to have any effect on the least tern. The Port has an existing worker education  
2 program regarding the California least tern that would apply to the Pacific Los Angeles  
3 Marine Terminal LLC (PLAMT) personnel.

4 *Vessel Traffic.* Project-related vessel traffic entering the Outer Harbor would use the  
5 existing Glenn Anderson Ship Channel to reach the berth on Pier 400. The increase  
6 of up to 201 vessel calls per year would represent a 7 percent increase over the  
7 CEQA Baseline entering Los Angeles Harbor and a 3 percent increase over the  
8 CEQA Baseline for Los Angeles-Long Beach Harbor. Compared to the NEPA  
9 Baseline, which assumes that a maximum of 267 new vessels calls would occur to  
10 satisfy demand and could be accommodated by existing facilities, project-related  
11 vessel traffic would be 66 calls per year less than that baseline. The small increase  
12 compared to the CEQA Baseline would have a low potential to adversely affect least  
13 tern foraging since this species primarily uses shallow water areas for foraging,  
14 although some deeper water areas, both inside and outside the Harbor, are sometimes  
15 used for foraging (Keane Biological Consulting and Aspen Environmental Group  
16 2004). Project-related vessel calls would have no effects on least tern foraging under  
17 NEPA.

18 *Visual.* The visual presence of the tanks and other facilities at Tank Farm Site 1 has  
19 the potential to affect California least terns. A visual simulation of the views from  
20 ground level at the southeastern corner, center, and northwest corner of the nesting  
21 site shows what the tanks would look like to least terns on the nesting site  
22 (Figure 3.3-1). When close to the chick fence along the west side of the nesting site,  
23 the fence would at least partially screen the view of the tanks with the exception of  
24 the top edge of the 50,000 bbl and 250,000 bbl tanks. From the center of the nesting  
25 area both tanks would be visible but only take up a small fraction (less than  
26 4 percent) of the skyline. Containers at the terminal to the north of the proposed  
27 Project site also would be visible. From the southeast corner of the nesting site, the  
28 two tanks would appear small and low and take up only a fraction of the skyline. In  
29 general, least terns do not nest in the direct vicinity of high structures such as solid  
30 walls and buildings. The distance of the tanks from the nesting site and the low  
31 elevation of the containment berms around the tanks (0.5 ft [0.2 m] higher relative to  
32 the elevation of the nesting site) would not infringe on the open vista of nesting sites  
33 normally occupied by least terns (see Figure 3.3-1).

34 *Oil Spills.* Small volumes (less than 238 bbl) of crude oil spilled into Harbor waters  
35 during vessel transit within the Port could occur with a frequency of one per 217  
36 years, assuming all proposed Project vessels are double hulled (see Section 3.12,  
37 Hazards, Table 3.12-7 in **Impact RISK-2.1**). Moderate spills (238-1,200 bbl) would  
38 occur with a frequency of one per 108,155 years. Spills greater than 1,200 bbl would  
39 occur less than once in two million years and the likelihood of occurrence during the  
40 proposed Project is remote. Spills of petroleum hydrocarbons into Harbor waters  
41 from the berth during unloading of crude oil would occur at a frequency of one per  
42 460 years for spills less than 238 bbl and at a frequency of one per 17,100 years for  
43 spill of 238-2,380 bbl. The frequency of marine gas oil (MGO) spills during barge  
44 transit from the Inner Harbor to the Outer Harbor would be one per 725 years (less  
45 than 238 bbl) and less than one per seven million years for a large spill. Small to  
46 moderate spills of oil into Harbor waters during vessel transit to Berth 408 would be  
47 in the Outer Harbor and could drift into the Cabrillo Shallow Water Habitat before  
48 being contained and cleaned up. If such an accident were to occur when California

1 least terns were present and foraging in that area, oil could adhere to their feathers  
2 and cause mortality or sublethal effects by changing the insulation qualities of the  
3 feathers, through ingestion during preening, or by rubbing off onto eggs or chicks.  
4 Such effects could reduce survival of affected individuals, including eggs or chicks,  
5 and thus the southern California nesting population size. Spills of crude oil or MGO  
6 during unloading at Berth 408 would be contained within the boom deployed around  
7 the vessel/barge and would not reach the shallow water foraging area used by the  
8 least terns.

9 Spills from Pipeline Segment 1 suspended on the causeway bridge could enter the  
10 Pier 300 Shallow Water Habitat, the Seaplane Lagoon, or the channel adjacent to the  
11 Pier 400 causeway (west side) due to pipeline rupture. Spills from Pipeline segment  
12 4 where it crosses over Dominguez Channel could also result in oil reaching Harbor  
13 waters. Spills from proposed Project pipelines that could reach Harbor waters would  
14 occur at a frequency of less than one per one million years (See Figure 3.12-11 in  
15 **Impact RISK-2.2**) and thus, the likelihood of occurrence during the proposed Project  
16 is remote. Oil spills from the tanks or pipelines on land would be contained and  
17 cleaned up before reaching Harbor waters in accordance with SPCC requirements  
18 and the proposed Project oil spill response plan (see below). The California least tern  
19 nesting site is also at a higher elevation than Tank Farm Site 1. Thus, the California  
20 least tern nesting site would not be affected by those oil spills, but foraging least terns  
21 could be affected by spills entering the Pier 300 Shallow Water Habitat and Seaplane  
22 Lagoon as described above.

23 Oil spills could also occur during proposed Project vessel transit in offshore waters.  
24 Small spills of less than 238 bbl would occur with a frequency of one per 319 years  
25 while 10 to 30 percent of the vessel cargo could be spilled once in 911 years.  
26 Spillage of the entire cargo (2,500,000 bbl) could occur once in 1,063 years (see  
27 Table 3.12-5 in **Impact RISK-2.1**). Offshore spills would not affect the California  
28 least tern because none would be present in these habitats.

### 29 **California Brown Pelican**

30 Normal operation of the proposed Project facilities is not likely to adversely affect  
31 brown pelicans in the Harbor because no foraging, roosting, or resting habitat would  
32 be lost or disturbed. Movement of tankers to and from the berth could briefly  
33 interfere with foraging, but this would not be any different than disturbances caused  
34 by other vessel traffic in the Harbor. About four vessels per week are expected to use  
35 the proposed Marine Terminal. This level of activity would not adversely affect  
36 pelican foraging.

37 As described above for the California least tern, oil spills are unlikely to occur due to  
38 the safety measures that are part of the proposed Project. If a spill were to occur that  
39 enters Harbor waters, however, oil could adhere to the feathers of brown pelicans as  
40 they dive into the water or while resting on the water surface. This could affect their  
41 thermoregulation and cause physiological stress when ingested during preening.  
42 Brown pelicans do not nest in the Harbor area so the oil would not affect their eggs,  
43 chicks, or breeding success. The number of brown pelicans that could be affected  
44 would depend on the time of year that the spill occurred, the size of the spill, and the





1 time for cleanup to be completed. The abundance of brown pelicans in the Harbor is  
2 greatest in the summer with a maximum of 1,181 observed in July 2000 (MEC and  
3 Associates 2002). California brown pelicans have a large range (west coast of the  
4 U.S. and into Mexico, with breeding at offshore islands in southern California and  
5 Mexico) so only a small proportion of the population might be affected by an oil spill  
6 in the Port. In addition, not all the individual brown pelicans in the Harbor would be  
7 affected by an oil spill because the oil would not spread over the entire water surface  
8 in the Harbor before being contained and cleaned up, and spill containment and  
9 cleanup activities would minimize brown pelican use of the spill area. For spills in  
10 open water away from the coast and coastal islands, few if any California brown  
11 pelicans would be affected due to their sparse distribution over open waters. Oil  
12 spills on land would not affect this species.

### 13 **Western Snowy Plover**

14 Operation of the proposed Project facilities on Pier 400 and Terminal Island would  
15 not interfere with western snowy plover migration. The storage tanks, associated  
16 facilities, and low level of human presence would not impede migration flights, and  
17 noise from the facilities at Tank Farm Site 1 on Pier 400 would not adversely affect  
18 the few individuals that would stop at the California least tern nesting site during  
19 their migration. The shipping pumps would be the primary source of noise, but the  
20 sound wall around them would reduce noise to levels that would not affect the birds.  
21 Furthermore, the pumps may not be running when the western snowy plovers are  
22 present. Oil spills into Harbor waters would not affect this species while at the least  
23 tern nesting site because the individuals are not using the water surface. For the  
24 individuals wintering at Cabrillo Beach, oil spills into Harbor waters from vessels in  
25 transit to Berth 408 are unlikely to reach the beach due to rapid containment and  
26 cleanup of such spills.

### 27 **Other Special Status Species**

28 Operation of Tank Farm Site 2 on Terminal Island would not affect listed or special  
29 status species since none are known to be present at this site. Peregrine falcons could  
30 forage in this area, but those nesting in the Inner Harbor are adapted to the industrial  
31 environment and would not be affected by operation of the proposed facilities. An  
32 estimated 201 vessel calls per year to the Port would result from the proposed Project  
33 by 2025. Underwater sound from these vessels or tug boats used to maneuver them  
34 to the berth would add to the existing vessel traffic noise in the Harbor. Adding one  
35 vessel call every 1 to 2 days is not expected to adversely affect marine mammals in  
36 the Outer Harbor because the transit distance would be short, few individuals would  
37 be affected, and sea lions, representing the main species likely to be encountered,  
38 would be expected to avoid sound levels that could cause damage to their hearing.  
39 Vessels approaching Angels Gate would pass through nearshore waters, and sound  
40 from their engines and drive systems could affect marine mammals that happen to be  
41 nearby.

42 The addition of 201 proposed Project vessel calls to the Port would have a low  
43 probability of harming endangered, threatened, or species of special concern such as  
44 marine mammals and sea turtles. Specifically, in regards to vessel collisions with  
45 whales in California coastal waters, the large amount of vessel traffic along the coast  
46 has resulted in few (less than three per year on average) reported strikes over the past

1 25 years. Vessel speed seems to influence the incidence of whale/ship collisions, and  
2 most strikes, if any were to occur, would likely be fatal to the whales because  
3 unmitigated vessel speeds are generally above 13 knots in the coastal shipping lanes.  
4 As discussed in Section 3.3.2.5, NOAA Fisheries recommends that speed restrictions  
5 in the range of 10 to 13 knots be used, where appropriate, feasible, and effective, in  
6 areas where reduced speed is likely to reduce the risk of ship strikes and facilitate  
7 whale avoidance.

8 A small or moderate oil spill within the Harbor could affect a few black skimmer  
9 individuals because this species forages at the water surface, as described for the  
10 California least tern. However, the number affected, if any, would be a small  
11 proportion of the population because few nest in the Harbor, and their population  
12 would not be affected by a small loss of individuals. None of the other special status  
13 birds in the Project area use the water surface and, thus, would not be affected by oil  
14 spills on the water. Effects on marine mammals would be minor, partly because few  
15 are present in the area where spills could occur and rapid containment and cleanup  
16 would reduce the potential for effects, even for a moderate spill. Sea lions would be  
17 the species most likely to come into contact with spilled oil in the Outer Harbor. Oil  
18 can cause temporary irritation of pinniped (seal and sea lion) eyes, while oil adhering  
19 to the fur of species that rely on blubber for insulation (e.g., California sea lions and  
20 harbor seals) apparently causes no signs of stress (Geraci and Smith 1977).

21 Oil spills in offshore waters would be unlikely to affect sea turtles because few, if  
22 any, would encounter such a spill and no foraging or breeding habitat would be  
23 affected. (Sea turtles are rare visitors along the coast.) Marine mammals in offshore  
24 waters could come in contact with spilled oil, although cetaceans may avoid oil  
25 slicks, with only minor effects such as a temporary discoloration of the skin (Geraci  
26 and St. Aubin 1980). None of the other special statute birds would be present over  
27 offshore waters.

### 28 ***Oil Spill Response***

29 As described in Section 3.12.2.1, all Port terminals and vessels calling at those  
30 terminals are required to have oil spill response plans and at least some capability to  
31 respond to a spill. Commercial contractors handle most oil spills in the Harbor and  
32 have a variety of response services and equipment (e.g., boats, skimmers, booms, and  
33 pumps) to handle all types of spills. In addition, LAHD has established conditions  
34 that are applied to all new and renewed Marine Oil Terminal leases. These include  
35 provisions for the inspection, control, and cleanup of leaks from aboveground tank  
36 and pipeline sources, thereby minimizing the potential for impacts of a spill to special  
37 status species.

### 38 ***ESA Preliminary Determination***

39 In summary, the USACE has preliminarily determined that construction (see Section  
40 3.3.4.3.1.1, Impact BIO-1.1) and operation of the proposed Project may affect the  
41 California least tern and the California brown pelican. Additionally, the USACE has  
42 preliminarily determined the proposed Project would not affect the western snowy  
43 plover. The USACE will initiate consultation with USFWS pursuant to ESA  
44 Section 7.



### **CEQA Impact Determination**

As described above, operation of the proposed Project could have significant impacts to the California least tern through increased predation and oil spills into Harbor waters that would reduce the population size. An increase in predation on least terns due to the proposed Project would be a significant impact. Any oil spills into Harbor waters that occur during April through August would have the potential to cause significant, unavoidable impacts to least terns. Offshore oil spills would have no impacts to the least tern, as described above. With the sound barrier in place around the shipping pumps and transformers (as part of proposed Project), noise and vibration from the shipping pumps, combined with other proposed Project equipment noise, would have a less than significant impact on the least terns. Proposed Project noise would be relatively constant while background noise would fluctuate with peaks and dips related to other activities on Pier 400.

Impacts of oil spills to the California brown pelican would likely be less than significant because few individuals in the population (California and Mexico) would be affected, and oil spills in the Port would not affect breeding success of the species because none breed in the Harbor area. Because of their generally coastal distribution, few if any individuals would be affected by offshore oil spills. In the worst case, however, a number of brown pelicans could be affected by an oil spill (in the Harbor or offshore) with significant, unavoidable impacts.

Impacts of oil spills to the black skimmer in the Harbor would be less than significant because few, if any, individuals in the breeding population would be affected.

No impacts to the western snowy plover are anticipated from oil spills in the Harbor for the reasons described above. Impacts of oil spills to marine mammals would be less than significant because effects would be temporary and would not cause mortality. Impacts to sea turtles would also be less than significant because few, if any, individuals would be affected and no mortality would be expected.

Impacts to other special status bird species would be less than significant for the reasons described above.

Project-related vessel traffic may affect some marine mammals. Impacts of increased underwater sound would be less than significant because few individuals would be affected, the animals would likely move away from the sound as it increases in intensity from the approaching vessel, exposure would be of a short duration that would not adversely affect individuals. Project-related oil tankers transiting the coastal waters of southern California could potentially cause harm to endangered, threatened, or species of special concern such as marine mammals and sea turtles from vessel collisions. Impacts of project-related vessel traffic on marine mammals and sea turtles would be considered less than significant because the probability of vessel strikes is low and proposed Project vessel strikes would not be expected to occur. As discussed above, less than three vessel strikes with whales are reported on average per year for the California coast. Very few ship strikes involving pinnipeds have been reported over the past 28 years by the Santa Barbara Marine Mammal Center (1976–2004). No sea turtle-ship strikes have been reported in the area, although an olive ridley sea turtle stranded in Santa Barbara in 2003 showed signs of blunt force trauma consistent with a vessel strike (Santa Barbara Marine Mammal

1 Center 1976–2004). No collisions have been reported between any oil tankers and  
2 any cetaceans or sea turtles in the region (Cordaro 2002), although an oil supply  
3 vessel struck and presumably killed an adult male northern elephant seal (*Mirounga*  
4 *angustirostris*) in the Santa Barbara Channel in June 1999 (Minerals Management  
5 Service 2001). MGO barges for the proposed Project would be traveling at slow  
6 speeds within the Harbor and would have less than significant impacts to harbor seals  
7 and California sea lions.

8 However, although the likelihood of a project-related collision is very low, it could  
9 occur and cause an impact to species listed under the ESA, especially blue whales.  
10 Therefore, although considered less than significant because of the low probability of  
11 vessel strikes, any increase in vessel traffic caused by the proposed Project may  
12 incrementally increase the potential for whale strikes.

### 13 *Mitigation Measures*

#### 14 *California Least Tern*

15 To reduce the potential for significant impacts from predation and oil spills, the  
16 following mitigation measures are proposed.

17 **MM BIO-1.2a: Structure Perches.** The portions of all structures (buildings, lights,  
18 etc.) at the proposed Tank Farm Site 1 on Pier 400 that have a direct line of sight to  
19 the least tern nesting site shall be designed to prevent birds from perching on them.  
20 The prevention measures cannot be specified at this time but shall be those approved  
21 by the USFWS at the time of installation (e.g., Nixalite currently used on high mast  
22 lights) and shall be monitored during the least tern nesting season to verify that  
23 predatory birds are not perching on proposed Project structures and to identify any  
24 repairs needed to keep the measures in good working order. Any such repairs shall  
25 be implemented immediately (i.e., within one day while least terns are present).

26 **MM BIO-1.2b: Predator Control.** A qualified biologist shall monitor Tank Farm  
27 Site 1 for predators during the least tern nesting season. Any predators found will be  
28 controlled in coordination with CDFG and USFWS.

29 **MM BIO-1.2c: Oil Spill Containment.** If a project-related oil spill occurs during  
30 the least tern nesting season and has the potential to enter the Pier 300 Shallow Water  
31 Habitat, booms shall be deployed to prevent oil from entering this important foraging  
32 area. The applicant shall ensure quick deployment of oil booms at the south entrance  
33 of the Pier 300 Shallow Water Habitat or at the causeway gap bridge, either through  
34 storage of booms at the south entrance to the Pier 300 Shallow Water Habitat and at  
35 the causeway gap bridge or through deployment at these locations in accordance with  
36 the approved oil spill response plan.

37 **MM BIO-1.2d: Security Lighting.** Security lighting standards on the eastern side  
38 of Tank Farm Site 1 near the least tern nesting site shall be no greater than 30 ft (9.1  
39 m) in height and directed away from the nesting site.

40 **MM BIO-1.2e: Operations Personnel Environmental Training.** The Port shall  
41 provide environmental training by a qualified biologist to all operational workers at  
42 the PLAMT Pier 400 Marine Terminal and Tank Farm Site 1. This shall include, but

1 not be limited to, information about the California least tern (e.g., seasonal presence,  
2 pictures of the birds, and regulatory protections) and measures required to avoid or  
3 minimize the potential for adverse effects to the species. The latter measure shall  
4 include placement of food in sealed containers and daily disposal of all food wastes  
5 in sealed containers, with off-site disposal at regular intervals; prohibition on  
6 bringing pets or animals of any kind to work on Pier 400; and scheduling significant  
7 maintenance/construction activities that would occur near the nesting site for the  
8 period between September and March.

9 *California Brown Pelican*

10 **MM BIO-1.2c** would apply for oil spill impacts within the Harbor for the California  
11 brown pelican, but no mitigation is feasible for significant oil spill impacts to the  
12 California brown pelican outside of the Pier 300 Shallow Water Habitat.

13 *Other Species*

14 No mitigation is needed for less than significant impacts. However, although the  
15 likelihood of a collision between a project-related vessel and marine mammals is  
16 very low and is considered less than significant, the following measure would further  
17 reduce potential impacts:

18 **MM BIO-1.2f: Vessel Speed Reduction Program.** All ships calling (100 percent)  
19 at Berth 408 shall comply with the expanded VSR Program of 12 knots between 40  
20 nm from Point Fermin and the Precautionary Area from Year 1 of operation.

21 The average cruise speed for a marine oil tanker ranges from about 18 to 25 knots;  
22 depending on the size of the ship (larger ships generally cruise at higher speeds). As  
23 discussed previously, NOAA Fisheries recommends that speed restrictions in the  
24 range of 10 to 13 knots be used. Slowing this speed to 12 knots within 40 nm of the  
25 Port would reduce the likelihood of collisions consistent with NOAA guidance. The  
26 40 nm zone extends to the Channel Islands area.

27 *Residual Impacts*

28 *California Least Tern*

29 Implementation of **MM BIO-1.2a** and **MM BIO-1.2b** would reduce impacts on the  
30 least tern nesting area from predatory birds and other animals to less than significant.  
31 Implementation of **MM BIO-1.2d** and **MM BIO-1.2e** would further reduce the  
32 potential for impacts from lighting and human activity.

33 Implementation of **MM BIO-1.2c** would reduce but not eliminate the potential for  
34 impacts of small or moderate oil spills on the least tern. There are no additional  
35 feasible mitigation measures that would reduce the potential for accidental oil spills  
36 to significantly affect the least terns when they are present and foraging in the area  
37 (e.g., during April through August). A small (e.g., up to 238 bbl) or larger oil spill,  
38 even though associated with a low probability of occurrence, that was not contained  
39 during the least tern nesting season could, therefore, result in significant and  
40 unavoidable impacts.

1 *California Brown Pelican*

2 Implementation of **MM BIO-1.2c** would reduce but not eliminate the potential for  
3 impacts of small or moderate oil spills on the brown pelican. There are no additional  
4 feasible mitigation measures that would reduce the potential for accidental oil spills  
5 to significantly affect the brown pelicans. A small (e.g., up to 238 bbl) or larger oil  
6 spill, even though associated with a low probability of occurrence, that was not  
7 contained could, therefore, result in significant and unavoidable impacts.

8 *Other Species*

9 Less than significant impacts would occur. Implementation of **MM BIO-1.2f** would  
10 further reduce the potential for impacts of vessel collisions with whales.

11 **NEPA Impact Determination**

12 As described for CEQA, operation of the proposed Project could have significant  
13 impacts to the California least tern through increased predation and oil spills into  
14 Harbor waters. Oil spills into Harbor waters during vessel transits that occur from  
15 April through August would have a low potential to cause significant unavoidable  
16 impacts to California least terns, because of the low frequency of such spills relative  
17 to the NEPA Baseline; one small spill per 217 years for the proposed Project  
18 compared to one per 184 years for the NEPA Baseline, and one moderate spill per  
19 108,155 years for the proposed Project versus one per 91,726 years for the NEPA  
20 Baseline. Offshore oil spills would have no impact to the least tern due to their  
21 nearshore distribution. With the sound barriers in place (as part of the proposed  
22 Project), noise and vibration from the shipping pumps, combined with other proposed  
23 Project equipment noise, would have a less than significant impact on the least terns,  
24 when present. Proposed Project noise would be relatively constant while background  
25 noise would fluctuate with peaks and dips related to other activities on Pier 400. An  
26 increase in predation on least terns due to the proposed Project would be a significant  
27 impact.

