



REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

June 28, 2012

TO INTERESTED PARTIES:

Enclosed for your file is a memo describing the website where the Final Supplemental Environmental Assessment (SEA) for the San Diego Harbor Maintenance Dredging Project, San Diego County, California can be found. In an effort to conserve paper and resources, the Final SEA may be downloaded at the noted web address. This SEA was written to address changes to the project description since the March 2009 Final Environmental Assessment (EA) and the August 2010 Final SEA.

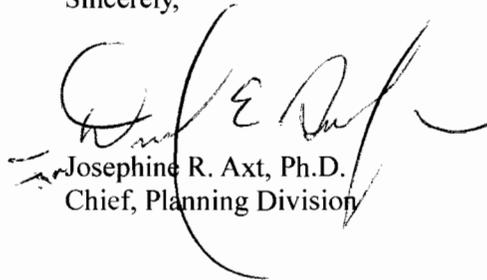
Dredging would occur over approximately 100 days using either a clamshell or hopper dredge. Approximately 550,000 cubic yards of clean, sandy nearshore compatible material would be dredged from the approach and entrance channels and would be placed in the nearshore waters at Imperial Beach or Coronado Beach. Dredging would occur between August 1, 2012 and April 1, 2013. The primary benefits from the proposed project would be restoration of authorized design depths and unimpeded navigation within the Federal Channel. Secondary benefits include the replenishment of the beach with placement of dredged material in the nearshore at Imperial Beach or Coronado Beach.

The draft SEA was sent for 30-day public review in December 2011. Comments received on the draft were incorporated into this final SEA as appropriate. Since the draft SEA the barge removal activities were removed from the project description. Also, a second nearshore disposal site was added at Coronado Beach. This site was previously used as a borrow site for the 1985 Shore Protection Improvement of U.S. Naval Amphibious Base and impacts to this area would be the same as those previously documented for the nearshore at Coronado Beach. Coordination occurred during and after the public review period with U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), Environmental Protection Agency (EPA), California Coastal Commission (CCC), California Department of Fish and Game (CDFG), and San Diego Regional Water Quality Control Board (RWQCB).

If you have any questions regarding the project, please contact Ms. Erin Jones, Project Environmental Coordinator, at (213) 300-9723 or at erin.l.jones@usace.army.mil.

Thank you for your attention to this document.

Sincerely,

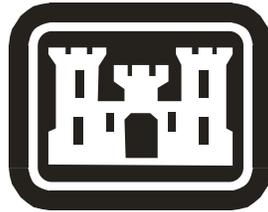


Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure

**SAN DIEGO HARBOR
MAINTENANCE DREDGING PROJECT
SAN DIEGO COUNTY, CALIFORNIA**

**FINAL
Supplemental Environmental Assessment**



Prepared by:

**U.S. Army Corps of Engineers
Los Angeles District**

JUNE 2012

**Final
Executive Summary
for
San Diego Harbor Maintenance Dredging Project**

PROPOSED ACTION: The Los Angeles District (LAD) Corps of Engineers (Corps), as part of its continuing program of regular maintenance dredging, proposes to remove shoaled sediment along the Federal Channel of San Diego Harbor, San Diego County, California. The proposed project would involve the dredging of nearshore compatible sediment from the approach and entrance channels of the Federal Channel of San Diego Harbor. The material would be disposed in the nearshore waters at Imperial Beach or Coronado Beach.

This Final Supplemental Environmental Assessment (SEA) addresses the impacts associated with the proposed dredging at San Diego Harbor and disposal at Imperial Beach or Coronado Beach. This Final SEA is written in compliance with the National Environmental Policy Act (NEPA), and applicable Federal, State and local environmental regulations.

LOCATION: The proposed dredge footprint is the approach and entrance channels of the Federal Channel of San Diego Harbor, San Diego County, California. The disposal site for nearshore compatible dredged material is located in the nearshore waters at Imperial Beach located approximately 12 miles south of San Diego along the Pacific Coast, or at Coronado Beach located approximately 3 miles south of San Diego along the Pacific Coast.