28 Impacts of oil spills to the California brown pelican would likely be less than  
29 significant because few individuals in the population (California and Mexico) would  
30 be affected, and oil spills in the Port would not affect breeding success of the species  
31 since no nesting occurs in the Harbor complex. Because of their generally coastal  
32 distribution, few if any individuals would be affected by offshore oil spills. In the  
33 worst case, however, a number of brown pelicans could be affected by an oil spill (in  
34 the Harbor or offshore) with significant, unavoidable impacts.

35 Impacts to the black skimmer would be less than significant because few, if any,  
36 individuals in the breeding population would be affected.

37 No impacts to the western snowy plover are anticipated from oil spills in the Harbor  
38 for the reasons described above. Impacts of oil spills to marine mammals would be  
39 less than significant because effects would be temporary and would not cause  
40 mortality. Impacts to sea turtles would also be less than significant because few, if  
41 any, individuals would be affected and no mortality would be expected.

1 Impacts to other special status bird species, sea turtles, and marine mammals would  
2 be less than significant, as described for CEQA.

3 Project-related vessel traffic (66 vessels per year less than the NEPA Baseline) would  
4 have a lower potential for impacts on marine mammals because fewer vessels would  
5 enter the Harbor, and any impacts that did occur would be less than significant as  
6 described for CEQA.

### 7 *Mitigation Measures*

#### 8 *California Least Tern*

9 To reduce the potential for significant predator impacts, lighting and personnel  
10 impacts, and oil spill effects, **MM BIO-1.2a** through **BIO-1.2e** described for CEQA  
11 impacts would apply.

#### 12 *California Brown Pelican*

13 To reduce the potential for oil spill effects, **MM BIO-1.2c** described for CEQA  
14 impacts would apply.

#### 15 *Other Species*

16 No mitigation is needed, but implementation of **MM BIO-1.2f** would reduce the  
17 potential for project-related vessel strikes with marine mammals.

### 18 *Residual Impacts*

#### 19 *California Least Tern*

20 Implementation of **MM BIO-1.2a** and **MM BIO-1.2b** would reduce impacts on the  
21 California least tern nesting area from predatory birds and other animals to less than  
22 significant. Implementation of **MM BIO-1.2d** and **MM BIO-1.2e** would further  
23 reduce the potential for impacts from lighting and human activity.

24 Implementation of **MM BIO-1.2c** would reduce but not eliminate the potential for  
25 impacts of small or moderate oil spills on the least tern. There are no additional  
26 feasible mitigation measures that would reduce the potential for accidental oil spills  
27 to significantly affect the least terns when they are present and foraging in the area  
28 (e.g., during April through August). A small (e.g., up to 238 bbl) or larger oil spill,  
29 even though associated with a low probability of occurrence, that was not contained  
30 during the least tern nesting season could, therefore, result in significant and  
31 unavoidable impacts.

#### 32 *California Brown Pelican*

33 Implementation of **MM BIO-1.2c** would reduce but not eliminate the potential for  
34 impacts of small or moderate oil spills on the brown pelican. There are no additional  
35 feasible mitigation measures that would reduce the potential for accidental oil spills  
36 to significantly affect the brown pelicans. A small (e.g., up to 238 bbl) or larger oil

1 spill, even though associated with a low probability of occurrence, that was not  
2 contained could, therefore, result in significant and unavoidable impacts.

3 *Other Species*

4 Less than significant impacts would occur.

5 **Impact BIO-2.2: Operation of proposed Project facilities would have the**  
6 **potential to substantially reduce or alter a state-, federally-, or locally-**  
7 **designated natural habitat, special aquatic site, or plant community,**  
8 **including wetlands.**

9 ***Natural Habitats***

10 No locally-designated natural habitats or plant communities are present at the proposed  
11 Project sites, including the proposed Marine Terminal and Tank Farm Site 1, Tank  
12 Farm Site 2, or along the pipeline routes, except the California least tern SEA on Pier  
13 400. Operation of Tank Farm Site 1 would affect the California least tern nesting  
14 habitat (SEA) as described in **Impact BIO-1.2**. Shading from the berth structures  
15 over the water would be minimal because only the narrow walkways and trestles as  
16 well as the small AMP and AMECS platforms would result in shading compared to the  
17 solid deck structure of a wharf. Thus, the berth structures would not be expected to  
18 reduce or eliminate the growth of algae on the rock riprap of the shoreline at Berth 408.  
19 The pilings for the berth structures with the greatest light exposure could be colonized  
20 by marine algae. The resulting changes in the algal community would be minor and  
21 would not result in a reduction of a locally-designated plant community. No eelgrass  
22 beds, wetlands, or mudflats are present near the Marine Terminal site and, thus, would  
23 not be affected by operations activities. This includes the eelgrass beds near Cabrillo  
24 Beach and in the Pier 300 Shallow Water Habitat and Seaplane Lagoon. Normal  
25 operation of the proposed Project facilities would have no effects on terrestrial  
26 natural habitats or plant communities.

27 Proposed Project operations, including temporary holding and shipment of crude oil  
28 through underground pipelines to the Valero Refinery, would occur mostly on  
29 already-developed land and would not affect any natural habitats.

30 Oil spills during vessel transit within the Outer Harbor could reach the Cabrillo  
31 Shallow Water Habitat and eelgrass beds near Cabrillo Beach. Spilled oil is less  
32 likely to reach the eelgrass beds in the Pier 300 Shallow Water Habitat due to  
33 distance and the ability to more effectively boom this area off. Effects on the plants,  
34 if spilled oil were to reach them, would be adverse but of short duration (Committee  
35 on Oil in the Sea 2003, Okada 2001). Invertebrates within eelgrass beds would also  
36 be adversely affected with rapid recovery for most species (Jacobs 1980, Jewett and  
37 Dean 1997, Den Hartog and Jacobs 1980). The oil would float, toxic volatile  
38 components would evaporate or be diluted (Jordan and Payne 1980) before the oil  
39 reaches these areas, and the oil would be cleaned up immediately in compliance with  
40 SPCC requirements and the proposed Project OSCP, thereby reducing the potential for  
41 toxic effects. Oil spills in offshore waters would not reach any natural habitats before  
42 being cleaned up or weathering until toxic components had evaporated. Thus, oil  
43 spills could cause a substantial reduction or alteration of eelgrass habitats but would  
44 not substantially affect other natural habitats.

### **Essential Fish Habitat**

The impacts of proposed Project operations on EFH and fish listed in the FMPs are addressed below and in Appendix K.

Operation of proposed Project facilities would not reduce or substantially alter EFH. An increase of up to 201 vessel calls per year and changes in storm runoff from the tank farm sites would not adversely affect EFH species because few additional vessels (7 percent increase over CEQA Baseline) to no additional vessels (less than NEPA Baseline) would enter the Los Angeles Harbor each year and existing regulations to protect water quality would continue to minimize the input of pollutants to Harbor waters.

Small oil spills (e.g., less than 238 bbl) could occur with a frequency of once in 217 years during the life of the proposed Project during vessel transit within the Harbor, and moderate spills would occur once in 108,155 years. For unloading crude oil, the frequency of small oil spills would be once in 460 years, and moderate spills could occur once in 17,100 years. Spills greater than 1,200 bbl would occur less than once in two million years, and the likelihood of occurrence during the proposed Project (Section 3.12) is remote. The frequency of MGO spills during transit in the Harbor would be one per 725 years (less than 238 bbl) and less than one per seven million years for a larger spill. Small to moderate spills of oil into Harbor waters during vessel transit to Berth 408 would be in the Outer Harbor and could drift into the Cabrillo Shallow Water Habitat before being contained and cleaned up. The small to moderate spills that have a low probability to occur could have short-term effects on Coastal Pelagics FMP species such as the northern anchovy, Pacific sardine, Pacific mackerel, and jack mackerel because juveniles and adults of these fish are frequently near the water surface and some individuals could be exposed to soluble fractions of spilled oil until evaporation and dilution occurs. However, only a small proportion of these fish present in the Harbor are likely to be affected (see Appendix K; also see **Impact BIO-4.2**), particularly for oil spilled during unloading into the containment boomed area around the vessel/barge. All of these species also are abundant in nearshore waters outside the Harbor so that regional populations would not be reduced. The Pacific sanddab (Groundfish FMP) would not be adversely affected by an oil spill because the juveniles and adults remain on or near the bottom and the oil would float. Of these five species, only the northern anchovy spawns in the Harbor as well as outside the Harbor, and the planktonic eggs and larvae could be exposed to toxic components of spilled oil that dissolve in the water. However, the area affected would be a fraction of the entire Harbor, and the amount of eggs and larvae that could be adversely affected would not substantially reduce recruitment into the population.

Small to large oil spills could occur during offshore transit of proposed Project vessels (see Section 3.12, Table 3.12-5 in **Impact RISK-2.1**). Small oil spills (less than 238 bbl) would affect a very small area and the volatile, toxic components would rapidly evaporate so that few if any individuals of FMP species (particularly those near the water surface) would be affected. For larger spills, however, the oil could spread over a considerable area before dispersing and thus could affect more individuals of FMP species. Eggs, larvae, juveniles, and adults near the water surface and under the oil would be exposed to the water soluble fractions of the oil, many of which are toxic. However, evaporation and dilution would rapidly reduce the concentration of these substances in the water (Jordan and Payne 1980) so that effects

1 on large numbers of fish would be unlikely to occur. Furthermore, the low frequency  
2 of large spills (once in 911 to 1,063 years) would only affect the fish in one year out  
3 of many, and the long-term population size would not be reduced (Laur and  
4 Halderson 1996).

5 **CEQA Impact Determination**

6 No natural plant communities, eelgrass beds, wetlands, or mudflats are present at the  
7 proposed Project sites, and operations at those sites would result in no impacts under  
8 CEQA. Impacts of Tank Farm Site 1 operation to the California least tern SEA  
9 (nesting habitat) would be significant but feasibly mitigated as described in **Impact**  
10 **BIO-1.2**. Impacts of an oil spill in the Harbor that reached eelgrass beds would be  
11 significant in the short term. Operational activities on land and in the water would  
12 not substantially reduce or alter EFH for the reasons described above, and impacts  
13 would be less than significant. Small oil spills in the Harbor and offshore would  
14 have less than significant impacts to sustainable fisheries because few fish within  
15 managed populations would be affected and effects would be of short duration.  
16 Large offshore oil spills would also have less than significant impacts to sustainable  
17 fisheries for the reasons described above.

18 *Mitigation Measures*

19 No mitigation is required for less than significant impacts to EFH. **MM BIO-1.2c**  
20 would apply for oil spill impacts within the Harbor for eelgrass beds in the Pier 300  
21 Shallow Water Habitat, but no mitigation is feasible for significant oil spill impacts  
22 to the Cabrillo Beach eelgrass beds.

23 *Residual Impacts*

24 Residual impacts to EFH would be less than significant. Implementation of **MM**  
25 **BIO-1.2c** would reduce but not eliminate the potential for impacts of oil spills on  
26 eelgrass beds. There are no additional feasible mitigation measures that would  
27 reduce the potential for accidental oil spills to significantly affect eelgrass beds. Oil  
28 spills, even though associated with a low probability of occurrence, that were not  
29 contained could, therefore, result in significant and unavoidable impacts.

30 **NEPA Impact Determination**

31 No natural plant communities, eelgrass beds, wetlands, or mudflats are present at the  
32 proposed Project site, and operations at those sites would result in no impacts under  
33 NEPA. Impacts to the California least tern SEA (nesting habitat) would be  
34 significant but feasibly mitigated as described in **Impact BIO-1.2**. Increased use of  
35 other terminals in the San Pedro Bay Ports for delivery of oil under the NEPA  
36 Baseline would not occur with the proposed Project, and all vessels transporting  
37 project-related oil would use proposed new Berth 408. Impacts of an oil spill in the  
38 Harbor that reached eelgrass beds would be significant in the short term. Operational  
39 activities on land and in the water would not substantially reduce or alter EFH for the  
40 reasons described above, and impacts would be less than significant. Compared to  
41 the NEPA Baseline, the number of tankers entering the Harbor would be 66 less than  
42 the baseline, and oil spills would occur less frequently than under baseline  
43 conditions, resulting in no impacts.



### *Mitigation Measures*

No mitigation is required for less than significant impacts to EFH. **MM BIO-1.2c** would apply for oil spill impacts within the Harbor for eelgrass beds in the Pier 300 Shallow Water Habitat, but no mitigation is feasible for significant oil spill impacts to the Cabrillo Beach eelgrass beds.

### *Residual Impacts*

Residual impacts to EFH would be less than significant. Implementation of **MM BIO-1.2c** would reduce but not eliminate the potential for impacts of oil spills on eelgrass beds. There are no additional feasible mitigation measures that would reduce the potential for accidental oil spills to significantly affect eelgrass beds. Oil spills, even though associated with a low probability of occurrence, that were not contained could, therefore, result in significant and unavoidable impacts.

### **Impact BIO-3.2: Operation of proposed Project facilities would not interfere with wildlife migration/movement corridors.**

No known terrestrial wildlife or aquatic species migration corridors are present in the proposed Project area, including the tank farm sites. The California least tern is a migratory bird species that nests on Pier 400 adjacent to Tank Farm Site 1, and operation of proposed Project facilities at that site (and at Tank Farm Site 2) is not expected to interfere with migration of this species to and from this nesting site. This species has continued to migrate to nesting sites within the Port that are adjacent to developed terminals for over 30 years. Movement to and from foraging areas in the Harbor would not be affected by the proposed Project facilities since the least terns currently fly over existing active terminals to reach foraging areas. Other operations-related effects of the proposed Project on least terns are addressed in **Impact BIO-1.2**. Movement of other migratory birds in the Harbor would not be affected by the proposed Project facilities because no movement corridors would be blocked.

### **CEQA Impact Determination**

No wildlife movement or migration corridors on land or in the water would be affected by the proposed Project for the reasons described above, resulting in no impacts under CEQA.

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

No impact.

### **NEPA Impact Determination**

No wildlife movement or migration corridors on land or in the water would be affected by the proposed Project for the reasons described above, resulting in no impacts under NEPA.

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 No impact.

5 **Impact BIO-4.2: Proposed Project operations, including accidental oil**  
6 **spills and introduction of invasive species, have the potential to**  
7 **substantially disrupt local biological communities.**

8 *Oil Spills*

9 Accidental oil spills during operations, described above under **Impact BIO-1.2**,  
10 could also affect other marine biological resources such as marine birds, fish, and  
11 intertidal invertebrates through direct contact with the oil (physical effects) or toxic  
12 effects of components in the oil (particularly the lighter, soluble/volatile  
13 components). Cleanup of spilled oil could have further impacts on these organisms  
14 through direct removal or toxicity of cleaning agents. The amount of habitat and  
15 numbers of organisms affected would depend on the size of the spill, type of oil,  
16 season, and oceanographic conditions. Small spills (e.g., up to 238 bbl) during vessel  
17 transit in the Port could occur with a frequency of one per 217 years, assuming all  
18 proposed Project vessels are double hulled (see Section 3.12, Table 3.12-7 in **Impact**  
19 **RISK-2.1**). Moderate spills (238-1,200 bbl) would occur with a frequency of one per  
20 108,155 years. Spills greater than 1,200 bbl would occur less than once in two  
21 million years, and the likelihood of occurrence during the proposed Project is remote.  
22 Spills of petroleum hydrocarbons into Harbor waters from the berth during unloading  
23 of crude oil would occur at a frequency of one per 460 years for spills less than 238  
24 bbl and at a frequency of one per 17,100 years for spill of 238-2,380 bbl. The  
25 frequency of MGO spills during barge transit from the Inner Harbor to the Outer  
26 Harbor would be one per 725 years (less than 238 bbl) and less than one per seven  
27 million years for a larger spill.

28 Small to moderate spills of oil into Harbor waters during vessel transit to Berth 408  
29 would be in the Outer Harbor and would likely remain there as containment and  
30 cleanup would be rapid in compliance with SPCC requirement and the proposed  
31 Project OSCP. Spills at the tank farms would not reach Harbor waters due to the  
32 containment berms around the tanks that are part of the proposed Project design.  
33 Because the pipelines are buried in the ground, except at the Pier 400 causeway gap  
34 and over Dominguez Channel, oil spills from the buried segments would have a very  
35 low probability of entering Harbor waters (see Section 3.12, **Impact RISK-2.2**).  
36 Spills from the short, above-ground segments could enter Harbor waters with a  
37 frequency of less than once in over a million years (see Section 3.12, Figure 3.12-11  
38 in **Impact RISK-2.2**).

39 Intertidal invertebrates would be affected if an oil slick contacted the shoreline  
40 (primarily riprap within the Harbor) and wharf pilings. However, the amount of such  
41 habitat that could be affected by a small to moderate spill from vessels in transit to  
42 Berth 408 would be a small proportion of that habitat present in the Harbor because  
43 the spill would be in an open area of the Outer Harbor where it could be contained

1 before reaching the shoreline. For a spill during unloading of tankers at Berth 408,  
2 the containment boom around the vessel/barge would prevent oil from reaching the  
3 shoreline. After cleanup, the disturbed area would be recolonized by invertebrates  
4 from planktonic eggs and larvae or movement from adjacent areas. Based on  
5 experimental removal of intertidal invertebrates, recovery would be expected within a  
6 few years (MEC 1988). Thus, oil spills in the Outer Harbor would not substantially  
7 disrupt local intertidal invertebrate communities. Although the probability of an oil  
8 spill from proposed Project pipelines is low, oil spilled into waters of the Inner  
9 Harbor would affect intertidal invertebrates over a larger area than a spill in the Outer  
10 Harbor because the narrow channels and slips have a larger amount of shoreline  
11 relative to the amount of surface water. Therefore, an oil spill would reach more  
12 shoreline before being contained and cleaned up. In a worst case, a substantial  
13 amount of intertidal habitat could be affected by a spill.

14 Subtidal benthic invertebrate communities are unlikely to be affected by an oil spill  
15 because the oil would float on the water surface, soluble components would be  
16 diluted before reaching the bottom, and cleanup would be rapid. The small amount  
17 of weathered oil that was not immediately cleaned up could sink to the bottom as tar  
18 balls that would either drift along the bottom or become incorporated into the  
19 sediments. The more toxic components would not be present in this weathered oil,  
20 and tar balls on the bottom would not substantially disrupt benthic invertebrate  
21 communities.

22 Planktonic organisms under the slick could be affected by reduced light penetration  
23 for photosynthesis (phytoplankton) or as a result of toxic soluble components of the  
24 oil (phytoplankton and zooplankton). Exposure of these organisms to the oil would  
25 be of short duration and limited to the immediate vicinity of the slick because these  
26 organisms move with the currents throughout the Harbor and cleanup would be  
27 immediate in compliance with SPCC requirements and the project-specific OSCP.  
28 Furthermore, planktonic organisms have a high naturally occurring mortality rate,  
29 coupled with high reproductive rates (Dawson and Pieper 1993) which allow for  
30 rapid recovery from small, localized impacts. Thus, the Outer Harbor plankton  
31 communities would not be substantially disrupted.

32 Fish in the water column are mobile and can move away from the crude oil spill and  
33 cleanup disturbance. Thus, few if any individuals would be affected, and fish  
34 communities would not be substantially disrupted. However, for marine birds  
35 (excluding those special status species addressed in **Impact BIO-1.2**) loss of  
36 substantial numbers due to a moderate oil spill, even though of low probability, could  
37 have long-term, adverse effects on population size due to their low reproductive  
38 rates. Gulls are the most numerous group of marine birds present in the Harbor  
39 (MEC and Associates 2002) and, thus, would be the most likely to be affected.  
40 These birds often rest on the water surface and could come into contact with oil on  
41 the surface. Other bird species, for which a small proportion of their regional  
42 populations could be affected by an oil spill in the Harbor, would not be substantially  
43 affected.

44 Oil spills from tankers traveling within the Outer Harbor could reach the Cabrillo  
45 Shallow Water Habitat before cleanup is complete. However, oil floating on the  
46 surface would not alter this habitat, and effects on fish and invertebrates would be as

1 described above. Spilled oil would be less likely to enter the Pier 300 Shallow Water  
2 Habitat due to the greater distance and channels to be followed.

3 Spills of MGO during barge transit within the Harbor are unlikely to occur, but if one  
4 did occur, local marine communities could be substantially disrupted. MGO is a  
5 distillate produce from crude oil that contains polycyclic aromatic hydrocarbons  
6 (PAHs) and is toxic to aquatic organisms (BP Marine 2004, Koyama and Kakuno  
7 2004). Thus, the potential for adverse effects on marine communities, particularly  
8 along the shoreline and in the upper part of the water column, would be greater than  
9 for a crude oil spill. Effects of an MGO spill, however, would be short term as  
10 recovery would be expected occur within a few years for intertidal invertebrates and  
11 in less time for plankton and fish due to rapid reproduction and recruitment. MGO  
12 spills during unloading at Berth 408 would be contained by the boom around the  
13 barge and would not result in a substantial disruption of local marine communities.

14 Small to large oil spills of crude oil could occur during offshore transit of proposed  
15 Project vessels (See Section 3.12, **Impact RISK-2.1**). Small oil spills (less than 238  
16 bbl) would affect a very small area and the volatile, toxic components would rapidly  
17 evaporate so that relatively few planktonic organisms and fish (particularly those near  
18 the water surface) could be affected. For larger spills, however, the oil could spread  
19 over a considerable area before dispersing and thus could affect more organisms near  
20 the water surface. Eggs, larvae, juveniles, and adults of invertebrates and fish near  
21 the water surface and under the oil would be exposed to the water soluble fractions of  
22 the oil, many of which are toxic. Evaporation and dilution would rapidly reduce the  
23 concentration of these substances in the water (Jordan and Payne 1980) so that effects  
24 on large numbers of organisms would be unlikely to occur. Marine organisms of the  
25 open ocean are generally wide ranging and do not form local communities.  
26 Furthermore, the low frequency of large spills (once in 911 to 1,063 years) would  
27 only affect the fish and planktonic organisms in one year out of many, and long-term  
28 population size would not be reduced. Thus, oil spills would not cause a substantial  
29 reduction or alteration of local fish and plankton communities. Flocks of marine  
30 birds that rest on or dive into the water, however, could be affected by a large  
31 offshore oil spill with population-level effects as described for spills within the  
32 Harbor that could cause a substantial reduction or alteration of local marine bird  
33 communities.

#### 34 **Runoff of Pollutants**

35 Accidental spills or releases of other pollutants used at proposed Project facilities  
36 through runoff from large storms and tsunamis that exceed the capacity of the sumps  
37 and storm drains would increase the pollutant load in Harbor waters (Section 3.14).  
38 Concentrations of these pollutants would likely be low due to dilution by the large  
39 amounts of water that caused the release and the small amount of pollutants that  
40 would be used on site, but bioaccumulation by marine organisms could still occur.  
41 The potential for such accidents is low due to standard safety measures that would be  
42 implemented as part of the proposed Project.

#### 43 **Invasive Species**

44 The number of vessels entering the Los Angeles Harbor would increase as a result of  
45 the proposed Project by approximately 201 per year by 2025 (nearly 7 percent per

1 year) compared to the CEQA Baseline of 2,813 vessels per year into Los Angeles  
2 Harbor. Compared to the NEPA Baseline of 267 vessels per year into the Los  
3 Angeles-Long Beach Harbor, the proposed Project decrease would be approximately  
4 66 per year, and the potential for introduction of invasive species would be reduced  
5 but not eliminated. These vessels would come primarily from outside the U.S.  
6 Exclusive Economic Zone (EEZ), and would be subject to regulations to minimize  
7 the introduction of non-native species in ballast water.

8 Increasing the number of vessels entering Los Angeles Harbor by nearly 7 percent  
9 compared to the CEQA Baseline would result in a small increase in the potential for  
10 discharge of ballast water containing invasive exotic species because the vessels  
11 would generally be unloading cargo, and consequently taking on ballast water to  
12 compensate when leaving the Harbor. However, the state law that went into effect on  
13 January 1, 2004 (CSLC 2004) requires specific ballast water management practices  
14 for such water carried from outside the EEZ and specifies that regulations for vessels  
15 traveling within the Pacific Coast Region (from Washington and Oregon) be  
16 developed by July 1, 2005. These regulations were developed and went into effect  
17 on March 22, 2006. Non-native algal and invertebrate species can also be spread via  
18 vessel hulls. Of particular concern is introduction of the alga, *Caulerpa taxifolia*.  
19 *Caulerpa taxifolia* has been found at two locations in southern California: Agua  
20 Hedionda Lagoon and Huntington Harbor (MEC and Associates 2002). This species  
21 and *Undaria pinnatifida*, discovered in the Los Angeles/Long Beach Harbor in 2000,  
22 could also be transported to the Harbor via vessels traveling between ports within the  
23 EEZ, although the risk for *Caulerpa* from this source is low because the primary  
24 introduction pathway has been the aquarium trade.

25 For vessels traveling to or from other ports along the west coast of North America,  
26 the potential for introduction of additional exotic species will be reduced by the new  
27 regulations. Nearly all new vessels calling at proposed Berth 408 are expected to  
28 originate from and travel to ports outside the EEZ. Thus, considering the small  
29 increase in vessel traffic as a result of the proposed Project compared to the total  
30 number entering the Harbor, as well as the ballast water regulations currently in  
31 effect, the potential for introduction of additional exotic species via ballast water  
32 would be low from vessels entering from or going outside the EEZ. Introduction of  
33 exotic species via organisms attached to vessel hulls and other equipment in the  
34 water, however, could still occur.

### 35 ***Habitat Alteration***

36 Alteration of the marine habitat caused by construction would continue throughout  
37 operations. The new structures in the water would be colonized by marine  
38 organisms, and local hard substrate biological communities would be increased.

### 39 **CEQA Impact Determination**

40 For intertidal invertebrates, impacts from crude oil spills into Harbor waters would  
41 most likely be less than significant and short-term, with full recovery expected to  
42 occur within a few years, as described above, and local communities would not be  
43 substantially disrupted. Impacts to local communities of plankton and fish in the  
44 Harbor and offshore would also be less than significant (no substantial disruption) for  
45 the reasons described above. Impacts to marine birds from even small oil spills

1 would be significant and unavoidable in the worst-case for the reasons described  
2 above because local communities could be substantially disrupted. Oil spills at the  
3 tank farms would be contained and would have no impacts to biological  
4 communities. Spills from buried pipelines would also be contained on land and  
5 would have no impacts to biological communities. Oil spills from the two above-  
6 ground pipeline segments into Harbor waters would be unlikely to occur during the  
7 proposed Project. In the worst case, however, impacts of a crude oil spill into waters  
8 of the Inner Harbor from a proposed Project pipeline rupture would be significant for  
9 local intertidal communities. An MGO spill during barge transit within the Harbor  
10 could cause substantial disruption of local biological communities, resulting in a  
11 significant impact. Runoff of pollutants and habitat alteration would have impacts  
12 that are less than significant for the reasons described above. Impacts of habitat  
13 alteration would be less than significant due to the minor changes that would occur.  
14 Although of low probability, operation of the proposed Project facilities has the  
15 potential to result in the introduction of non-native species via vessel hulls or ballast  
16 water and, thus, could substantially disrupt local biological communities. Such  
17 impacts would, therefore, be significant under CEQA.

18 *Mitigation Measures*

19 *Oil Spills*

20 No mitigation is feasible for significant crude oil and MGO spill impacts to local  
21 marine communities. However, implementation of **MM BIO-1.2c** would reduce the  
22 potential for impacts from an oil spill in the Outer Harbor to marine birds using the  
23 Pier 300 Shallow Water Habitat. No mitigation is required for the less than  
24 significant impacts of crude oil spills to other local biological communities.

25 *Runoff of Pollutants*

26 No mitigation is required.

27 *Invasive Species*

28 Existing regulations would reduce but not eliminate the potential for introduction of  
29 invasive species via vessels. Due to the lack of a proven technology, no feasible  
30 mitigation is currently available to prevent introduction of invasive species via vessel  
31 hulls. New technologies are being explored, and if methods become available in the  
32 future they would be implemented as required at that time.

33 *Habitat Alteration*

34 No mitigation is required.

35 *Residual Impacts*

36 *Oil Spills*

37 For most small oil spills (less than 238 bbl) during unloading of crude oil and MGO  
38 at the berth, standard measures proposed as part of the proposed Project to prevent,  
39 contain, and cleanup the spill would reduce residual impacts to less than significant.

1 Residual impacts of spills from the above-ground pipeline segments would be  
2 significant and unavoidable in the worst case. Oil spill response capabilities in the  
3 Harbor are summarized in **Impact BIO-1.2** and detailed in Section 3.12.

4 For accidental oil spills, particularly those from proposed Project vessels during  
5 transit in the Port, these measures would similarly reduce impacts, but would not  
6 eliminate the potential for such accidents to adversely impact local biological  
7 communities. Since no additional feasible mitigation is available, residual impacts  
8 from accidental oil spills that affected a substantial number of marine birds or other  
9 local biological communities would be considered significant and unavoidable.

#### 10 *Runoff of Pollutants*

11 Residual impacts would be less than significant.

#### 12 *Invasive Species*

13 Residual impacts would be significant and unavoidable.

#### 14 *Habitat Alteration*

15 Residual impacts would be less than significant.

### 16 **NEPA Impact Determination**

17 The NEPA Baseline includes paving of Tank Farm Sites 1 and 2, and 267 vessel calls  
18 per year for delivery of oil to other berths in the San Pedro Bay Ports that are not part  
19 of the CEQA Baseline. Runoff of pollutants would be slightly less than described for  
20 the CEQA analysis because uses of Tank Farm Site 1 under the NEPA Baseline  
21 would contribute a small amount of pollutants to storm runoff from that site, and  
22 impacts would be less than significant for the reasons described in the CEQA  
23 analysis. Habitat alteration would have less than significant impacts for the reasons  
24 described above. The potential for introduction of invasive species would be less  
25 than for the CEQA analysis because vessel traffic would be decreased by 66 calls per  
26 year relative to the NEPA Baseline as compared to an increase of 201 relative to the  
27 CEQA Baseline. Under NEPA, the proposed Project's potential for introduction of  
28 exotic species would be less than for the applicable baseline, and impacts of  
29 introduced species, if they did occur, would be included within that baseline.  
30 Therefore, the proposed Project would result in less than significant impacts related  
31 to introduction of exotic species under NEPA.

32 Oil spills at the tank farms would be contained and would have no impacts to  
33 biological resources. Spills from buried pipelines would also be contained on land  
34 and would have no impacts to biological resources. Oil spills from the two above-  
35 ground pipeline segments into Harbor waters would be unlikely to occur, but in the  
36 worst case, impacts of a crude oil spill into waters of the Inner Harbor from a  
37 proposed Project pipeline rupture would be significant for local intertidal  
38 communities. An MGO spill during barge transit within the Harbor could cause  
39 substantial disruption of local biological communities resulting in a significant  
40 impact. Increased use of other terminals in the San Pedro Bay Ports for delivery of  
41 oil under the NEPA Baseline would not occur with the proposed Project, and all

1 vessels transporting project-related oil would use proposed new Berth 408. Because  
2 the number of oil tankers would be less than the baseline, oil spills would be less  
3 likely to occur, resulting in less than significant impacts to local intertidal  
4 invertebrate, plankton, fish, and marine bird communities.

5 *Mitigation Measures*

6 *Oil Spills*

7 No mitigation is required for less than significant impacts of oil spills, and no  
8 mitigation is available for significant impacts of an MGO spill or a spill from one of  
9 the above-ground pipeline segments, although **MM BIO-1.2c** would reduce the  
10 potential for impacts to marine birds using the Pier 300 Shallow Water Habitat.

11 *Runoff of Pollutants*

12 No mitigation is required.

13 *Invasive Species*

14 No mitigation is required.

15 *Habitat Alteration*

16 No mitigation is required.

17 *Residual Impacts*

18 *Oil Spills*

19 Residual impacts would be significant and unavoidable for oil and MGO spills.

20 *Runoff of Pollutants*

21 Residual impacts would be less than significant.

22 *Invasive Species*

23 Residual impacts would be less than significant.

24 *Habitat Alteration*

25 Residual impacts would be less than significant.

26 **3.3.4.3.2 No Federal Action/No Project Alternative**

27 Under the No Federal Action/No Project Alternative, proposed Project facilities  
28 would not be constructed or operated. As described in Section 2.5.2.1, the No  
29 Federal Action/No Project Alternative considers the only remaining allowable and  
30 reasonably foreseeable use of the proposed Project site: Use of the site for temporary  
31 storage of wheeled containers on the site of Tank Farm 1 and on Tank Farm Site 2.



1 This use would require paving, construction of access roads, and installation of  
2 lighting and perimeter fencing.

3 In addition, for analysis purposes, under the No Federal Action/No Project  
4 Alternative a portion of the increasing demand for crude oil imports is assumed to be  
5 accommodated at existing liquid bulk terminals in the San Pedro Bay Ports, to the  
6 extent of their remaining capacities. Although additional demand, in excess of the  
7 capacity of existing marine terminals to receive it, may come in by rail, barge, or  
8 other means, rather than speculate about the specific method by which more crude oil  
9 or refined products would enter southern California, for analysis purposes, the impact  
10 assessment for the No Federal Action/No Project Alternative in this SEIS/SEIR is  
11 based on marine deliveries only up to the available capacity of existing crude oil  
12 berths. As described in Section 2.5.2.1, the impact assessment for the No Federal  
13 Action/No Project Alternative also assumes existing terminals would eventually  
14 comply with the California State Lands Commission (CSLC) Marine Oil Terminal  
15 Engineering and Maintenance Standards (MOTEMS), that LAHD and the Port of  
16 Long Beach would renew the operating leases for existing marine terminals, and that  
17 existing terminals would comply with Clean Air Action Plan (CAAP) measures as of  
18 the time of lease renewal (i.e., 2008 for Port of Long Beach Berths 84-87, 2015 for  
19 LAHD Berths 238-240, and 2023 for Port of Long Beach Berths 76-78).

20 The NEPA Baseline condition coincides with the No Federal Action/No Project  
21 Alternative for this project because the USACE, the LAHD, and the applicant have  
22 concluded that, absent a USACE permit, no part of the proposed Project would be  
23 built (Section 2.6.1). All elements of the No Federal Action/No Project Alternative  
24 are identical to the elements of the NEPA Baseline. Therefore, under a NEPA  
25 determination there would be no impact associated with the No Federal Action/No  
26 Project Alternative.

27 **Impact BIO-1: Construction and operation of the No Federal Action/No**  
28 **Project Alternative could affect individuals of or habitat for the**  
29 **California least tern and other special status species.**

30 **Construction**

31 The only construction activities associated with the No Federal Action/No Project  
32 Alternative would involve paving the areas that were designated for the proposed  
33 Project as Tank Farm Site 1 (on Pier 400) and Tank Farm Site 2 (on Terminal Island).  
34 In addition to paving, the Pier 400 site would be fenced and approximately 29 lights  
35 on poles that are 120 ft (36.6 m) tall would be installed. Construction activities  
36 within approximately 200 ft (61 m) of the California least tern nesting site when the  
37 terns are present (e.g., April through August) could adversely affect their nesting.  
38 Noise and human presence could cause adults to abandon nests or to leave the nests  
39 long enough that the eggs or chicks become chilled or are preyed upon. Because the  
40 western side of the California least tern nesting site is at a higher elevation than the  
41 site to be paved, human presence alone within 200 ft (61 m) is not likely to adversely  
42 affect the least terns. Food wastes from construction workers that are not placed in  
43 sealed trash receptacles and lighting that could attract predators would disturb or  
44 cause predation to least terns. In addition, fumes (volatile hydrocarbons) released  
45 during installation of asphalt anywhere on the site while the least terns are nesting  
46 could adversely affect the least terns through physiological effects or by causing

1 them to abandon the nesting site. The Pier 300 site would also be fenced and lights  
2 installed, but this would not affect the California least tern due to distance from their  
3 nesting site.

4 In 2004 (CEQA Baseline year), approximately 25 pairs of black skimmers attempted  
5 to nest on Pier 400 (Keane Biological Consulting 2005b) and could nest there again if  
6 conditions are appropriate. However, that site was suitable for black skimmer  
7 nesting only in the years when vegetation was cleared from the site to provide  
8 additional area for California least tern nesting. Such clearing has not occurred since  
9 2005 and is not required or planned to occur in the future. Therefore, nesting by  
10 black skimmers is not expected to occur prior to paving activities, and no nesting  
11 habitat would be lost. If site clearing for paving leaves the site barren prior to the  
12 nesting season, black skimmers could use the site again and construction activities  
13 would have the potential to injure or kill nesting birds and would cause them to  
14 abandon the site. If burrowing owls are nesting at the site, construction activities could  
15 injure individuals or cause them to abandon the nest site.

16 Construction activities at the Pier 400 and Pier 300 sites would not adversely affect  
17 other special status bird species, marine mammals, or sea turtles because none are  
18 expected to be present at those locations.

### 19 **Operations**

20 Activities and noise associated with storage of containers within about 200 ft (61 m)  
21 of the California least tern nesting site on Pier 400 could disturb the nesting birds,  
22 especially if such activities were at night when the birds are roosting. Lighting at the  
23 container storage area could increase visibility within the least tern nesting site for  
24 predators and thus increase predation on the least terns. These lights could also  
25 provide perches for predatory birds to use.

26 The tops of the containers on chasses would be approximately 14 to 15 ft (4.3 to  
27 4.8 m) above the pavement surface (assuming that no stacking would occur). Thus,  
28 predatory birds could use containers near the California least tern nesting site for  
29 perches from which to prey upon the least terns. The top of the containers would be  
30 4 to 5 ft (1.2 to 1.5 m) higher than the top of the chick fence along the western side of  
31 the nesting area, thus allowing predatory birds to see into about 75 percent of the  
32 nesting site from containers within approximately 140 ft (43 m) of the nesting site.  
33 For containers placed 200 ft (61 m) from the nesting site, ravens could view  
34 approximately 65 percent (from 14-ft containers) to 70 percent (from 15-ft  
35 containers) of the least tern nesting site with a total sight distance of over 430 ft  
36 (131 m). Other birds (e.g., gulls, crows, and blackbirds) that could prey upon  
37 California least tern chicks are unlikely to use containers that are at least 200 ft  
38 (61 m) from the nesting site for predatory perched due to the long sight distance.

39 The presence of containers stored on chassis adjacent to the California least tern  
40 nesting site would not affect the least terns. The containers would only be 7 to 8 ft  
41 (2.1 to 2.4 m) above the level of the western side of the nesting site, which is much  
42 lower than the proposed Project tanks, and would not constrain flight access to and  
43 from the nesting site.

1 Trash, and particularly food-related trash, in the temporary container storage area on  
2 Pier 400 could attract bird and mammal predators and, thus, increase predation on the  
3 California least terns.

4 Operation of a temporary container storage area on Pier 300 would not affect the  
5 California least tern or any other special status species because none are present at  
6 that location.

7 The increase of 267 vessel calls per year to the Harbor would include 146 in Los  
8 Angeles Harbor and 121 to the two oil terminal berths in the Port of Long Beach.  
9 This increase in vessel traffic would not adversely affect California least tern  
10 foraging because the vessels use deep water channels that are not the primary  
11 foraging areas for this species. Effects of vessel traffic on other special status species,  
12 including marine mammals, would be inconsequential as described for the proposed  
13 Project.

14 Small oil spills into Harbor waters during vessel transit could occur at a frequency of  
15 once in 184 years, but these spills could occur in Long Beach Harbor or Los Angeles  
16 Harbor. However, spills in Long Beach Harbor are less likely to enter areas used for  
17 foraging by the California least tern than are spills in Los Angeles Harbor, so the  
18 potential for oil spill effects on this species would be slightly reduced compared to  
19 the proposed Project. Potential effects on the California brown pelican, black  
20 skimmer, western snowy plover, and marine mammals would be the same as for the  
21 proposed Project, but with a slightly higher probability of occurring (once in 184  
22 years versus once in 217 years). Oil spills within the Harbor are unlikely to affect any  
23 other special status birds (e.g., burrowing owl) because they do not use the water  
24 surface. Effects of offshore oil spills would be the same as described for the  
25 proposed Project but with a higher frequency of occurrence for all sizes of spills  
26 (once in 270 years versus once in 329 years for a small spill and once in 902 years  
27 versus once in 1,063 years for a large spill).

### 28 **CEQA Impact Determination**

29 Disturbances to California least tern nesting that could result from construction  
30 activities could have significant impacts to this species through stress, abandonment  
31 of nests, increased predation while adults are away from the nest due to construction  
32 activities, and physiological effects of volatile hydrocarbons from fresh asphalt. No  
33 loss of the black skimmer nesting site would occur, and no impacts to nesting black  
34 skimmers would occur if the site is not cleared until immediately before paving. Site  
35 clearing that allows black skimmers to nest there prior to paving could result in  
36 significant impacts to the black skimmer through disruption of nesting and injury to  
37 nesting individuals. Disruption of burrowing owl nesting would also represent a  
38 significant impact. Impacts of construction activities on other special status species  
39 would range from less than significant to no impact, depending on the species, for the  
40 reasons given above.

41 Movement of containers within about 200 feet (61 m) of the least tern nesting site  
42 during the nesting season, particularly at night, would have significant impacts to this  
43 species if reproductive success were decreased due to these activities. Any increase  
44 in predation due to light, perches for predators on lights or containers, and food-  
45 related trash would have significant impacts to the least tern population. Vessel

1 traffic impacts to marine mammals would be less than significant for the reasons  
2 described above. Oil spills could have significant and unavoidable impacts to the  
3 California least tern and California brown pelican as described for the proposed  
4 Project. Impacts to other special status species would be less than significant for the  
5 reasons noted for the proposed Project.

6 *Mitigation Measures*

7 **MM BIO-2: Container Movement.** Containers shall be parked at least 200 ft (61  
8 m), or other buffer distance established through consultation with USFWS and  
9 CDFG, from the western edge of the California least tern nesting area from April  
10 through August. No movement activities shall occur within the nesting site buffer  
11 during that time.

12 **MM BIO-3: Trash.** Trash shall be removed from the Pier 400 temporary container  
13 storage area at least weekly from April through August and monthly the remainder of  
14 the year to minimize predator use of the area.

15 **MM BIO-4: Oil Spill Containment.** Containment booms shall be stored at the  
16 south entrance to the Pier 300 Shallow Water Habitat and at the causeway gap bridge.  
17 If a project-related oil spill occurs during the least tern nesting season and has the  
18 potential to enter the Pier 300 Shallow Water Habitat, these booms shall be deployed  
19 to prevent oil from entering this important foraging area.

20 **MM BIO-5: Construction and Operations Personnel Environmental Training.**  
21 The Port shall provide environmental training by a qualified biologist to all  
22 construction contractor and operations personnel working at the site. This shall  
23 include, but not be limited to, information about the California least tern (e.g.,  
24 seasonal presence, pictures of the birds, and regulatory protections) and other special  
25 status species (e.g., black skimmer and burrowing owl) and measures required to  
26 avoid or minimize the potential for impacts to these species. The latter measures  
27 shall include placement of food in sealed containers and daily disposal of all food  
28 wastes in sealed containers, with off-site disposal at regular intervals during  
29 construction; prohibition of pets or animals of any kind to work on Pier 400; limiting  
30 activities within 200 ft (61m), or other established buffer distance, of the nesting site  
31 from March through August; and scheduling construction activities that would be  
32 near the nesting site for the period between September and March.

33 In addition, the following mitigation measures would also apply to the No Federal  
34 Action/No Project Alternative.

35 **MM BIO-1.1a: Monitor California Least Tern and Other Bird Nesting.**

36 **MM BIO-1.1c: Construction Schedule.**

37 **MM BIO-1.1e: Perches.**

38 **MM BIO-1.1f: Lighting.**

39 **MM BIO-1.1g: Vegetation Clearing.**

**MM BIO-1.1h: Protection of Special Status Species Nesting Birds.****MM BIO-1.1i: Protection of California Least Tern Nesting****MM BIO-1.2b: Predator Control.***Residual Impacts*

With implementation of **MM BIO-2, MM BIO-3, MM BIO-4, MM BIO-1.1a, MM BIO-1.1c, MM BIO-1.1e** through **MM BIO-1.1i**, and **MM BIO-1.2b**, residual impacts on the California least tern as a result of No Federal Action/No Project construction and operation activities on Pier 400 would be less than significant.

Implementation of **MM BIO-1.1g** would minimize the potential for black skimmers to nest at the proposed temporary container storage area on Pier 400 prior to construction, resulting in less than significant impacts to this species.

Implementation of **MM BIO-4** would reduce, but not eliminate, the potential for impacts of oil spills on the California least tern and California brown pelican. There are no additional feasible mitigation measures that would reduce the potential for accidental oil spills to significantly affect the least terns and brown pelicans when they are present and foraging in the area (e.g., during April through August for the least terns and all year for the brown pelicans). A small oil spill (e.g., up to 238 bbl) that was not contained could, therefore, result in significant and unavoidable impacts.

Implementation of **MM BIO-1.1i** would reduce impacts to nesting black skimmers and burrowing owls to less than significant.

Less than significant impacts would occur for other special status species.

**NEPA Impact Determination**

Because the No Federal Action/No Project Alternative is identical to the NEPA Baseline in this project, under NEPA the No Federal Action/No Project Alternative would have no impact.

*Mitigation Measures*

No mitigation is required.

*Residual Impacts*

No residual impacts would occur.

**Impact BIO-2: Construction and operation of No Federal Action/No Project Alternative facilities would have the potential to substantially reduce or alter a state-, federally-, or locally-designated natural habitat, special aquatic site, or plant community, including wetlands.**

1                                   **Natural Habitats**

2                                   No state-, federally-, or locally-designated natural habitats or plant communities are  
3 present at the proposed temporary container storage site on Pier 400 and Pier 300, as  
4 described for the proposed Project, and thus would not be affected by construction or  
5 operations activities at those sites. Potential effects on the California least tern SEA  
6 adjacent to the Pier 400 site would be as described for **Impact BIO-1**.

7                                   Relative to the CEQA Baseline, increased vessel traffic for delivery of oil to Port of  
8 Long Beach Berths B76-78 and B84-87 would not directly affect any natural habitats  
9 or plant communities because none are present at these berths or in the channels used  
10 by vessels to access these facilities. LAHD Berths 238-240 are located across the  
11 Main Channel from the mudflat at Berth 78, and up to 146 more vessel calls per year  
12 to this terminal, comprising about one vessel call every two to three days, would not  
13 represent a disturbance source that would affect the mudflat area. Oil spills resulting  
14 from the increased delivery at the Port of Long Beach berths would not affect any  
15 natural habitats or plant communities because none of these resources are present in  
16 the vicinity of the berths or along the channels used by vessels traveling to the berths.  
17 The mudflat across from LAHD Berths 238-240 could be temporarily affected by a  
18 No Federal Action/No Project-related uncontained oil spill, although rapid cleanup of  
19 the oil in compliance with SPCC requirements would minimize effects to this habitat.  
20 Oil spills from No Federal Action/No Project-related vessels in the Outer Harbor  
21 would have no substantial effects on kelp beds along the breakwaters due to planned  
22 rapid containment and cleanup and mucous coating on kelp fronds that prevents oil  
23 from adhering. For example, dense kelp beds have persisted in an area of natural oil  
24 seeps at Coal Oil Point in Santa Barbara County. No kelp beds are present in the  
25 Inner Harbor. Although the frequency of small oil spills in the Harbor would be  
26 slightly greater than for the proposed Project, effects on eelgrass beds at Cabrillo  
27 Beach and in the Pier 300 Shallow Water Habitat and Seaplane Lagoon could be  
28 adverse as described for the proposed Project in **Impact BIO-2.2**. Offshore oil spills  
29 would not affect any natural habitats as none are present. Thus, only oil spills within  
30 the Harbor that reach eelgrass beds would cause a substantial reduction or alteration  
31 of natural habitats.

32                                   Relative to the NEPA Baseline, no effects would occur because activities would be  
33 the same as in that baseline.

34                                   **Essential Fish Habitat**

35                                   The small changes in storm runoff from the temporary container storage areas would  
36 not adversely affect EFH species because regulations to protect water quality would  
37 continue to minimize the input of pollutants to Harbor waters. The increase in vessel  
38 traffic would not reduce or substantially alter EFH. Up to 146 additional vessels per  
39 year would call at Berths 238-240, and an additional 121 vessels per year would call  
40 at Port of Long Beach Berths 76-78 and 84-87 relative to the CEQA Baseline, and no  
41 change in vessel calls would occur relative to the NEPA Baseline. These small  
42 increases in vessel traffic relative to the CEQA Baseline of 2,813 for the Port and  
43 3,380 for the Port of Long Beach would not adversely affect EFH species because  
44 comparatively few additional vessels would enter the Harbor each year, they would  
45 be unlikely to represent a substantial effect on EFH, and any effects that did occur  
46 would likely be to only to a few individuals of FMP species.

1 Small spills from vessels in transit to the berths could occur at a frequency of once in  
2 184 years, but would be expected to cause only short-term effects to Coastal Pelagics  
3 FMP species such as the northern anchovy, Pacific sardine, Pacific mackerel, and  
4 jack mackerel since juveniles and adults of these fish occur frequently near the water  
5 surface and some individuals could be exposed to soluble fractions of spilled oil until  
6 evaporation and dilution occurs. Moderate oil spills (238-1,200 bbl) could occur at a  
7 frequency of once in 91,726 years and would not affect the entire Harbor due to rapid  
8 containment and cleanup in compliance with SPCC requirements with similar effects  
9 on managed species as a small spill. Small oil spills during unloading could occur at  
10 a frequency of once in 450 years while spills of up to 2,380 bbl could occur once in  
11 16,650 years. These spills likely would be contained by booms at the berths. Only a  
12 small proportion of the FMP fish present in the Harbor are likely to be affected by  
13 small to moderate oil spills due to the small area affected and planned rapid cleanup.  
14 All of these species are also abundant in nearshore waters outside the Harbor so that  
15 regional populations would not be reduced. The Pacific sanddab (Groundfish FMP)  
16 would not be adversely affected by an oil spill because the juveniles and adults  
17 remain on or near the bottom and the oil would float. Of these five species, only the  
18 northern anchovy spawns in the Harbor as well as outside the Harbor, and the  
19 planktonic eggs and larvae could be exposed to toxic components of spilled oil that  
20 dissolve in the water. However, the area affected would be a fraction of the entire  
21 Harbor, and the amount of eggs and larvae that could be adversely affected would not  
22 substantially reduce recruitment into the population.

23 The likelihood of occurrence for large oil spills (greater than 1,200 bbl) from tankers  
24 in transit in the Harbor as a result of the No Federal Action/No Project Alternative is  
25 remote (less than once in nearly two million years). Small to large oil spills in  
26 offshore waters would have the same effects as described for the proposed Project but  
27 at a slightly higher frequency of occurrence.

### 28 **CEQA Impact Determination**

29 Natural Habitats. Construction would have no impacts on natural habitats such as  
30 kelp beds, eelgrass beds, mudflats, or wetlands because the proposed temporary  
31 container storage sites are on land where none of these habitats are present. Impacts  
32 to the least tern SEA adjacent to the Pier 400 site would be significant but feasibly  
33 mitigated as discussed for **Impact BIO-1**. Use of existing facilities at Port of Long  
34 Beach Berths 76-78 and 84-87 would have no impacts to natural habitats because  
35 none are present at or near these berths. Increased vessel traffic to LAHD Berths  
36 238-240 would have less than significant impacts to the mudflat on the west side of  
37 the Main Channel due to oil spills, for the reasons described above. Oil spills in the  
38 Harbor that reach eelgrass beds could have significant impacts to this community by  
39 causing a substantial alteration of the habitat in the short term. Offshore oil spills  
40 would have no impacts on natural habitats.

41 Essential Fish Habitat. Construction activities at the proposed temporary container  
42 storage sites would have no direct impacts on EFH because none is present on land.  
43 Indirect impacts through runoff of pollutants during storm events (construction and  
44 operations) would be less than significant because such runoff would be controlled as  
45 described for water quality in Section 3.14 (e.g., project-specific SWPPP with BMPs)  
46 and because no substantial reduction or alteration of EFH would occur.

1 Oil spills would have less than significant impacts to FMP species for the reasons  
2 described above.

3 *Mitigation Measures*

4 No mitigation is required for less than significant impacts to EFH. **MM BIO-4**  
5 would apply for oil spill impacts within the Harbor for eelgrass beds in the Pier 300  
6 Shallow Water Habitat, but no mitigation is feasible for significant oil spill impacts  
7 to the Cabrillo Beach eelgrass beds.

8 *Residual Impacts*

9 Residual impacts to EFH would be less than significant. Implementation of **MM**  
10 **BIO-4** would reduce but not eliminate the potential for impacts of oil spills on  
11 eelgrass beds. There are no additional feasible mitigation measures that would  
12 reduce the potential for accidental oil spills to significantly affect eelgrass beds. Oil  
13 spills, even though associated with a low probability of occurrence, that were not  
14 contained could, therefore, result in significant and unavoidable impacts.

15 **NEPA Impact Determination**

16 Because the No Federal Action/No Project Alternative is identical to the NEPA  
17 Baseline in this project, under NEPA the No Federal Action/No Project Alternative  
18 would have no impact.

19 *Mitigation Measures*

20 No mitigation is required.

21 *Residual Impacts*

22 No residual impacts would occur.

23 **Impact BIO-3: Construction and operation of No Federal Action/No**  
24 **Project Alternative facilities would not interfere with any wildlife**  
25 **migration/movement corridors.**

26 No known terrestrial wildlife or aquatic species migration corridors are present in the  
27 No Federal Action/No Project area, including Port of Long Beach Berths 76-78 and  
28 Berths 84-87 and LAHD Berths 238-240. Migration of the California least tern,  
29 western snowy plover, and California brown pelican would not be affected by  
30 construction or operations activities, as described for the proposed Project.

31 **CEQA Impact Determination**

32 No wildlife movement or migration corridors would be affected by the No Federal  
33 Action/No Project Alternative during construction of the temporary container storage  
34 area on Pier 400, and operation of that facility as well as oil imports to berths in the  
35 San Pedro Bay Ports. Therefore, there would be no impacts under CEQA.



1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impact*

4                    No residual impacts would occur.

5                    **NEPA Impact Determination**

6                    Because the No Federal Action/No Project Alternative is identical to the NEPA  
7                    Baseline in this project, under NEPA the No Federal Action/No Project Alternative  
8                    would have no impact.

9                    *Mitigation Measures*

10                   No mitigation is required.

11                   *Residual Impacts*

12                   No residual impacts would occur.

13                   **Impact BIO-4.1: No Federal Action/No Project Alternative construction**  
14                   **activities would not substantially disrupt local biological communities.**

15                   Runoff of pollutants during construction (grading and paving) of the temporary  
16                   container storage areas would be minimized through the use of BMPs, as described in  
17                   Section 3.14, with less than significant effects on water quality. The resultant small  
18                   amount of pollutants entering the Harbor through storm drains would not  
19                   substantially disrupt local biological communities of marine organisms (fish,  
20                   invertebrates, and plankton). Construction of the temporary container storage  
21                   facilities at Tank Farm Site 1 and Tank Farm Site 2 would not substantially disrupt  
22                   the highly disturbed terrestrial habitats present.

23                   **CEQA Impact Determination**

24                   Impacts of construction on local terrestrial communities and pollutant runoff  
25                   (construction and operations) on marine biological communities would be less than  
26                   significant.

27                   *Mitigation Measures*

28                   No mitigation is required.

29                   *Residual Impact*

30                   Residual impacts would be less than significant.

1 **NEPA Impact Determination**

2 Because the No Federal Action/No Project Alternative is identical to the NEPA  
3 Baseline in this project, under NEPA the No Federal Action/No Project Alternative  
4 would have no impact.

5 *Mitigation Measures*

6 No mitigation is required.

7 *Residual Impacts*

8 No residual impacts would occur.

9 **Impact BIO-4.2: No Federal Action/No Project operations, including**  
10 **accidental oil spills and introduction of invasive species, have the**  
11 **potential to substantially disrupt local biological communities.**

12 ***Oil Spills***

13 As described for the proposed Project, oil spills from vessels during transit through  
14 the Harbor or during unloading at a berth could affect marine biological resources  
15 such as marine birds, fish, and intertidal invertebrates through direct contact with the  
16 oil (physical effects) or toxic effects of components in the oil (particularly the lighter,  
17 soluble/volatile components). Cleanup of spilled oil could have further impacts on  
18 these organisms through direct removal or toxicity of cleaning agents. These effects  
19 could occur at more locations in the Harbor, including in Long Beach Harbor (inner  
20 and outer), than for the proposed Project due to the different berths to be used.

21 Small spills (up to 238 bbl) during vessel transit in the San Pedro Bay Ports could  
22 occur with a frequency of one per 184 years, assuming all No Federal Action/No  
23 Project vessels are double hulled. Moderate oil spills (238-1,200 bbl) could occur  
24 once in 91,726 years, and larger spills would be unlikely to occur (less than once in  
25 nearly two million years) (see Section 3.12, Table 3.12-14). Spills during unloading  
26 at the berths are less likely to occur (frequency of once in 450 years for small spills  
27 and once in 16,650 years for moderate spills) (Section 3.12, Hazards).

28 Intertidal invertebrates would be affected if the oil slick contacts the shoreline  
29 (primarily riprap within the Harbor) and wharf pilings. The amount of such habitat  
30 that could be affected by a small spill to moderate spill in the Outer Harbor would be  
31 a small proportion of comparable habitat present in the Harbor because the spill  
32 would be in an open area of the Outer Harbor where it could be contained before  
33 reaching the shoreline. After cleanup, the disturbed area would be recolonized by  
34 invertebrates from planktonic eggs and larvae or movement from adjacent areas.  
35 Based on experimental removal of intertidal invertebrates, recovery would be  
36 expected within a few years (MEC 1988). Thus, oil spills in the Outer Harbor would  
37 not substantially disrupt local intertidal invertebrate communities. Oil spilled into  
38 waters of the Inner Harbor would affect intertidal invertebrates over a larger area than  
39 a spill in the Outer Harbor because the narrow channels and slips have a larger  
40 amount of shoreline relative to the amount of surface water. Therefore, an oil spill

1 would reach more shoreline before being contained and cleaned up. In a worst case,  
2 a substantial amount of intertidal habitat could be affected by a spill.

3 Benthic invertebrate communities are unlikely to be affected by an oil spill because  
4 the oil would float on the water surface, soluble components would be diluted before  
5 reaching the bottom, and cleanup would be rapid. The small amount of weathered oil  
6 that was not immediately cleaned up could sink to the bottom as tar balls that would  
7 either drift along the bottom or become incorporated into the sediments. The more  
8 toxic components would not be present in this weathered oil, and tar balls on the  
9 bottom would not substantially disrupt benthic invertebrate communities.

10 Planktonic organisms under the slick could be affected by reduced light penetration  
11 for photosynthesis (phytoplankton) or as a result of soluble components of the oil  
12 (phytoplankton and zooplankton). However, exposure of these organisms to the oil  
13 would be of short duration and limited to the immediate vicinity of the slick because  
14 these species move with currents throughout the Harbor and cleanup would be  
15 implemented immediately, by plan. Furthermore, planktonic organisms have a high  
16 naturally occurring mortality rate coupled with high reproductive rates are (Dawson  
17 and Pieper 1993), so rapid recovery should occur following small, localized impacts.  
18 Thus, plankton communities would not be substantially disrupted.

19 Fish in the water column are mobile and can move away from the spill and cleanup  
20 disturbance. Thus, few if any individuals would be affected, and fish communities  
21 would not be substantially disrupted. However, for marine birds (excluding the  
22 special status species addressed in **Impact BIO-1**) loss of substantial numbers due to  
23 a moderate oil spill, even though of low probability, could have long-term, adverse  
24 effects on population size due to their low reproductive rates. Gulls are the most  
25 numerous group of marine birds present in the Harbor (MEC and Associates 2002)  
26 and, thus, would be the most likely to be affected. These birds often rest on the water  
27 surface and could come in contact with oil on the surface. Other species, for which a  
28 small proportion of their regional populations could be affected by an oil spill in the  
29 Harbor, would not be substantially affected.

30 Oil spills from tankers traveling within the Outer Harbor, and particularly in Los  
31 Angeles Harbor, could reach the Cabrillo Shallow Water Habitat before cleanup is  
32 complete. However, oil floating on the surface would not alter this habitat, and  
33 effects on fish and invertebrates would be as described above. Spilled oil would be  
34 less likely to enter the Pier 300 Shallow Water Habitat due to the greater distance and  
35 channels to be followed.

36 Offshore oil spills would have the same types of effects as described for the proposed  
37 Project, but the frequency of occurrence would be slightly more often. That is, oil  
38 spills would not cause a substantial reduction or alteration of local fish and plankton  
39 communities but could cause a substantial reduction or alteration of local marine bird  
40 communities.

### 41 **Runoff of Pollutants**

42 Accidental spills or releases of other pollutants from containers and vehicles used at  
43 the temporary container storage areas on Pier 400 and Pier 300 would increase the  
44 pollutant load in Harbor waters through runoff from the sites (see Section 3.14).

1 However, concentrations of these pollutants would likely be low due to the small  
2 amount of pollutants that could be present on site and the planned rapid cleanup of  
3 any accidental spills. The small amount of pollutants that might enter the Harbor  
4 through the storm drains would be regulated by a stormwater permit that includes a  
5 SWPPP and BMPs and would not substantially disrupt local biological communities  
6 near Pier 400 or Pier 300.

### 7 ***Invasive Species***

8 The number of vessels entering Los Angeles-Long Beach Harbor would increase as a  
9 result of the No Federal Action/No Project by approximately 267 per year by 2025  
10 (approximately 4 percent) compared to the CEQA Baseline of 6,193 vessels per year  
11 into this Harbor complex. These vessels would come primarily from outside the U.S.  
12 EEZ and would be subject to regulations to minimize the introduction of non-native  
13 species in ballast water.

14 Increasing the number of vessels entering Los Angeles-Long Beach Harbor by  
15 approximately 4 percent would result in only a small increase in the potential for  
16 discharge of ballast water containing invasive exotic species because the vessels  
17 generally would be unloading cargo and subsequently taking on ballast water to  
18 compensate when leaving the Harbor. However, the state law that went into effect on  
19 January 1, 2004 (CSLC 2004) requires specific ballast water management practices  
20 for such water carried from outside the EEZ and specifies that regulations for vessels  
21 traveling within the Pacific Coast Region (from Washington and Oregon) be  
22 developed by July 1, 2005. These regulations were developed and went into effect  
23 on March 22, 2006. Non-native algal and invertebrate species can also be spread via  
24 vessel hulls. Of particular concern would be the introduction of the alga, *Caulerpa*  
25 *taxifolia*. *Caulerpa taxifolia* has been found at two locations in southern California:  
26 Agua Hedionda Lagoon and Huntington Harbor (MEC and Associates 2002). This  
27 species and *Undaria pinnatifida*, discovered in the Los Angeles/Long Beach Harbor  
28 in 2000, could also be transported to the Harbor via vessels traveling between ports  
29 within the EEZ, although the risk for *Caulerpa* from this source is low because the  
30 primary introduction pathway has been the aquarium trade.

31 For vessels traveling to or from other ports along the west coast of North America,  
32 the potential for introduction of additional exotic species will be reduced by the new  
33 regulations. Nearly all new vessels calling at LAHD Berths 238-240 and Port of  
34 Long Beach Berths 76-78 and 84-87 are expected to originate from and travel to  
35 ports outside the EEZ. Thus, considering the small increase in vessel traffic as a  
36 result of the No Federal Action/No Project compared to the total number entering the  
37 Harbor, as well as the ballast water regulations currently in effect, the potential for  
38 introduction of additional exotic species via ballast water would be low from vessels  
39 entering from or going outside the EEZ. Introduction of exotic species via organisms  
40 attached to vessel hulls and other equipment in the water, however, could still occur.

### 41 **CEQA Impact Determination**

42 For intertidal invertebrates, impacts of oil spills into Outer Harbor waters would most  
43 likely be less than significant and short-term, with full recovery expected to occur  
44 within a few years, as described above, and local communities would not be  
45 substantially disrupted. Spills into Inner Harbor waters, however, could substantially

1 disrupt local intertidal invertebrate communities in the worst case, resulting in a  
2 significant and unavoidable impact. Impacts to local communities of plankton and  
3 fish in the Harbor and offshore would also be less than significant (no substantial  
4 disruption) for the reasons described for the proposed Project. Impacts to birds from  
5 large oil spills would be significant and unavoidable under worst-case scenarios, as  
6 described above because local communities could be substantially disrupted. Runoff  
7 of pollutants would have impacts that are less than significant for the reasons  
8 described above. Although unlikely, operation of the No Federal Action/No Project  
9 facilities has the potential to result in the introduction of non-native species via vessel  
10 hulls or ballast water, thereby potentially causing substantial effects to local  
11 biological communities. Impacts would, therefore, be significant under CEQA.

### 12 *Mitigation Measures*

13 Oil Spills. No mitigation is feasible for significant oil spill impacts to local intertidal  
14 invertebrate and marine bird communities. However, implementation of **MM BIO-4**  
15 would reduce the potential for impacts to marine birds using the Pier 300 Shallow  
16 Water Habitat. No mitigation is required for the less than significant impacts of oil  
17 spills to other local biological communities.

18 Runoff of Pollutants. No mitigation is required.

19 Invasive Species. Existing regulations would reduce but not eliminate the potential  
20 for introduction of invasive species via vessels. No feasible mitigation is available as  
21 described for the proposed Project.

### 22 *Residual Impacts*

23 Oil Spills. For small oil spills (less than 238 bbl) during unloading of oil at the  
24 berths, standard measures to prevent, contain, and cleanup a spill would reduce the  
25 residual impact to less than significant. Oil spill response capabilities in the Harbor  
26 are as summarized for **Impact BIO-1.2** for the proposed Project and as detailed in  
27 Section 3.12.

28 For small accidental oil spills from No Federal Action/No Project vessels during  
29 transit in the Harbor, these measures would similarly reduce impacts, but would not  
30 eliminate the potential for such accidents to adversely impact local biological  
31 communities. As no additional, feasible mitigation is available, residual impacts  
32 from oil spills that affected a substantial number of birds or other local biological  
33 communities would be considered significant and unavoidable.

34 Runoff of Pollutants. Residual impacts would be less than significant.

35 Invasive Species. Residual impacts would be significant and unavoidable.

### 36 **NEPA Impact Determination**

37 Because the No Federal Action/No Project Alternative is identical to the NEPA  
38 Baseline in this project, under NEPA the No Federal Action/No Project Alternative  
39 would have no impact.

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 No residual impacts would occur.

5 **3.3.4.3.3 Reduced Project Alternative**

6 Under the Reduced Project Alternative, as described in Section 2.5.2.2, construction  
7 and operation at Berth 408 would be identical to the proposed Project with the  
8 exception of the lease cap limiting throughput in certain years. However, as  
9 explained in Section 2.5.2.2, the lease cap would not change the amount of crude oil  
10 demanded in southern California, and therefore the analysis of the Reduced Project  
11 Alternative also includes the impacts of marine delivery of incremental crude oil  
12 deliveries to existing liquid bulk terminals in the San Pedro Bay Ports in years where  
13 demand exceeds the capacity of the lease-limited Berth 408.

14 As described in Section 2.5.2.2, the impact assessment for the Reduced Project  
15 Alternative also assumes existing terminals would eventually comply with the  
16 MOTEMS, that the LAHD and the Port of Long Beach would renew the operating  
17 leases for existing marine terminals, and that existing terminals would comply with  
18 CAAP measures as of the time of lease renewal (i.e., 2008 for Port of Long Beach  
19 Berths 84-87, 2015 for LAHD Berths 238-240, and 2023 for Port of Long Beach  
20 Berths 76-78).

21 Because the Reduced Project Alternative would involve construction of the same  
22 facilities as for the proposed Project, impacts, mitigation, and residual impacts would  
23 be the same as described for **Impact BIO-1.1, Impact BIO-2.1, Impact BIO-3.1,**  
24 **and Impact BIO-4.1.** This includes the construction of the AMP air quality  
25 mitigation system and platform for the ACTI AMECS system. Operations would be  
26 the same with a lower throughput, thus reducing the number of vessels using Berth  
27 408 and the potential for oil spills from those vessels. Additional oil would be  
28 delivered to other berths in the San Pedro Bay Ports as described above, resulting in a  
29 greater number of smaller vessels entering the Harbor than for the proposed Project.

30 **3.3.4.3.3.1 Construction Impacts**

31 **Impact BIO-1.1: Construction of the Reduced Project Alternative could**  
32 **affect individuals of or habitat for the California least tern and other**  
33 **special status species.**

34 All construction activities at the Marine Terminal, Tank Farm Site 1, Tank Farm Site  
35 2, and staging areas and for installation of pipelines would be the same as noted for  
36 the proposed Project. Effects of these activities on the California least tern and other  
37 special status species would be the same as described for the proposed Project in  
38 **Impact BIO-1.1.**

### **CEQA Impact Determination**

California least tern. Impacts would be less than significant for construction activities that are more than 200 ft (61 m), or other established buffer distance, from the nesting site when the terns are present, except for stone column installation and temporary lighting at Tank Farm Site 1. Construction activities closer than approximately 200 ft (61 m) to the nesting site when the terns are present could have significant impacts. Stone column installation at Tank Farm Site 1 and construction lighting while the terns are nesting could have significant impacts.

California brown pelican. Impacts of construction activities would be less than significant, as described for the proposed Project.

Western snowy plover. Construction would have no impacts.

Other special status species. Since Tank Farm Site 1 would not be cleared for construction and would not be left vacant at the beginning of the nesting season, black skimmers would be unlikely to use this area for nesting, resulting in no impacts to this species. If vegetation clearing at Tank Farm Site 1 prior to construction resulted in black skimmer nesting at the site, injury to nesting birds and disruption of nesting would be a significant but feasibly mitigated impact. If burrowing owls were nesting at Tank Farm Site 1 and nesting was disrupted, impacts would be significant. Impacts to other special status species, including marine mammals, would be less than significant.

### ***Mitigation Measures***

**MM 4D-7** and **MM 4D-9** from the Deep Draft FEIS/FEIR are applicable to the Reduced Project impacts. However, the more project-specific measures below cover the intent of **MM 4D-7** and **MM 4D-9**, so the latter are not included in the list of mitigation measures below.

**MM BIO-1.1a** through **MM BIO-1.1j** would apply, as described for the proposed Project.

No mitigation measures are required for the less than significant impacts to marine mammals.

### ***Residual Impact***

With implementation of **MM BIO-1.1a** through **MM BIO-1.1j**, residual impacts on the California least tern and other special status species as a result of Reduced Project construction activities would be less than significant.

### **NEPA Impact Determination**

California least tern. Impacts would be less than significant for construction activities that are more than 200 ft (61 m), or other established buffer distance, from the nesting site when the California least terns are present, except for stone column installation and temporary lighting at Tank Farm Site 1. Construction activities closer than approximately 200 ft (61 m) to the nesting site when the terns are present

1 could have significant impacts. Stone column installation at Tank Farm Site 1 and  
2 construction lighting while the terns are nesting could have significant impacts.

3 California brown pelican. Impacts of construction activities would be less than  
4 significant, as described for the proposed Project.

5 Western snowy plover. Construction activities would cause no impacts.

6 Other special status species. Because black skimmers currently do not nest at Tank  
7 Farm Site 1 and are not expected to nest there between now and when Reduced  
8 Project facilities would be built (assuming that the area is not cleared of vegetation),  
9 no loss of black skimmer nesting habitat and, consequently, no impacts would occur.  
10 Under the NEPA Baseline, the site would be paved by about 2012. Vegetation  
11 clearing prior to the black skimmer nesting season could allow nesting to occur  
12 again, and construction activities could then have a significant impact to this species  
13 through injury to nesting birds or by causing them to abandon the nest site. If  
14 burrowing owls are nesting at the Tank Farm Site 1 and nesting is disrupted, impacts  
15 would be significant. Impacts to marine mammals would be less than significant as  
16 described for the proposed Project.

17 *Mitigation Measures*

18 **MM BIO-1.1a** through **BIO-1.1j** would apply for the California least tern, black  
19 skimmer, and burrowing owl, as described for the proposed Project.

20 No mitigation measures are required for the less than significant impacts to marine  
21 mammals.

22 *Residual Impact*

23 With implementation of **MM BIO-1.1a** through **MM BIO-1.1j**, residual impacts on  
24 the California least tern and other special status species as a result of Reduced Project  
25 construction activities would be less than significant.

26 **Impact BIO-2.1: Construction of Reduced Project Alternative facilities**  
27 **would not substantially reduce or alter a state-, federally-, or locally-**  
28 **designated natural habitat or plant community, including wetlands.**

29 No locally-designated natural habitats or plant communities are present at the  
30 Reduced Project sites, including the Pier 400 Marine Terminal site, Tank Farm Site  
31 1, pipeline routes, and staging areas as described for the proposed Project. Impacts to  
32 the least tern SEA on Pier 400 are as discussed for **Impact BIO-1.1** in the proposed  
33 Project. The small amount of marine algae that would be affected by Marine  
34 Terminal construction, and installation, operation, and removal of a temporary  
35 mooring at staging area 412, would be inconsequential and would not result in a  
36 substantial reduction or alteration of a locally-designated plant community. No  
37 eelgrass beds, wetlands, or mudflats are present near the Berth 408 site or staging  
38 area 412. The closest such habitats are 1.4 mi (2.3 km) from the Berth 408 site, and  
39 they would not be affected due to the distance from the in-water construction sites.



1 This includes the eelgrass beds at Cabrillo beach, in the Pier 300 Shallow Water  
2 Habitat, and in the Seaplane Lagoon.

3 Construction of the Marine Terminal berth and temporary mooring at staging area  
4 412 (Figure 2-12 in Chapter 2) could temporarily affect a small amount of EFH and  
5 individuals of the FMP fish species in Table 3.3-2 that are present at the time of  
6 construction as a result of increased turbidity, temporary displacement of individuals,  
7 release of contaminants to the water column, temporary lighting, and underwater  
8 sound from pile driving as described for the proposed Project. The small amount of  
9 soft bottom habitat converted to hard substrate habitat would not adversely affect  
10 EFH or managed species as described for the proposed Project. Construction of  
11 facilities on land would have no direct effects on EFH, which is located in the water,  
12 and runoff from those areas would be controlled as discussed in Section 3.14.

### 13 ***EFH Preliminary Determination***

14 The USACE has preliminarily determined the Reduced Project would have adverse,  
15 but less than significant impacts on EFH based on the above analysis and Appendix  
16 K, and will initiate consultation with NMFS pursuant to the Magnuson-Stevens  
17 Fishery Conservation and Management Act.

### 18 **CEQA Impact Determination**

19 Natural Habitats. Construction would have no impacts on natural habitats such as  
20 eelgrass beds, mudflats, or wetlands because none are present at or near the Reduced  
21 Project site. Impacts to marine algae for Berth 408 construction, AMP system and  
22 ACTI AMECS platform installation, and temporary mooring installation/removal and  
23 use at a staging area on Pier 400 would be less than significant as described for the  
24 proposed Project. Impacts to the least tern SEA would be less than significant with  
25 mitigation, as discussed for **Impact BIO-1.1**.

26 Essential Fish Habitat. Temporary disturbances in the water during Berth 408, AMP  
27 system and ACTI AMECS platform installation, and a temporary mooring  
28 construction would cause no substantial alteration of EFH or loss of individuals in  
29 managed fish species, as described for the proposed Project, and impacts would be  
30 less than significant under CEQA. Construction activities at the tank farm sites and  
31 for new pipeline installation would have no direct impacts on EFH because none is  
32 present at those sites. Indirect impacts through runoff of sediments during storm  
33 events would be less than significant because the runoff would be controlled as  
34 described for water quality in Section 3.14 (e.g., project-specific SWPPP with BMPs  
35 such as sediment barriers and sedimentation basins). In addition, the work would be  
36 conducted in compliance with applicable permits, such as the USACE's Section 10  
37 (Rivers and Harbors Act) and LARWQCB's 401 Water Quality Certification.

### 38 ***Mitigation Measures***

39 No mitigation is required. Mitigation for impacts on the California least tern SEA are  
40 addressed in **Impact BIO-1.1** for the proposed Project.

1 *Residual Impact*

2 Residual impacts would be less than significant.

3 **NEPA Impact Determination**

4 Natural Habitats. Construction would have no impacts on natural habitats such as  
5 eelgrass beds, mudflats, or wetlands because none are present at or near the Reduced  
6 Project site as described for the CEQA analysis. Impacts to marine algae for Berth  
7 408 construction, AMP system and ACTI AMECS platform installation, and  
8 temporary mooring installation and use at a staging area on Pier 400 would be less  
9 than significant as described for the proposed Project. The potential for impacts to  
10 the California least tern SEA would be less than significant with mitigation as  
11 discussed for **Impact BIO-1.1**.

12 Essential Fish Habitat. Temporary disturbances in the water during Berth 408, ACTI  
13 or AMP system platform installation, and a temporary mooring construction would  
14 cause no substantial alteration of EFH or loss of individuals in managed fish species,  
15 as described for the proposed Project, and impacts would be less than significant  
16 under NEPA. Construction activities at the tank farm sites would have no direct  
17 impacts on EFH because none is present at those sites. Indirect impacts through  
18 runoff of sediments during storm events would be less than significant because the  
19 runoff would be controlled as described for water quality in Section 3.14 (e.g.,  
20 project-specific SWPPP with BMPs such as sediment barriers and sedimentation  
21 basins).

22 *Mitigation Measures*

23 No mitigation is required. Mitigation for impacts on the California least tern SEA are  
24 addressed in **Impact BIO-1.1** for the proposed Project.

25 *Residual Impact*

26 Residual impacts would be less than significant.

27 **Impact BIO-3.1: Construction of Reduced Project Alternative facilities**  
28 **would not interfere with any wildlife migration/movement corridors.**

29 No known terrestrial wildlife or aquatic species migration corridors are present in the  
30 Reduced Project area. Migration of the California least tern, western snowy plover,  
31 and California brown pelican would not be affected by construction activities as  
32 described for the proposed Project.

33 **CEQA Impact Determination**

34 No wildlife movement or migration corridors would be affected by the Reduced  
35 Project during construction activities on land and in the water, as described for the  
36 proposed Project, resulting in no impacts under CEQA.

---

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impact*

4                    No impact.

5                    **NEPA Impact Determination**

6                    No wildlife movement or migration corridors would be affected by the Reduced  
7                    Project during construction activities on land and in the water, as described for the  
8                    proposed Project, resulting in no Impacts under NEPA.

9                    *Mitigation Measures*

10                   No mitigation is required.

11                   *Residual Impact*

12                   No impact.

13                   **Impact BIO-4.1: Reduced Project Alternative construction activities**  
14                   **could substantially disrupt local biological communities.**

15                   As described for the proposed Project, turbidity, noise, and vibration from  
16                   construction of the berth, AMP system and ACTI AMECS platform, and a temporary  
17                   mooring would result in temporary disturbance to marine animals. However, there  
18                   would be no substantial adverse effects to their populations due to the small number  
19                   of individuals affected, the small numbers of individuals moving into other areas, the  
20                   short duration of the disturbance, and the small proportion of the Harbor affected.  
21                   Upon completion of construction, the displaced individuals would be able to return,  
22                   resulting in no substantial disruption of Outer Harbor biological communities. The  
23                   potential for impacts to the California least tern and other special status species are as  
24                   addressed in **Impact BIO-1.1**.

25                   Temporary disturbances resulting from construction activities would not substantially  
26                   reduce the amount of food available to predatory species. The Cabrillo Shallow  
27                   Water Habitat and Pier 300 Shallow Water Habitat would not be adversely affected  
28                   by construction activities, including sound pressure waves from pile driving, due to  
29                   their distance from those activities. Construction activities on land would not  
30                   substantially disrupt plant communities and terrestrial wildlife, as described for the  
31                   proposed Project.

32                   Caspian and elegant terns, which have used a portion of the Tank Farm Site 1 area for  
33                   nesting in the past, would not be expected to nest there prior to Project construction  
34                   as described for the proposed Project. If, however, vegetation were cleared in  
35                   advance of Tank Farm Site 1 construction and prior to the nesting season, elegant and  
36                   Caspian terns could use the site again, and construction activities could injure or kill  
37                   nesting birds or cause them to abandon their nests. Nesting by both species is  
38                   protected under the Migratory Bird Treaty Act.

1 Runoff of pollutants during construction would be minimized through use of BMPs  
2 as described in Section 3.14 and would not adversely affect marine organisms. No  
3 accidents are expected that would result in spills of pollutants that could adversely  
4 affect biological resources. Project-related vessel traffic during construction would  
5 be increased slightly for delivery of rock for stone column installation. Vessels or  
6 barges are likely to be local or from other West Coast locations with minimal  
7 potential to introduce invasive species. A small amount of habitat alteration would  
8 occur at the Marine Terminal, tank farm sites, along the pipeline routes, and at the  
9 staging areas. Construction of the berth at the Marine Terminal would replace about  
10 0.03 acre (0.01 ha) of water column habitat with 0.2 acre (0.09 ha) of hard substrate  
11 habitat, and rock placed around the bases of the larger piles would convert about 0.1  
12 acre (0.04 ha) of soft bottom to hard substrate habitat, as described for the proposed  
13 Project. Installation of the AMP system and ACTI AMECS platform for air quality  
14 mitigation would replace a smaller amount of water column habitat with hard  
15 substrate for the pilings. These minor changes would not substantially disrupt local  
16 biological communities, as described for the proposed Project. Construction  
17 activities on land would have minimal effects on terrestrial biota because most are  
18 non-native and/or adapted to industrial areas, and project-related landscaping would  
19 replace the vegetation and habitat lost.

#### 20 **CEQA Impact Determination**

21 Impacts of pollutant runoff, noise and vibration, turbidity, and introduction of  
22 invasive species to local biological communities would be less than significant under  
23 CEQA, as described above. Since Tank Farm Site 1 would not be cleared for  
24 construction and would be left vacant at the beginning of the nesting season, elegant  
25 terns and Caspian terns would be unlikely to use this area for nesting, resulting in no  
26 impacts to these species. If vegetation clearing at Tank Farm Site 1 for construction  
27 resulted in elegant tern and/or Caspian tern nesting at the site, injury to nesting birds  
28 and disruption of nesting would be a significant impact. The small amount of water  
29 column habitat replaced with hard substrate marine habitat would not represent a  
30 permanent loss of aquatic habitat, and Reduced Project construction impacts would  
31 be less than significant. Accidental spills of pollutants during in-water construction  
32 would be unlikely to occur and would have less than significant impacts if any did  
33 occur. Loss or alteration of terrestrial habitats would result in less than significant  
34 impacts because the areas affected would be small with minimal value to wildlife,  
35 and project-related landscaping would replace the low values lost.

#### 36 *Mitigation Measures*

37 **MM BIO-1.1g** and **MM BIO-1.1h** would be implemented to reduce the potentially  
38 significant impacts to elegant terns, Caspian terns, and other nesting birds at Tank  
39 Farm Site 1. No mitigation is required for the less than significant impacts.

#### 40 *Residual Impact*

41 Residual impacts would be less than significant.

#### 42 **NEPA Impact Determination**

43 Impacts of pollutant runoff, noise and vibration, turbidity, and introduction of  
44 invasive species to local biological communities would be less than significant under

NEPA, as described above for CEQA. Since Tank Farm Site 1 would not be cleared for construction and would be left vacant at the beginning of the nesting season, elegant terns and Caspian terns would be unlikely to use this area for nesting, resulting in no impacts to these species. If vegetation clearing at Tank Farm Site 1 for construction resulted in elegant tern and/or Caspian tern nesting at the site, injury to nesting birds and disruption of nesting would be a significant impact. The small amount of water column habitat replaced with hard substrate marine habitat would not represent a permanent loss of aquatic habitat, and Reduced Project Alternative construction impacts would be less than significant. Accidental spills of pollutants during in-water construction would be unlikely to occur and would have less than significant impacts if any did occur. Loss or alteration of terrestrial habitats would result in less than significant impacts because the areas affected would be small with minimal value to wildlife, and project-related landscaping would replace the low values lost. The vegetated area at Tank Farm Site 1 would not be lost compared to the NEPA Baseline because that area would be paved.

#### *Mitigation Measures*

**MM BIO-1.1g** and **MM BIO-1.1h** would be implemented to reduce the potentially significant impacts to elegant terns, Caspian terns, and other nesting birds at Tank Farm Site 1. No mitigation is required for the less than significant impacts.

#### *Residual Impact*

Residual impacts would be less than significant.

### **3.3.4.3.3.2 Operation Impacts**

#### **Impact BIO-1.2: Operation of the Reduced Project Alternative could affect individuals of or habitat for the California least tern and other special status species.**

Operation of Tank Farm Site 1 adjacent to the California least tern nesting site would be the same as for the proposed Project, but less oil would be transferred. Thus, operational activities, other than transfer of oil, would have the same potential for low level effects of noise, lights, human presence, vessel traffic, and visual presence of structures to this species, as described for the proposed Project. Increased predation could have the same adverse effects as described for the proposed Project.

Increased oil imports at LAHD Berths 238-240 and at Port of Long Beach Berths 76-78 and 84-87 would increase vessel traffic and the potential for oil spills in the Port of Long Beach and in the Main Channel of the Port with the same potential effects on special status species as described for the No Federal Action/No Project Alternative. The frequency of small oil spills during Reduced Project vessel transit within the Harbor to all four of the berths would be once in 118 years, compared to once in 217 years for the proposed Project, and once in 58,914 years versus once in 108,155 years for moderate spills of 238-1,200 bbl (see Section 3.12, Table 3.12-17). The frequency for spills greater than 1,200 bbl is less than once in a million years. Spills during unloading of crude oil at all of the berths would occur once in 410 years (238 bbl) to once in 15,245 years (238-2,380 bbl), which is slightly more frequent than for the proposed Project. MGO spills could occur at a frequency of once in 1,090 years

1 for a small spill (up to 238 bbl) and less than once in about 10 million years for a  
2 larger spill during transit in the Harbor. Effects of a spill that did occur during tanker  
3 transit in the Harbor would be the same as described for the proposed Project and the  
4 No Federal Action/No Action Alternative (i.e., could affect the California least tern  
5 population and brown pelican, and unlikely to affect the black skimmer, western  
6 snowy plover, and marine mammal populations). Other special status bird species  
7 would not be affected by oil spills because they do not use the water surface. Spills  
8 while unloading crude oil or MGO would be contained and would not affect special  
9 status species. Spills from onshore tanks and buried pipelines would not reach  
10 Harbor waters or the California least tern nesting site, as described for the proposed  
11 Project. The probability of oil spills from Pipeline Segment 1 on the Pier 400  
12 causeway bridge is remote (less than one in a million years), but if one did occur, it  
13 could enter the Pier 300 Shallow Water Habitat and Seaplane Lagoon and affect  
14 California least terns during foraging as described for the proposed Project.

15 Oil spills could also occur during Reduced Project vessel transit in offshore waters.  
16 Small spills of less than 238 bbl would occur with a frequency of one per 174 years  
17 while 10 to 30 percent of the vessel cargo could be spilled once in 496 years.  
18 Spillage of the entire cargo (2,500,000 bbl) could occur once in 579 years (see Table  
19 3.12-17 in **Impact RISK-2.1**). Offshore spills would not affect the California least  
20 tern, western snowy plover, or black skimmer because none would be present due to  
21 habitat differences. Few if any California brown pelicans, marine mammals, or sea  
22 turtles would be affected.

23 Effects of vessel traffic during operations on other special status species, such as  
24 marine mammals, would be inconsequential as described for the proposed Project.

### 25 ***ESA Preliminary Determination***

26 The USACE has preliminarily determined that construction and operation of the  
27 Reduced Project may affect the California least tern and the California brown  
28 pelican. Additionally, the USACE has preliminarily determined that the Reduced  
29 Project would not affect the western snowy plover. The USACE will initiate  
30 consultation with USFWS pursuant to ESA Section 7.

### 31 **CEQA Impact Determination**

32 Operation of the Reduced Project could have significant impacts to the California  
33 least tern through increased predation and oil spills. With the sound barrier in place  
34 around the shipping pumps (as part of Reduced Project), noise and vibration from the  
35 shipping pumps, combined with other Reduced Project equipment noise, would have  
36 a less than significant impact on least terns, when present. Reduced Project noise  
37 would be relatively constant while background noise would fluctuate with peaks and  
38 dips related to other activities on Pier 400. An increase in predation on least terns due  
39 to the Reduced Project would be a significant impact. Any uncontained oil spills that  
40 occurred during April through August would have the potential to cause significant,  
41 unavoidable impacts to least terns. Impacts of oil spills during vessel transit within  
42 the Harbor to the brown pelican would likely be less than significant because few  
43 individuals in the population (California and Mexico) would be affected, and oil  
44 spills in the Port would not affect breeding success of the species since they do not  
45 nest in the Harbor region. In the worst case, however, a number of brown pelicans

1 could be affected by an oil spill in the Harbor resulting in significant, unavoidable  
2 impacts. Impacts to the black skimmer would likely be less than significant because  
3 few individuals in the breeding population would be affected. No impacts would  
4 occur to other special status bird species, including the western snowy plover, as  
5 described for the proposed Project. Crude oil spills during unloading at the berths  
6 and MGO at Berth 408 would have no impacts to special status species because the  
7 spills would be contained by the boom around the vessel/barge and immediately  
8 cleaned up. Spills from onshore facilities (tanks and pipelines) that do not reach  
9 Harbor waters would have no impacts to special status species for the reasons  
10 described above. A spill from Pipeline Segment 1 on the Pier 400 causeway bridge,  
11 however, could have significant unavoidable impacts to the California least tern if  
12 such a spill occurred during the least tern nesting season.

13 Offshore oil spills would have less than significant impacts to the California brown  
14 pelican because few, if any, individuals would be affected as described for the  
15 proposed Project. No impacts to the California least tern, black skimmer western  
16 snowy plover, and other special status birds would occur as none would be present in  
17 offshore waters. Impacts to sea turtles and marine mammals would be less than  
18 significant, as described for the proposed Project.

19 Although the Reduced Project could have up to 372 more vessel calls per year  
20 (spread among four berths) than the CEQA Baseline (171 more than the proposed  
21 Project), impacts of project-related vessel traffic on marine mammals would be less  
22 than significant because few individuals would be affected, the animals would likely  
23 move away from the sound as it increases in intensity from the approaching vessel,  
24 exposure would be of a short duration that would not adversely affect individuals,  
25 and Reduced Project vessel strikes of whales would not be expected to occur.

### 26 *Mitigation Measures*

27 To reduce the potential for significant impacts from predation and oil spill effects on  
28 the California least tern, **MM BIO-1.2a**, **MM BIO-1.2b**, **MM BIO-1.2c**, **MM BIO-**  
29 **1.2d**, and **MM BIO-1.2e** would apply. **MM BIO-1.2c** would also apply for impacts  
30 of oil spills to the California brown pelican.

31 No mitigation is needed for the less than significant impacts to other special status  
32 species, but implementation of **MM BIO-1.2f** would reduce the potential for  
33 Reduced Project-related vessel strikes with marine mammals.

### 34 *Residual Impact*

35 Implementation of **MM BIO-1.2a** and **MM BIO-1.2b** would reduce impacts on the  
36 California least tern nesting area from predatory birds and other animals to less than  
37 significant. Implementation of **MM BIO-1.2d** and **MM BIO-1.2e** would further  
38 reduce the potential for impacts from lighting and human activity.

39 Implementation of **MM BIO-1.2c** would reduce, but not eliminate, the potential for  
40 impacts of moderate or small oil spills on the California least tern and California  
41 brown pelican. There are no additional feasible mitigation measures that would  
42 reduce the potential for accidental oil spills to significantly affect these species when  
43 present and foraging in the area (e.g., during April through August for the least tern

1 and all year for the brown pelican). A small (up to 238 bbl) or moderate oil spill,  
2 even though of low probability, that was not contained could, therefore, result in  
3 significant, unavoidable impacts.

4 For the other special status species, less than significant impacts would occur.

5 **NEPA Impact Determination**

6 Operation of the Reduced Project could have significant impacts to the California  
7 least tern through increased predation and oil spills. With the sound barrier in place  
8 around the shipping pumps (as part of Reduced Project), noise and vibration from the  
9 shipping pumps, combined with other Reduced Project equipment noise, would have  
10 a less than significant impact on the least terns, when present. Reduced Project noise  
11 would be relatively constant while background noise would fluctuate with peaks and  
12 dips related to other activities on Pier 400. An increase in predation on least terns due  
13 to the Reduced Project would be a significant impact. However, relative to the NEPA  
14 Baseline with temporary container storage adjacent to the least tern nesting site, the  
15 potential for increased predation would be similar to that baseline. Small oil spills that  
16 occurred during April through August would have the potential to cause significant,  
17 unavoidable impacts to least terns. Impacts of oil spills during vessel transit within  
18 the Harbor to the brown pelican would likely be less than significant because few  
19 individuals in the population (California and Mexico) would be affected, and oil  
20 spills in the Port would not affect breeding success of the species because it does not  
21 nest in the Harbor region. In the worst case, however, a number of brown pelicans  
22 could be affected by an oil spill in the Harbor resulting in significant, unavoidable  
23 impacts. Impacts to the black skimmer would be less than significant because few  
24 individuals in the breeding population would be affected. No impacts would occur to  
25 other special status bird species, including the western snowy plover, as described for  
26 the proposed Project. Crude oil spills during unloading at the berths and MGO at  
27 Berth 408 would have no impacts to special status species because the spills would  
28 be contained by the boom around the vessel/barge and immediately cleaned up.  
29 Spills from onshore facilities (tanks and pipelines) that do not reach Harbor waters  
30 would have no impacts to special status species, for the reasons described above. A  
31 spill from Pipeline Segment 1 on the Pier 400 causeway bridge, however, could have  
32 significant unavoidable impacts to the California least tern if such a spill occurred  
33 during the least tern nesting season.

34 Offshore oil spills would have less than significant impacts to the California brown  
35 pelican because few, if any, individuals would be affected, as described for the  
36 proposed Project. No impacts to the California least tern, black skimmer, western  
37 snowy plover, and other special status birds would occur as none would be present in  
38 offshore waters. Impacts to sea turtles and marine mammals would be less than  
39 significant, as described for the proposed Project.

40 The Reduced Project would have up to 105 more vessel calls per year than under the  
41 NEPA Baseline, and impacts of project-related vessel traffic on marine mammals  
42 would be less than significant because few individuals would be affected, the animals  
43 would likely move away from the sound as it increases from the approaching vessel,  
44 exposure would be of a short duration that would not adversely affect individuals,  
45 and Reduced Project vessel strikes of whales would not be expected to occur.



### *Mitigation Measures*

To reduce the potential for significant impacts of predation and oil spill effects on the California least tern, **MM BIO-1.2a**, **MM BIO-1.2b**, **MM BIO-1.2c**, **MM BIO-1.2d**, and **MM BIO-1.2e** would apply. **MM BIO-1.2c** would also apply for impacts of oil spills to the California brown pelican.

No mitigation is needed for the less than significant impacts to other special status species, but implementation of **MM BIO-1.2f** would reduce the potential for Reduced Project-related vessel strikes with marine mammals.

### *Residual Impact*

Implementation of **MM BIO-1.2a** and **MM BIO-1.2b** would reduce impacts on the California least tern nesting area from predatory birds and other animals to less than significant. Implementation of **MM BIO-1.2d** and **MM BIO-1.2e** would further reduce the potential for impacts from lighting and human activity.

Implementation of **MM BIO-1.2c** would reduce, but not eliminate, the potential for impacts of small and moderate oil spills on the California least tern and California brown pelican. There are no additional feasible mitigation measures that would reduce the potential for accidental oil spills to significantly affect the least terns and brown pelicans when they are present and foraging in the area (e.g., during April through August for the least tern and all year for the brown pelican). A small (up to 238 bbl) or a larger oil spill, even though of low probability, that was not contained could, therefore, result in significant, unavoidable impacts.

For the other special status species, less than significant impacts would occur.

**Impact BIO-2.2: Operation of Reduced Project Alternative facilities would have the potential to substantially reduce or alter a state-, federally-, or locally-designated natural habitat or plant community, including wetlands.**

### *Natural Habitats*

As described above for construction, no designated natural habitats or plant communities, except the California least tern SEA, are present at or near the Reduced Project facility sites, and operations would not affect these habitats. None of these habitats are present at Berths B76-78 and B84-87 in the Port of Long Beach. Operation of Tank Farm Site 1 would have the same effects on the least tern SEA as described for the proposed Project in **Impact BIO-1.1**. An increase of 131 vessels per year to Berths 238-240 relative to the CEQA Baseline would have no adverse effects on the mudflat at Berth 78 in the Main Channel, as described for the No Federal Action/No Project Alternative. Changes in algal growth on the riprap and pilings at Berth 408 would be minor and less than significant, as described for the proposed Project. Habitat changes due to pilings would be less than significant, as described for the proposed Project. Increased vessel traffic (109 vessel calls per year) to the Long Beach berths would not adversely affect any natural habitats, as described for the No Federal Action/No Project Alternative.

1 The potential for oil spills from vessel, while in transit to the four berths, to reach the  
2 eelgrass beds at Cabrillo Beach and in the Pier 300 Shallow Water Habitat and  
3 Seaplane Lagoon would be essentially the same as for the proposed Project, and the  
4 probability of such spills from the vessels going to Berths B76-78, B84-87, and 238-  
5 240 would be slightly less than for the No Federal Action/No Project Alternative. As  
6 described for the proposed Project, effects on these habitats would be adverse, but the  
7 potential for such effects would be reduced because the oil would float, toxic volatile  
8 components would evaporate or be diluted before the oil reaches these areas (Jordan  
9 and Payne 1980), and the oil would be cleaned up immediately in compliance with  
10 SPCC requirements. Offshore oil spills would not affect any natural habitats  
11 because none are present. Thus, oil spills could cause a substantial reduction or  
12 alteration of eelgrass habitats but would not substantially affect other natural habitats.

### 13 **Essential Fish Habitat**

14 Effects of Reduced Project operations on EFH would be the same as described for the  
15 proposed Project, but the predicted frequency of small oil spills would be slightly  
16 greater at one per 118 years, compared to one per 217 years, and moderate spills  
17 would occur once in 58,914 years versus 108,155 years. Spills greater than 1,200 bbl  
18 would occur less than once in one million years and the likelihood of occurrence  
19 during the Project is remote (Section 3.12, Table 3.12-17). For unloading crude oil,  
20 the frequency of small oil spills would be once in 410 years, and moderate spills  
21 could occur once in 15,245 years. The frequency of MGO spills during would be less  
22 frequent than for the proposed Project at one per 1,090 years (less than 238 bbl) and  
23 less than one per 10 million years for a larger spill. Small to moderate spills of oil  
24 into Outer Harbor waters during vessel transit to any of the four berths could drift  
25 into the Cabrillo Shallow Water Habitat before being contained and cleaned up in  
26 compliance with SPCC requirements. Spills in the Port of Long Beach Inner Harbor  
27 would likely be contained within the channels and cleaned up. As described for the  
28 proposed Project, the number of individuals in managed fish species that could be  
29 affected would be a small proportion of their total populations in the region.

30 Small to large oil spills could occur during offshore transit of proposed Project  
31 vessels (See Section 3.12, Table 3.12-15 in **Impact RISK-2.1**), as described for the  
32 proposed Project. Small oil spills (less than 238 bbl) would affect a very small area  
33 and few if any individuals of FMP species (particularly those near the water surface).  
34 For larger spills, however, the oil could spread over a considerable area before  
35 dispersing and, thus, could affect more individuals of FMP species. However, the  
36 low frequency of large spills (once in 496 to 579 years) would only affect the fish in  
37 one year out of many, and long-term population size would not be reduced (Laur and  
38 Halderson 1996).

39 The amount of vessel traffic would be 171 more than for the proposed Project, with  
40 over half of those in the Port of Long Beach. These additional vessel calls would not  
41 substantially alter EFH due to the small number relative to the total number of vessel  
42 calls per year and the distribution of these vessels in the deep water channels of the  
43 San Pedro Bay Ports.

### **CEQA Impact Determination**

No natural plant communities, eelgrass beds, wetlands, or mudflats are present at the Reduced Project site or at Berths B76-78 and B84-87, resulting in no impacts under CEQA. Impacts of vessel traffic and oil spills on mudflats near Berths 238-240 would be less than significant, as described for the No Federal Action/No Project Alternative. Impacts of oil spills in the Outer Harbor to eelgrass beds would be significant as described for the proposed Project. Impacts of operating Tank Farm Site 1 to the California least tern SEA (nesting habitat) would be significant but feasibly mitigated as described for the proposed Project (**Impact BIO-1.2**).

Operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described for the proposed Project, and impacts would be less than significant. Impacts of oil spills on EFH in the Harbor and offshore, although slightly more likely to occur, would be less than significant for the reasons described for the proposed Project.

### ***Mitigation Measures***

No mitigation is required for less than significant impacts to EFH. **MM BIO-1.2c** would apply for oil spill impacts within the Harbor for eelgrass beds in the Pier 300 Shallow Water Habitat, but no mitigation is feasible for significant oil spill impacts to the Cabrillo Beach eelgrass beds.

### ***Residual Impact***

Residual impacts to EFH would be less than significant. Implementation of **MM BIO-1.2c** would reduce but not eliminate the potential for impacts of oil spills on eelgrass beds. There are no additional feasible mitigation measures that would reduce the potential for accidental oil spills to significantly affect eelgrass beds. Oil spills, even though associated with a low probability of occurrence, that were not contained could, therefore, result in significant and unavoidable impacts.

### **NEPA Impact Determination**

No natural plant communities, eelgrass beds, wetlands, or mudflats are present at the Reduced Project site, resulting in no impacts under NEPA. Increased use of other terminals in the San Pedro Bay Ports for delivery of oil under the NEPA Baseline would be less than for the No Federal Action/No Project Alternative, resulting in no impact. Small to moderate oil spills could occur from vessels transporting project-related oil to Berth 408, with significant impacts to eelgrass beds as described for the proposed Project. Impacts of operating Tank Farm Site 1 to the California least tern SEA (nesting habitat) would be significant but feasibly mitigated as described for the proposed Project (**Impact BIO-1.2**).

Operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and impacts would be less than significant. Small to moderate oil spills from vessels using Berth 408 would have less than significant impacts to sustainable fisheries because few individuals within managed fish species would be affected, as described for the proposed Project. Offshore oil spills would have less than significant impacts to EFH for the reasons described under the proposed Project.

1 *Mitigation Measures*

2 No mitigation is required for less than significant impacts to EFH. **MM BIO-1.2c**  
3 would apply for oil spill impacts within the Harbor for eelgrass beds in the Pier 300  
4 Shallow Water Habitat, but no mitigation is feasible for significant oil spill impacts  
5 to the Cabrillo Beach eelgrass beds.

6 *Residual Impact*

7 Residual impacts to EFH would be less than significant. Implementation of **MM**  
8 **BIO-1.2c** would reduce but not eliminate the potential for impacts of oil spills on  
9 eelgrass beds. There are no additional feasible mitigation measures that would  
10 reduce the potential for accidental oil spills to significantly affect eelgrass beds. Oil  
11 spills, even though associated with a low probability of occurrence, that were not  
12 contained could, therefore, result in significant and unavoidable impacts.

13 **Impact BIO-3.2: Operation of Reduced Project Alternative facilities**  
14 **would not interfere with any wildlife migration/movement corridors.**

15 No known terrestrial wildlife or aquatic species migration corridors are present in the  
16 Reduced Project area. As described for the proposed Project and No Federal  
17 Action/No Project Alternative, operation of Reduced Project facilities would not  
18 interfere with movement or migration of wildlife and aquatic species.

19 **CEQA Impact Determination**

20 No impacts would occur to wildlife migration/movement corridors.

21 *Mitigation Measures*

22 No mitigation is required.

23 *Residual Impact*

24 No residual impacts would occur.

25 **NEPA Impact Determination**

26 No impacts would occur to wildlife migration/movement corridors.

27 *Mitigation Measures*

28 No mitigation is required.

29 *Residual Impact*

30 No residual impacts would occur.

31 **Impact BIO-4.2: Reduced Project Alternative operations, including**  
32 **accidental oil spills and introduction of invasive species, have the**  
33 **potential to substantially disrupt local biological communities.**

1 The Reduced Project Alternative would have the same types of effects on biological  
2 communities as previously described for the proposed Project because the potential  
3 for oil spills or MGO spills would be changed very little by the reduced throughput.  
4 Oil spills, however, could occur in the Port of Long Beach (Berths B76-78 and B84-  
5 87) as well as in the LAHD (Berths 238-240 and 408). For most small oil spills (less  
6 than 238 bbl) during unloading of oil at the berths and MGO at Berth 408, standard  
7 measures in use at the three existing oil terminals and those proposed as part of the  
8 Reduced Project Alternative to prevent, contain, and cleanup the spill would reduce  
9 impacts to less than significant. Effects of oil spills at the tank farms or along the  
10 pipeline routes would be the same as described for the proposed Project. Effects on  
11 marine birds of a moderate oil spill from Reduced Project Alternative vessels and  
12 MGO barges during transit in the Harbor would be the same as described for the  
13 proposed Project. Oil spills from vessels in transit to the additional berths for  
14 unloading oil would not change the potential for or level of effect on the Cabrillo  
15 Shallow Water Habitat or the Pier 300 Shallow Water Habitat from that described for  
16 the No Federal Action/No Project Alternative. Large offshore oil spills would have  
17 the potential to affect large numbers of marine birds, as described for the proposed  
18 Project.

19 Runoff of pollutants from Reduced Project facility sites would be the same as  
20 described for the proposed Project.

21 The number of vessels entering the Harbor would be up to 372 (171 more than for the  
22 proposed Project) due to increased import of oil in smaller vessels to other berths in  
23 the Harbor, and the potential for introduction of invasive species from ballast water  
24 and vessel hulls would be slightly greater than described for the proposed Project.

25 Alteration of the marine habitat would continue throughout operations in the same  
26 manner as noted for the proposed Project. The new structures in the water would be  
27 colonized by marine organisms and hard substrate biological communities would be  
28 increased correspondingly.

### 29 **CEQA Impact Determination**

30 Runoff of pollutants and habitat alteration would have impacts that are less than  
31 significant for the same reasons described under the proposed Project. For plankton  
32 and fish, crude oil spills into Harbor and offshore waters would not substantially  
33 disrupt local communities, and impacts would be less than significant and short-term,  
34 with full recovery expected to occur within a few years as described for the proposed  
35 Project. Impacts to local intertidal invertebrate communities would also be less than  
36 significant in most cases because the small amount of such habitat affected would not  
37 substantially disrupt such communities. Impacts of oil spills in the Harbor and  
38 offshore to marine birds would be significant and unavoidable under worst-case  
39 scenarios, as described for the proposed Project because local communities could be  
40 substantially disrupted. Oil spills at the tank farms would be contained and would  
41 have no impacts to biological communities. Spills from buried pipelines would also  
42 be contained on land and would have no impacts to biological communities. Oil  
43 spills from the two above-ground pipeline segments into Harbor waters would be  
44 unlikely to occur (less than once in over a million years); however, if such a spill did  
45 occur from a Reduced Project pipeline rupture, impacts in waters of the Inner Harbor  
46 would be significant for local intertidal communities. An MGO spill during barge

1 transit within the Harbor also could cause substantial disruption of local biological  
2 communities, resulting in a significant impact as described for the proposed Project.  
3 Although of low probability, operation of the Reduced Project facilities has the  
4 potential to result in the introduction of non-native species via vessel hulls or ballast  
5 water and, thus, could substantially disrupt local biological communities. Such  
6 impacts would, therefore, be significant under CEQA.

7 *Mitigation Measures*

8 No mitigation is feasible for significant crude oil and MGO spill impacts to local  
9 marine communities. However, implementation of **MM BIO-1.2c** would reduce the  
10 potential for impacts from an oil spill in the Outer Harbor to marine birds using the  
11 Pier 300 Shallow Water Habitat. No mitigation is required for the less than  
12 significant impacts of crude oil spills to other local biological communities. Existing  
13 regulations would reduce but not eliminate the potential for introduction of invasive  
14 species via vessels. Due to a lack of proven technology, no feasible mitigation is  
15 currently available to prevent introduction of invasive species via vessel hulls. New  
16 technologies are being explored, and if methods become available in the future they  
17 would be implemented as required at that time. No mitigation is required for the less  
18 than significant impacts from runoff and habitat alteration.

19 *Residual Impact*

20 As described for the proposed Project, residual impacts of most small spills would be  
21 less than significant while residual impacts of worst case crude oil spills on birds and  
22 intertidal invertebrates, MGO spills on local biological communities, and  
23 introduction of invasive species have the potential to be significant and unavoidable.

24 For runoff of pollutants and habitat alteration, residual impacts would be less than  
25 significant.

26 **NEPA Impact Determination**

27 The NEPA Baseline includes paving of Tank Farm Site 1 and Tank Farm Site 2 and  
28 267 vessel calls per year to other berths in the San Pedro Bay Ports. Runoff of  
29 pollutants from the tank farm sites would be slightly greater than under the NEPA  
30 Baseline, but impacts would be less than significant for the reasons presented in the  
31 CEQA analysis. Habitat alteration would have impacts that are less than significant  
32 for the reasons described above under the proposed Project. The potential for  
33 introduction of invasive species would be considerably less than in the CEQA  
34 analysis because vessel traffic would be increased by 105 calls per year relative to the  
35 NEPA Baseline as compared to 372 relative to the CEQA Baseline. Impacts,  
36 however, could be significant if such an introduction were to occur and substantially  
37 disrupt local biological communities. For plankton and fish, impacts of crude oil  
38 spills into the Harbor and offshore waters would not substantially disrupt local  
39 communities, and impacts would be less than significant and short-term, with full  
40 recovery expected to occur within a few years as described above for CEQA.  
41 Impacts to local intertidal invertebrate communities would also be less than  
42 significant in most cases because the small amount of such habitat affected would not  
43 substantially disrupt such communities. Impacts to marine birds would be significant  
44 and unavoidable under worst-case oil spill scenarios (offshore and in the Harbor), as

1 described above under the proposed Project because local communities could be  
2 substantially disrupted. The potential for oil spills from tankers, however, would be  
3 less than described for the CEQA analysis because fewer oil tankers would enter the  
4 Harbor compared to the NEPA Baseline. Oil spills at the tank farms would be  
5 contained and would have no impacts to biological communities. Spills from buried  
6 pipelines would also be contained on land and would have no impacts to biological  
7 communities. Oil spills from the two above-ground pipeline segments into Harbor  
8 waters would be unlikely to occur (less than once in over a million years); however,  
9 if such a spill did occur from a Reduced Project pipeline rupture, impacts in waters of  
10 the Inner Harbor would be significant for local intertidal communities. An MGO  
11 spill during barge transit within the Harbor also could cause substantial disruption of  
12 local biological communities, resulting in a significant impact as described for the  
13 proposed Project.

#### 14 *Mitigation Measures*

15 No mitigation is feasible for significant crude oil and MGO spill impacts to local  
16 marine communities. However, implementation of **MM BIO-1.2c** would reduce the  
17 potential for impacts from an oil spill in the Outer Harbor to marine birds using the  
18 Pier 300 Shallow Water Habitat. No mitigation is required for the less than  
19 significant impacts of crude oil spills to other local biological communities. Existing  
20 regulations would reduce but not eliminate the potential for introduction of invasive  
21 species via vessels. Due to a lack of proven technology, no feasible mitigation is  
22 currently available to prevent introduction of invasive species via vessel hulls. New  
23 technologies are being explored, and if methods become available in the future they  
24 would be implemented as required at that time. No mitigation is required for the less  
25 than significant impacts from runoff and habitat alteration.

#### 26 *Residual Impact*

27 As described for the proposed Project, residual impacts of most small spills would be  
28 less than significant while impacts of worst case crude oil spills on birds and  
29 intertidal invertebrates, MGO spills on local biological communities, and  
30 introduction of invasive species have the potential to be significant and unavoidable.

31 For runoff of pollutants and habitat alteration, residual impacts would be less than  
32 significant.

#### 33 **3.3.4.3.4 Summary of Impact Determinations**

34 Table 3.3-3 summarizes the CEQA and NEPA impact determinations of the proposed  
35 Project and its alternatives related to Biological Resources, as described in the  
36 detailed discussion in Sections 3.3.4.3.1 through 3.3.4.3.3. This table is meant to  
37 allow easy comparison between the potential impacts of the proposed Project and its  
38 alternatives with respect to this resource. Identified potential impacts may be based  
39 on Federal, State, or City of Los Angeles significance criteria, Port criteria, and the  
40 scientific judgment of the report preparers.

**Table 3.3-3: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative                     | Environmental Impacts  | Impact Determination  | Mitigation Measures   | Impacts after Mitigation  |
|---------------------------------|--|---|---|---|
| <b>3.3 Biological Resources</b> |  |   |   |   |
| Proposed Project                | <b>BIO-1.1:</b> Construction of proposed Project facilities could affect individuals of or habitat for the California least tern and other special status species. | CEQA:<br><u>California Least Tern</u> : <b>Potential for significant</b> impact<br><u>California Brown Pelican</u> : Less than significant impact<br><u>Western Snowy Plover</u> : No impact<br><u>Black Skimmer, Burrowing Owl</u> : <b>Potential for significant</b> impact<br><u>Other Special Status Species</u> : Less than significant impact | <u>California Least Tern, Black Skimmer, Burrowing Owl</u> :<br><b>MM BIO-1.1a:</b> Monitor the California Least Tern and Other Bird Nesting<br><b>MM BIO-1.1b:</b> Stone Column Installation Monitoring<br><b>MM BIO-1.1c:</b> Construction Schedule<br><b>MM BIO-1.1d:</b> Construction Contractor Environmental Training<br><b>MM BIO-1.1e:</b> Perches<br><b>MM BIO-1.1f:</b> Lighting<br><b>MM BIO-1.1g:</b> Vegetation Clearing<br><b>MM BIO-1.1h:</b> Protection of Special Status Species Nesting Birds<br><b>MM BIO-1.1i:</b> Protection of California Least Tern Nesting<br><b>MM BIO-1.1j:</b> Noise Buffer<br><u>Other Special Status Species</u> : Mitigation not required | CEQA:<br><u>California Least Tern</u> : Less than significant impact<br><u>California Brown Pelican</u> : Less than significant impact<br><u>Western Snowy Plover</u> : No impact<br><u>Black Skimmer, Burrowing Owl</u> : Less than significant impact<br><u>Other Special Status Species</u> : Less than significant impact |



**Table 3.3-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives (continued)**

| <i>Alternative</i>                          | <i>Environmental Impacts</i>   | <i>Impact Determination</i>   | <i>Mitigation Measures</i>  | <i>Impacts after Mitigation</i>   |
|---|--|---|---|---|
| <b>3.3 Biological Resources (continued)</b> |  |   |   |   |
| Proposed Project (continued)                | <b>BIO-1.1 (continued)</b>   | NEPA:<br><u>California Least Tern</u> : <b>Potential for significant</b> impact<br><u>California Brown Pelican</u> : Less than significant impact<br><u>Western Snowy Plover</u> : No impact<br><u>Black Skimmer, Burrowing Owl</u> : <b>Potential for significant</b> impact<br><u>Other Special Status Species</u> : Less than significant impact | <u>California Least Tern, Black Skimmer, Burrowing Owl</u> :<br><b>MM BIO-1.1a</b> through <b>MM BIO-1.1j</b><br><br><u>Other Special Status Species</u> :<br>Mitigation not required | NEPA:<br><u>California Least Tern</u> : Less than significant impact<br><u>California Brown Pelican</u> : Less than significant impact<br><u>Western Snowy Plover</u> : No impact<br><u>Black Skimmer, Burrowing Owl</u> : Less than significant impact<br><u>Other Special Status Species</u> : Less than significant impact |
|   | <b>BIO-2.1</b> : Construction of proposed Project facilities would not substantially reduce or alter a state-, federally-, or locally-designated natural habitat or plant community, including wetlands. | CEQA: Less than significant impact<br>-----<br>NEPA: Less than significant impact   | Mitigation not required<br>-----<br>Mitigation not required   | CEQA: Less than significant impact<br>-----<br>NEPA: Less than significant impact   |
|   | <b>BIO-3.1</b> : Construction of proposed Project facilities would not interfere with any wildlife migration/movement corridors.   | CEQA: No impact<br>-----<br>NEPA: No impact   | Mitigation not required<br>-----<br>Mitigation not required   | CEQA: No impact<br>-----<br>NEPA: No impact   |
|   | <b>BIO-4.1</b> : Proposed Project construction activities could substantially disrupt local biological communities.  | CEQA: <b>Potential for significant</b> impact<br>-----<br>NEPA: <b>Potential for significant</b> impact   | <b>MM BIO-1.1g</b> and <b>MM BIO-1.1h</b><br>-----<br><b>MM BIO-1.1g</b> and <b>MM BIO-1.1h</b>   | CEQA: Less than significant impact<br>-----<br>NEPA: Less than significant impact   |

**Table 3.3-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives (continued)**

| Alternative                                 | Environmental Impacts   | Impact Determination  | Mitigation Measures   | Impacts after Mitigation   |
|---|---|---|---|--|
| <b>3.3 Biological Resources (continued)</b> |   |   |   |  |
| Proposed Project (continued)                | <b>BIO-1.2:</b> Operation of proposed Project facilities could affect individuals of or habitat for the California least tern and other special status species.   | CEQA:<br><u>California Least Tern: Potential for significant impact</u><br><u>California Brown Pelican: Potential for significant impact</u><br><u>Other Special Status Species: Less than significant impact</u> | <u>California Least Tern:</u><br><b>MM BIO-1.2a:</b> Structure Perches<br><b>MM BIO-1.2b:</b> Predator Control<br><b>MM BIO-1.2c:</b> Oil Spill Containment<br><b>MM BIO-1.2d:</b> Security Lighting<br><b>MM BIO-1.2e:</b> Operations Personnel Environmental Training<br><u>California Brown Pelican:</u><br><b>MM BIO-1.2c</b><br><u>Other Special Status Species:</u><br><b>MM BIO-1.2f:</b> Vessel Speed Reduction Program | CEQA:<br><u>California Least Tern:</u><br><b>Significant</b> and unavoidable impact<br><u>California Brown Pelican:</u><br><b>Significant</b> and unavoidable impact<br><u>Other Special Status Species:</u><br>Less than significant impact |
|   |   | NEPA:<br><u>California Least Tern: Potential for significant impact</u><br><u>California Brown Pelican: Potential for significant impact</u><br><u>Other Special Status Species: Less than significant impact</u> | <u>California Least Tern:</u><br><b>MM BIO-1.2a</b> through <b>MM BIO-1.2e</b><br><u>California Brown Pelican:</u><br><b>MM BIO-1.2c</b><br><u>Other Special Status Species:</u><br><b>MM BIO-1.2f</b>  | NEPA:<br><u>California Least Tern:</u><br><b>Significant</b> and unavoidable impact<br><u>California Brown Pelican:</u><br><b>Significant</b> and unavoidable impact<br><u>Other Special Status Species:</u><br>Less than significant impact |
|   | <b>BIO-2.2:</b> Operation of proposed Project facilities would have the potential to substantially reduce or alter a state-, federally-, or locally-designated natural habitat, special aquatic site, or plant community, including wetlands. | CEQA: <b>Potential for significant impact</b>   | <b>MM BIO-1.2c</b>  | CEQA: <b>Significant</b> and unavoidable impact  |
|   |   | NEPA: <b>Potential for significant impact</b>   | <b>MM BIO-1.2c</b>  | NEPA: <b>Significant</b> and unavoidable impact  |

**Table 3.3-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives (continued)**

| <i>Alternative</i>                          | <i>Environmental Impacts</i>   | <i>Impact Determination</i>   | <i>Mitigation Measures</i>  | <i>Impacts after Mitigation</i>   |
|---|--|---|---|---|
| <b>3.3 Biological Resources (continued)</b> |  |   |   |   |
| Proposed Project (continued)                | <b>BIO-3.2:</b> Operation of proposed Project facilities would not interfere with wildlife migration/movement corridors.   | CEQA: No impact<br>NEPA: No impact  | Mitigation not required<br>Mitigation not required  | CEQA: No impact<br>NEPA: No impact  |
|   | <b>BIO-4.2:</b> Proposed Project operations, including accidental oil spills and introduction of invasive species, have the potential to substantially disrupt local biological communities. | CEQA:<br><u>Oil Spills:</u> <b>Potential for significant</b> impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Potential for significant</b> impact<br><u>Habitat Alteration:</u> Less than significant impact<br>NEPA:<br><u>Oil Spills:</u> <b>Potential for significant</b> impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> Less than significant impact<br><u>Habitat Alteration:</u> Less than significant impact | <u>Oil Spills:</u><br><b>MM BIO-1.2c</b><br><u>Runoff of Pollutants:</u><br>Mitigation not required<br><u>Invasive Species:</u><br>None feasible<br><u>Habitat Alteration:</u><br>Mitigation not required | CEQA:<br><u>Oil Spills:</u> <b>Significant</b> and unavoidable impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Significant</b> and unavoidable impact<br><u>Habitat Alteration:</u> Less than significant impact<br>NEPA:<br><u>Oil Spills:</u> <b>Significant</b> and unavoidable impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> Less than significant impact<br><u>Habitat Alteration:</u> Less than significant impact |

**Table 3.3-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives (continued)**

| Alternative                                 | Environmental Impacts   | Impact Determination  | Mitigation Measures  | Impacts after Mitigation   |
|---|---|---|--|--|
| <b>3.3 Biological Resources (continued)</b> |   |   |  |  |
| No Federal Action/No Project Alternative    | <b>BIO-1:</b> Construction and operation of the No Federal Action/No Project Alternative could affect individuals of or habitat for the California least tern and other special status species.   | CEQA:<br><u>California Least Tern</u> : <b>Potential for significant</b> impact<br><u>California Brown Pelican</u> : <b>Potential for significant</b> impact<br><u>Black Skimmer, Burrowing Owl</u> : <b>Potential for significant</b> impact<br><u>Other Special Status Species</u> : Less than significant impact | <b>MM BIO-1.1a</b><br><b>MM BIO-1.1c</b><br><b>MM BIO-1.1e</b><br><b>MM BIO-1.1f</b><br><b>MM BIO-1.1g</b><br><b>MM BIO-1.1h</b><br><b>MM BIO-1.1i</b><br><b>MM BIO-1.2b</b><br><b>MM BIO-2:</b> Container Movement<br><b>MM BIO-3:</b> Trash<br><b>MM BIO-4:</b> Oil Spill Containment<br><b>MM BIO-5:</b> Construction and Operations Personnel Environmental Training | CEQA:<br><u>California Least Tern</u> : <b>Significant</b> and unavoidable impact<br><u>California Brown Pelican</u> : <b>Significant</b> and unavoidable impact<br><u>Black Skimmer, Burrowing Owl</u> : Less than significant impact<br><u>Other Special Status Species</u> : Less than significant impact |
|   |   | NEPA: No impact   | Mitigation not required  | NEPA: No impact  |
|   | <b>BIO-2:</b> Construction and operation in the No Federal Action/No Project Alternative would have the potential to substantially reduce or alter a state-, federally-, or locally-designated natural habitat, special aquatic site, or plant community, including wetlands. | CEQA: <b>Potential for significant</b> impact   | <b>MM BIO-4</b>  | CEQA: <b>Significant</b> and unavoidable impact  |
|   |   | NEPA: No impact   | Mitigation not required  | NEPA: No impact  |
|   | <b>BIO-3:</b> Construction and operation of No Federal Action/No Project Alternative facilities would not interfere with any wildlife migration/movement corridors.   | CEQA: No impact   | Mitigation not required  | CEQA: No impact  |
|   |   | NEPA: No impact   | Mitigation not required  | NEPA: No impact  |
|   | <b>BIO-4.1:</b> No Federal Action/No Project Alternative construction activities would not substantially disrupt local biological communities.  | CEQA: Less than significant impact  | Mitigation not required  | CEQA: Less than significant impact   |
|   |   | NEPA: No impact   | Mitigation not required  | NEPA: No impact  |

**Table 3.3-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives (continued)**

| <i>Alternative</i>                                   | <i>Environmental Impacts</i>   | <i>Impact Determination</i>   | <i>Mitigation Measures</i>  | <i>Impacts after Mitigation</i>   |
|--|--|---|---|---|
| <b>3.3 Biological Resources (continued)</b>          |  |   |   |   |
| No Federal Action/No Project Alternative (continued) | <b>BIO-4.2:</b> No Federal Action/No Project operations, including accidental oil spills and introduction of invasive species, have the potential to substantially disrupt local biological communities. | CEQA:<br><u>Oil Spills:</u> <b>Potential for significant</b> impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Potential for significant</b> impact<br>-----<br>NEPA: No impact  | <u>Oil Spills:</u><br><b>MM BIO-4</b><br><u>Runoff of Pollutants:</u><br>Mitigation not required<br><u>Invasive Species:</u><br>None feasible<br>-----<br>Mitigation not required   | CEQA:<br><u>Oil Spills:</u> <b>Significant</b> and unavoidable impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Significant</b> and unavoidable impact<br>-----<br>NEPA: No impact  |
| Reduced Project Alternative                          | <b>BIO-1.1:</b> Construction of the Reduced Project Alternative could affect individuals of or habitat for the California least tern and other special status species.                                   | CEQA:<br><u>California Least Tern:</u> <b>Potential for significant</b> impact<br><u>California Brown Pelican:</u> Less than significant impact<br><u>Western Snowy Plover:</u> No impact<br><u>Black Skimmer, Burrowing Owl:</u> <b>Potential for significant</b> impact<br><u>Other Special Status Species:</u> Less than significant impact<br>-----<br>NEPA:<br><u>California Least Tern:</u> <b>Potential for significant</b> impact<br><u>California Brown Pelican:</u> Less than significant impact<br><u>Western Snowy Plover:</u> No impact<br><u>Black Skimmer, Burrowing Owl:</u> <b>Potential for significant</b> impact<br><u>Other Special Status Species:</u> Less than significant impact | <u>California Least Tern, Black Skimmer, Burrowing Owl:</u><br><b>MM BIO-1.1a through MM BIO-1.1j</b><br><br><u>Other Special Status Species:</u><br>Mitigation not required<br>-----<br><u>California Least Tern, Black Skimmer, Burrowing Owl:</u><br><b>MM BIO-1.1a through MM BIO-1.1j</b><br><br><u>Other Special Status Species:</u><br>Mitigation not required | CEQA:<br><u>California Least Tern:</u> Less than significant impact<br><u>California Brown Pelican:</u> Less than significant impact<br><u>Western Snowy Plover:</u> No impact<br><u>Black Skimmer, Burrowing Owl:</u> Less than significant impact<br><u>Other Special Status Species:</u> Less than significant impact<br>-----<br>NEPA:<br><u>California Least Tern:</u> Less than significant impact<br><u>California Brown Pelican:</u> Less than significant impact<br><u>Western Snowy Plover:</u> No impact<br><u>Black Skimmer, Burrowing Owl:</u> Less than significant impact<br><u>Other Special Status Species:</u> Less than significant impact |

**Table 3.3-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives (continued)**

| Alternative   | Environmental Impacts   | Impact Determination  | Mitigation Measures   | Impacts after Mitigation           |
|---|---|---|---|------------------------------------|
| <b>3.3 Biological Resources (continued)</b>   |   |   |   |                                    |
| Reduced Project Alternative (continued)   | <b>BIO-2.1:</b> Construction of Reduced Project Alternative facilities would not substantially reduce or alter a state-, federally-, or locally-designated natural habitat or plant community, including wetlands.              | CEQA: Less than significant impact  | Mitigation not required   | CEQA: Less than significant impact |
|   |   | NEPA: Less than significant impact  | Mitigation not required   | NEPA: Less than significant impact |
|   | <b>BIO-3.1:</b> Construction of Reduced Project Alternative facilities would not interfere with any wildlife migration/movement corridors.  | CEQA: No impact   | Mitigation not required   | CEQA: No impact                    |
|   |   | NEPA: No impact   | Mitigation not required   | NEPA: No impact                    |
|   | <b>BIO-4.1:</b> Reduced Project Alternative construction activities could substantially disrupt local biological communities.   | CEQA: <b>Potential for significant impact</b>   | <b>MM BIO-1.1g and MM BIO-1.1h</b>  | CEQA: Less than significant impact |
| NEPA: <b>Potential for significant impact</b>   |   | <b>MM BIO-1.1g and MM BIO-1.1h</b>  | NEPA: Less than significant impact  |                                    |
| <b>BIO-1.2:</b> Operation of the Reduced Project Alternative could affect individuals of or habitat for the California least tern and other special status species. | CEQA:<br><u>California Least Tern:</u> <b>Potential for significant impact</b><br><u>California Brown Pelican:</u> <b>Potential for significant impact</b><br><u>Other Special Status Species:</u> Less than significant impact | <u>California Least Tern:</u><br><b>MM BIO-1.2a through MM BIO-1.2e</b><br><u>California Brown Pelican:</u><br><b>MM BIO-1.2c</b><br><u>Other Special Status Species:</u><br><b>MM BIO-1.2f</b> | CEQA:<br><u>California Least Tern:</u> <b>Significant</b> and unavoidable impact<br><u>California Brown Pelican:</u> <b>Significant</b> and unavoidable impact<br><u>Other Special Status Species:</u> Less than significant impact |                                    |
|   | NEPA:<br><u>California Least Tern:</u> <b>Potential for significant impact</b><br><u>California Brown Pelican:</u> <b>Potential for significant impact</b><br><u>Other Special Status Species:</u> Less than significant impact | <u>California Least Tern:</u><br><b>MM BIO-1.2a through MM BIO-1.2e</b><br><u>California Brown Pelican:</u><br><b>MM BIO-1.2c</b><br><u>Other Special Status Species:</u><br><b>MM BIO-1.2f</b> | NEPA:<br><u>California Least Tern:</u> <b>Significant</b> and unavoidable impact<br><u>California Brown Pelican:</u> <b>Significant</b> and unavoidable impact<br><u>Other Special Status Species:</u> Less than significant impact |                                    |

**Table 3.3-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives (continued)**

| <i>Alternative</i>  | <i>Environmental Impacts</i>  | <i>Impact Determination</i>  | <i>Mitigation Measures</i>  | <i>Impacts after Mitigation</i>                 |
|---|---|--|---|---|
| <b>3.3 Biological Resources (continued)</b>   |   |  |   |   |
| Reduced Project Alternative (continued)   | <b>BIO-2.2:</b> Operation of Reduced Project Alternative facilities would have the potential to substantially reduce or alter a state-, federally-, or locally-designated natural habitat or plant community, including wetlands.                               | CEQA: <b>Potential for significant</b> impact  | MM BIO-1.2c   | CEQA: <b>Significant</b> and unavoidable impact |
|   |   | NEPA: <b>Potential for significant</b> impact  | MM BIO-1.2c   | NEPA: <b>Significant</b> and unavoidable impact |
|   | <b>BIO-3.2:</b> Operation of Reduced Project Alternative facilities would not interfere with any wildlife migration/movement corridors.   | CEQA: No impact  | Mitigation not required   | CEQA: No impact                                 |
|   |   | NEPA: No impact  | Mitigation not required   | NEPA: No impact                                 |
| <b>BIO-4.2:</b> Reduced Project Alternative operations, including accidental oil spills and introduction of invasive species, have the potential to substantially disrupt local biological communities. | CEQA:<br><u>Oil Spills:</u> <b>Potential for significant</b> impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Potential for significant</b> impact<br><u>Habitat Alteration:</u> Less than significant impact | <u>Oil Spills:</u><br>MM BIO-1.2c<br><u>Runoff of Pollutants:</u><br>Mitigation not required<br><u>Invasive Species:</u><br>None feasible<br><u>Habitat Alteration:</u><br>Mitigation not required | CEQA:<br><u>Oil Spills:</u> <b>Significant</b> and unavoidable impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Significant</b> and unavoidable impact<br><u>Habitat Alteration:</u> Less than significant impact |   |
|   | NEPA:<br><u>Oil Spills:</u> <b>Potential for significant</b> impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Potential for significant</b> impact<br><u>Habitat Alteration:</u> Less than significant impact | <u>Oil Spills:</u><br>MM BIO-1.2c<br><u>Runoff of Pollutants:</u><br>Mitigation not required<br><u>Invasive Species:</u><br>None feasible<br><u>Habitat Alteration:</u><br>Mitigation not required | NEPA:<br><u>Oil Spills:</u> <b>Significant</b> and unavoidable impact<br><u>Runoff of Pollutants:</u> Less than significant impact<br><u>Invasive Species:</u> <b>Significant</b> and unavoidable impact<br><u>Habitat Alteration:</u> Less than significant impact |   |

1 This table is meant to allow easy comparison between the potential impacts of the  
2 proposed Project and its alternatives with respect to this resource. Identified potential  
3 impacts may be based on Federal, State, or City of Los Angeles significance criteria,  
4 Port criteria, and the scientific judgment of the report preparers.

5 For each type of potential impact, the table describes the impact, notes the CEQA and  
6 NEPA impact determinations, describes any applicable mitigation measures, and  
7 notes the residual impacts (i.e., the impact remaining after mitigation). All impacts,  
8 whether significant or not, are included in this table. Note that impact descriptions  
9 for each of the alternatives are the same as for the proposed Project, unless otherwise  
10 noted.

#### 11 **3.3.4.4 Mitigation Monitoring**

12 Significant impacts have the potential to occur during proposed Project construction  
13 and operations. The following measures would be incorporated into contract  
14 specifications to ensure impacts to biological species are minimized to the greatest  
15 extent feasible.

16 Note that **MM 4D-7** and **MM 4D-9** from the Deep Draft FEIS/FEIR are applicable to  
17 impacts of the proposed Project and Reduced Project Alternative. However, the more  
18 project-specific measures below cover the intent of **MM 4D-7** and **MM 4D-9**, so  
19 they are not included in the list of mitigation measures below.



### Mitigation Measures Developed in this Draft SEIS/SEIR

|  |  |
|--|--|
| <b>Proposed Project Impact BIO-1.1: Construction of proposed Project facilities could affect individuals of or habitat for the California least tern and other special status species.</b> |  |
| <b>MM BIO-1.1a: Monitor California Least Tern and Other Bird Nesting</b>   |  |
| Mitigation Measure   | A qualified biologist shall monitor the least tern and other special status bird nesting during construction activities on Pier 400, including installation of Pipeline Segment 1 to Tank Farm Site 2 and use of staging area 412 that would occur from April through August. In the event of an imminent threat to nesting special status species, and the Construction Manager is not immediately available, the monitor shall have the authority to redirect construction activities. If construction activities need to be redirected to prevent impacts to special status birds, the monitor shall immediately contact the LAHD Environmental Management Division, Port Inspector, and Construction Manager. The Construction Manager has the authority to halt construction if determined to be necessary.   |
| Timing   | During Project construction on Pier 400 and along the Pipeline Segment 1 route.  |
| Methodology  | The construction contractor shall instruct construction personnel as part of normal construction procedures. LAHD shall arrange for the presence of the monitor during construction activity.  |
| Responsible Parties  | Construction contractor; LAHD.   |
| Residual Impacts   | Implementation of this measure would reduce impacts on biological resources during construction to less-than-significant. Based on existing (2006 and 2007) conditions at Tank Farm Site 1 (vegetated), impacts to black skimmer nesting would be less than significant. This does not account for potential future clearing.  |
| <b>MM BIO-1.1b: Stone Column Installation Monitoring</b>   |  |
| Mitigation Measure   | At Tank Farm Site 1, no stone column construction shall occur at night (sunset to sunrise), and if possible, stone column construction during daytime hours should be conducted outside the least tern nesting season. If stone column installation is unavoidable during the nesting season, the work shall be phased so that installation nearest the nesting site is conducted prior to or after the nesting season, and a qualified biologist shall monitor the least terns at the nesting site during stone column installation to identify adverse reactions of the birds to this activity. If the terns react adversely to work at any of these sites, work will be temporarily stopped. The LAHD Environmental Management Division, least tern biologist, and Construction Manager shall confer with the USFWS and CDFG regarding necessary further actions. |
| Timing   | During stone column installation at Tank Farm Site 1.  |
| Methodology  | The construction contractor shall instruct construction personnel as part of normal construction procedures. LAHD shall arrange for the presence of the monitor during construction activity.  |
| Responsible Parties  | Construction contractor; LAHD.   |
| Residual Impacts   | Implementation of this measure would reduce impacts on biological resources during construction to less than significant.  |

| <b>Mitigation Measures Developed in this Draft SEIS/SEIR (continued)</b> |   |
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| <b>MM BIO-1.1c: Construction Schedule.</b>                               |   |
| Mitigation Measure   | All construction activities that are within 200 ft (61 m) of the California least tern nesting site and foraging areas shall be scheduled to occur between September and March, unless otherwise approved by the USFWS and CDFG. This includes installation and removal of mooring piles as well as gravel delivery at staging area 412 (See Port brochure in Appendix J).  |
| Timing   | During proposed Project construction at Tank Farm Site 1 on Pier 400 and along the Pipeline Segment 1 route.  |
| Methodology  | The construction contractor shall be responsible for scheduling the construction activity during the allowed time periods and for instructing construction personnel on least tern sensitivity issues to be observed as part of normal construction procedures. LAHD shall perform periodic inspections to ensure the schedule is being followed.   |
| Responsible Parties  | Construction contractor; LAHD.  |
| Residual Impacts   | Implementation of this measure would reduce construction impacts on special status species to less than significant.  |
| <b>MM BIO-1.1d: Construction Contractor Environmental Training.</b>      |   |
| Mitigation Measure   | The Port shall provide environmental training by a qualified biologist to all construction contractor personnel working at the site. This shall include, but not be limited to, information about the California least tern (e.g., seasonal presence, pictures of the birds, and regulatory protections) and other special status species (e.g., black skimmer and burrowing owl) and measures required to avoid or minimize the potential for impacts to these species. The latter measures shall include placement of food in sealed containers and daily disposal of all food wastes in sealed containers, with off-site disposal at regular intervals during construction; prohibition of pets or animals of any kind during work on Pier 400; limiting activities within 200 ft (61m), or other established buffer distance, of the nesting site from March through August, to the extent feasible; and scheduling construction activities that would be near the nesting site for the period between September and March. |
| Timing   | Prior to and during proposed Project construction.  |
| Methodology  | The Port shall provide the qualified biologist to give the environmental training to all construction contractor personnel working at the site.<br>LAHD shall perform periodic inspections to ensure this measure is being implemented.   |
| Responsible Parties  | Construction contractor; LAHD.  |
| Residual Impacts   | Implementation of this measure would reduce impacts on biological resources to less than significant.   |
| <b>MM BIO-1.1e: Perches.</b>   |   |
| Mitigation Measure   | When California least terns are present at the nesting site, idle construction equipment and stockpiles of materials exceeding approximately 8 ft (2.4 m) in height shall be placed so they do not provide perches for birds that could prey on least terns.  |
| Timing   | During proposed Project construction at Tank Farm Site 1 on Pier 400 when least terns are present at the nesting site.  |
| Methodology  | The construction contractor shall instruct construction personnel on these requirements as part of normal construction procedures. LAHD shall perform periodic inspections to ensure these measures are being implemented.  |

| <b>Mitigation Measures Developed in this Draft SEIS/SEIR (continued)</b> |   |
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| Responsible Parties  | Construction contractor; LAHD.  |
| Residual Impacts   | Implementation of this measure would reduce impacts to the least tern to less than significant.   |
| <b>MM BIO-1.1f: Lighting.</b>  |   |
| Mitigation Measure   | Night time construction at Tank Farm Site 1 and construction staging area 412 during the least tern nesting season should be avoided. All lighting (temporary and security) shall be directed away from the California least tern nesting site and shielded to minimize increased light in the nesting area.  |
| Timing   | During proposed Project construction at Tank Farm Site 1 and use of staging area 412 on Pier 400 when least terns are present at the nesting site.  |
| Methodology  | The construction contractor shall instruct construction personnel on these requirements as part of normal construction procedures. LAHD shall perform periodic inspections to ensure these measures are being implemented.  |
| Responsible Parties  | Construction contractor; LAHD   |
| Residual Impacts   | Implementation of this measure would reduce impacts to the least tern to less than significant.   |
| <b>MM BIO-1.1g: Vegetation Clearing.</b>                                 |   |
| Mitigation Measure   | Vegetation growing at Tank Farm Site 1 shall be cleared immediately prior to construction activities occurring from April through August to discourage and protect least terns and black skimmers from nesting within the work area. Areas cleared at other times of the year will not be left barren and vacant during the nesting season.   |
| Timing   | During proposed Project construction at Tank Farm Site 1 on Pier 400.   |
| Methodology  | The construction contractor shall instruct construction personnel on these requirements as part of normal construction procedures. LAHD shall perform periodic inspections to ensure these measures are being implemented.  |
| Responsible Parties  | Construction contractor; LAHD   |
| Residual Impacts   | Implementation of this measure would reduce impacts to the black skimmer and least tern to less than significant.   |
| <b>MM BIO-1.1h: Protection of Special Status Species Nesting Birds.</b>  |   |
| Mitigation Measure   | To avoid impacts to nesting special status species, such as the California least tern, black skimmer, and burrowing owl, a preconstruction survey shall be conducted by a qualified biologist if construction commences during the normal nesting season for most bird species (February 1 to August 1) to determine if any are nesting there.<br>If any nesting is found, a buffer area of 200 ft (61 m) shall be established and protective measures shall be finalized in coordination with USFWS and CDFG. Nesting birds shall be protected until nesting is complete or young have fledged as determined by a qualified biologist. |
| Timing   | Prior to construction at Tank Farm Site 1 on Pier 400.  |
| Methodology  | The construction contractor shall instruct construction personnel as part of normal construction procedures. LAHD shall arrange for the presence of the qualified biologist prior to construction.  |
| Responsible Parties  | Construction contractor; LAHD   |

| <b>Mitigation Measures Developed in this Draft SEIS/SEIR (continued)</b>   |   |
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| Residual Impacts   | Implementation of this measure would reduce impacts to the least tern, black skimmer, and burrowing owl to less than significant.   |
| <b>MM BIO-1.1i: Protection of California Least Tern Nesting.</b>   |   |
| Mitigation Measure   | During construction, no unauthorized vehicles or persons shall be allowed within 100 ft (30 m) of the east side and northeast corner of the least tern nesting site (the "at grade portion") during the nesting season. Signs shall be posted, and barriers (e.g., temporary fencing) shall be provided if signage is not adequate.   |
| Timing   | During proposed Project construction at Tank Farm Site 1 on Pier 400.   |
| Methodology  | The construction contractor shall instruct construction personnel on these requirements as part of normal construction procedures. LAHD shall perform periodic inspections to ensure these measures are being implemented.  |
| Responsible Parties  | Construction contractor; LAHD   |
| Residual Impacts   | Implementation of this measure would reduce impacts to the least tern to less than significant.   |
| <b>MM BIO-1.1j: Noise Buffer.</b>  |   |
| Mitigation Measure   | Construction of the north-south oriented containment dikes at Tank Farm Site 1 should occur early in site development to aid as noise buffers during construction.  |
| Timing   | During proposed Project construction at Tank Farm Site 1 on Pier 400.   |
| Methodology  | The construction contractor shall instruct construction personnel on these requirements as part of normal construction procedures. LAHD shall perform periodic inspections to ensure these measures are being implemented.  |
| Responsible Parties  | Construction contractor; LAHD   |
| Residual Impacts   | Implementation of this measure would reduce impacts to the least tern to less than significant.   |
| <b>Proposed Project Impact BIO-1.2: Operation of proposed Project facilities would affect individuals of or habitat for the California least tern and other sensitive species.</b> |   |
| <b>MM BIO-1.2a: Structure Perches.</b>   |   |
| Mitigation Measure   | The portions of all structures (buildings, lights, etc.) at the proposed Tank Farm Site 1 on Pier 400 that have a direct line of sight to the least tern nesting site shall be designed to prevent birds from perching on them. The prevention measures cannot be specified at this time but shall be those approved by the USFWS at the time of installation (e.g., Nixalite currently used on high mast lights) and shall be monitored during the least tern nesting season to verify that predatory birds are not perching on proposed Project structures and to identify repairs needed to keep the measures in good working order. Any such repairs will be implemented immediately (i.e., within one day when least terns are present). |
| Timing   | Prior to issuance of construction permits (design of structures) and during proposed Project operation (monitor prevention measures).   |
| Methodology  | The project applicant shall prepare and submit detailed plans for approval identifying prevention measures for all Pier 400 Tank Farm Site 1 structures. CDFG, USFWS, and LAHD shall review and approve these plans. LAHD shall arrange for the presence of the monitor during operations.  |
| Responsible Parties  | Project applicant; CDFG; USFWS; LAHD.   |

| <b>Mitigation Measures Developed in this Draft SEIS/SEIR (continued)</b> |   |
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| Residual Impacts   | Implementation of this measure would reduce impacts on the least tern nesting area from predatory birds to less than significant.   |
| <b>MM BIO-1.2b: Predator Control.</b>                                    |   |
| Mitigation Measure   | A qualified biologist shall monitor Tank Farm Site 1 for predators during the least tern nesting season. Any predators found will be controlled in coordination with CDFG and USFWS.  |
| Timing   | During proposed Project operation (monitor and remove predators).   |
| Methodology  | The project applicant shall prepare a predator control plan for approval by the CDFG, USFWS, and LAHD.  |
| Responsible Parties  | Project applicant; CDFG; USFWS; LAHD. LAHD shall arrange for the presence of the monitor during operations.   |
| Residual Impacts   | Implementation of this measure would reduce the potential for impacts of predators on least terns to less than significant.   |
| <b>MM BIO-1.2c: Oil Spill Containment.</b>                               |   |
| Mitigation Measure   | If a project-related oil spill occurs during the least tern nesting season and has the potential to enter the Pier 300 Shallow Water Habitat, booms shall be deployed to prevent oil from entering this important foraging area. The applicant shall ensure quick deployment of oil booms at the south entrance of the Pier 300 Shallow Water Habitat or at the causeway gap bridge, either through storage of booms at the south entrance to the Pier 300 Shallow Water Habitat and at the causeway gap bridge or through deployment at these locations in accordance with the approved oil spill response plan. |
| Timing   | Prior to operations (included in oil spill response plan) and during operations.  |
| Methodology  | The project applicant shall prepare and submit detailed plans for approval identifying oil spill containment measures for the Pier 300 Shallow Water Habitat. CDFG and LAHD shall review and approve these plans.   |
| Responsible Parties  | Project applicant; CDFG; LAHD.  |
| Residual Impacts   | Implementation of this measure would reduce, but not eliminate, the potential for effects of oil spills on the California least tern and California brown pelican. Residual impacts could be significant and unavoidable.   |
| <b>MM BIO-1.2d: Security Lighting.</b>                                   |   |
| Mitigation Measure   | Security lighting standards on the eastern side of Tank Farm Site 1 near the least tern nesting site shall be no greater than 30 ft (9.1 m) in height and directed away from the nesting site.  |
| Timing   | During construction.  |
| Methodology  | The project applicant shall prepare and submit detailed plans for the lighting. LAHD shall review and approve these plans.  |
| Responsible Parties  | Project applicant; LAHD.  |
| Residual Impacts   | Implementation of this measure would reduce the potential for impacts of lighting on least terns to less than significant.  |

| <b>Mitigation Measures Developed in this Draft SEIS/SEIR (continued)</b>   |  |
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| <b>MM BIO-1.2e: Operations Personnel Environmental Training.</b>   |  |
| Mitigation Measure   | The Port shall provide environmental training by a qualified biologist to all operational workers at the PLAMT Pier 400 Marine Terminal and Tank Farm Site 1. This shall include, but not be limited to, information about the California least tern (e.g., seasonal presence, pictures of the birds, and regulatory protections) and measures required to avoid or minimize the potential for adverse effects to the species. The latter measure shall include placement of food in sealed containers and daily disposal of all food wastes in sealed containers, with off-site disposal at regular intervals; prohibition on bringing pets or animals of any kind to work on Pier 400; and scheduling significant maintenance/construction activities that would occur near the nesting site for the period between September and March. |
| Timing   | Annually during proposed Project operations of Tank Farm Site 1 and the Marine Terminal on Pier 400.   |
| Methodology  | LAHD shall include the environmental training requirement in the tenant lease agreement.   |
| Responsible Parties  | Project applicant; LAHD shall arrange for the presence of the qualified biologist during operations.   |
| Residual Impacts   | Implementation of this measure would further reduce the potential for impacts of operations on least terns.  |
| <b>MM BIO-1.2f: Vessel Speed Reduction Program.</b>  |  |
| Mitigation Measure   | All ships calling (100 percent) at Berth 408 shall comply with the expanded VSR Program of 12 knots between 40 nm from Point Fermin and the Precautionary Area from Year 1 of operation.   |
| Timing   | During operations.   |
| Methodology  | LAHD shall require VSRP as a requirement of the applicant's lease.   |
| Responsible Parties  | PLAMT/LAHD   |
| Residual Impacts   | Less than Significant.   |
| <b>No Federal Action/No Project Alternative Impact BIO-1: Construction and operation of No Federal Action/No Project Alternative facilities on Pier 400 could affect individuals of or habitat for the California least tern and other special status species.</b> |  |
| In addition to MM BIO-2 through MM BIO-5 detailed below, MM BIO-1.1a, MM BIO-1.1c, MM BIO-1.1e through MM BIO-1.1i, and MM BIO-1.2b would also apply   |  |
| <b>MM BIO-2: Container Movement.</b>   |  |
| Mitigation Measure   | Containers shall be parked at least 200 ft (61 m), or other buffer distance established through consultation with USFWS and CDFG, from the western edge of the California least tern nesting area from April through August. No movement activities shall occur within the nesting site buffer during that time.   |
| Timing   | During No Federal Action/No Project Alternative operations.  |
| Methodology  | LAHD shall include restrictions on container parking and movement in the lease agreement for the site. Lessee will be responsible for implementing the measures.   |
| Responsible Parties  | LAHD; lessee.  |
| Residual Impacts   | Implementation of this measure would reduce impacts on the least tern to less than significant.  |

| <b>Mitigation Measures Developed in this Draft SEIS/SEIR (continued)</b>       |  |
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| <b>MM BIO-3: Trash.</b>  |  |
| Mitigation Measure   | Trash shall be removed from the Pier 400 temporary container storage area at least weekly from April through August and monthly the remainder of the year to minimize predator use of the area.  |
| Timing   | During No Federal Action/No Project Alternative operations on Pier 400.  |
| Methodology  | Lessee will implement trash pickup. LAHD shall include trash clean-up specifications in lease agreement and will perform periodic inspections to ensure these measures are being implemented.  |
| Responsible Parties  | Lessee; LAHD.  |
| Residual Impacts   | Implementation of this measure would reduce impacts to the least tern to less than significant.  |
| <b>MM BIO-4: Oil Spill Containment.</b>  |  |
| Mitigation Measure   | Containment booms shall be stored at the south entrance to the Pier 300 Shallow Water Habitat and at the causeway gap bridge. If a project-related oil spill occurs during the least tern nesting season and has the potential to enter the Pier 300 Shallow Water Habitat, these booms shall be deployed to prevent oil from entering this important foraging area.   |
| Timing   | Prior to operations (to be included in an oil spill response plan) and during operations   |
| Methodology  | LAHD shall prepare and submit detailed plans for approval identifying oil spill containment measures for the Pier 300 Shallow Water Habitat. CDFG shall review and approve these plans.  |
| Responsible Parties  | CDFG; LAHD.  |
| Residual Impacts   | Implementation of this measure would reduce, but not eliminate, the potential for effects of oil spills on the California least tern and California brown pelican. Residual impacts could be significant and unavoidable.  |
| <b>MM BIO-5: Construction and Operations Personnel Environmental Training.</b> |  |
| Mitigation Measure   | The Port shall provide environmental training by a qualified biologist to all construction contractor and operations personnel working at the site. This shall include, but not be limited to, information about the California least tern (e.g., seasonal presence, pictures of the birds, and regulatory protections) and other special status species (e.g., black skimmer and burrowing owl) and measures required to avoid or minimize the potential for impacts to these species. The latter measures shall include placement of food in sealed containers and daily disposal of all food wastes in sealed containers, with off-site disposal at regular intervals during construction; prohibition of pets or animals of any kind to work on Pier 400; limiting activities within 200 ft (61m), or other established buffer distance, of the nesting site from March through August; and scheduling construction activities that would be near the nesting site for the period between September and March. |
| Timing   | Prior to and during construction at the temporary container storage site on Pier 400 and annually during operation of the facility   |
| Methodology  | LAHD shall include the environmental training requirement in the lease agreement. The Port shall provide the qualified biologist to give the training to construction and operations personnel.<br>LAHD shall perform periodic inspections to ensure this measure is being implemented.  |
| Responsible Parties  | Construction contractor; LAHD.   |

| <b>Mitigation Measures Developed in this Draft SEIS/SEIR (continued)</b>   |  |
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| Residual Impacts   | Implementation of this measure would reduce impacts on special status species. |
| <p><b>Reduced Project Impact BIO-1.1: Construction of the Reduced Project Alternative could affect individuals of or habitat for the California least tern and other special status species.</b><br/> <b>MM BIO-1.1a through MM BIO-1.1j</b> described for the proposed Project would apply.</p> |  |
| <p><b>Reduced Project Impact BIO-1.2: Operation of the Reduced Project Alternative could affect individuals of or habitat for the California least tern and other special status species.</b><br/> <b>MM BIO-1.2a through MM BIO-1.2f</b> described for the proposed Project would apply.</p>    |  |