**PURPOSE AND
NEED:**

Long shore transport of sand from the ocean has shoaled the sides of the approach/entrance channel, and other areas of the Federal Channel have developed shoals due to propeller wash from passing ships and sediment deposition from Sweetwater Channel. The San Diego Harbor maintenance dredging project is important for the continued and safe navigation of the channel by deep draft vessels using the Harbor.

The proposed project would serve the following purposes: (1) restore the channel that is subject to continual shoaling to design depths; (2) assure the continued navigation for marine traffic within the harbor; and (3) provide beach nourishment material for downcast beaches severely eroded by littoral processes. The primary benefits realized from the proposed project would be restoration of design depths and unimpeded navigation within the Federal Channel. Secondary benefits include the replenishment of the beach with placement of dredged material in the nearshore to ensure that a pleasant shoreline environment is maintained for the public.

**ALTERNATIVES
ADDRESSED:**

AUTHORITY:

Maintenance dredging of San Diego Harbor is authorized by the 1852 Rivers and Harbors Act, amended by the MILCON (Military Construction) project performed by the Navy. The approach channel was deepened by the Navy to -55 MLLW in the 1990's for defense purposes as part of a MILCON project. Based on statute 33 U.S.C. 562.a, Corps South Pacific Division authorized Los Angeles District to maintain the approach channel at this depth as part of its regular maintenance dredging.

BACKGROUND/HISTORY OF DEVELOPING ALTERNATIVES:

The Corps has performed geotechnical surveys, including grain size and bulk chemistry analyses, for the proposed dredge material. Grain size analysis and chemical analysis revealed that dredge material from the proposed project site is suitable for nearshore disposal. Alternatives were developed based on the results of these surveys, amount of material to be dredged, suitability of material for nearshore disposal, and beaches located in the vicinity of the maintenance dredging site, as well as on the mechanical operations and limitations of available dredges.

Imperial Beach and Coronado Beach are analyzed as viable alternatives. Other alternatives considered included the No Action Alternative, onshore disposal, ocean disposal, upland disposal, and use of a clamshell dredge were analyzed in the March 2009 Environmental Assessment (EA). These alternatives were not found to be feasible and were eliminated from further consideration.

ENVIRONMENTAL
IMPACTS OF THE
PROPOSED ACTION
AND
ALTERNATIVES:

The proposed project would dredge approximately 550,000 cubic yards of material from the approach and entrance channels in the Federal Channel, from station 120+00 to station -65+00, and the disposal of nearshore compatible sediment in the nearshore waters at Imperial Beach or Coronado Beach. Dredging is now scheduled to occur between August 2012 and April 2013. The maximum duration of dredging would be approximately 100 days depending on the type of dredge to be used. If delays occur, the concerned agencies would be notified.

The Corps has coordinated with the Environmental Protection Agency (EPA) regarding suitability of the dredged sediment for nearshore replenishment. Only nearshore compatible material, as determined by sediment sampling performed in October 2008, would be dredged and placed in the nearshore waters at Imperial Beach or Coronado Beach.

The Corps has coordinated with the U.S. Fish and Wildlife Service (USFWS), and has developed mitigation measures to avoid and minimize impacts to Federally listed species. Impacts to foraging for the California least tern will be avoided by monitoring water quality and turbidity during the dredging operation, and monitoring foraging behaviors if dredging occurs prior to September 15. Dredging activities would occur far off-shore from known snowy plover habitat within the harbor. Dredge material deposited in the nearshore is expected to disperse via wave action over the course of several months to replenish the beach. No large quantities of material will be disposed of on or near snowy plover habitat.

The proposed project is located within the Coastal Zone and is subject to the Coastal Zone Management Act (CZMA). The Corps has coordinated with the California Coastal Commission (CCC) to address requirements of the CZMA. Concurrence with the Negative Determination was received from the CCC (Appendix B).

The Corps shall implement water quality monitoring at the dredge and nearshore disposal sites. This monitoring will minimize impacts to water quality and turbidity during implementation of the proposed project. The Corps coordinated with the San Diego Regional Water Quality Control Board (RWQCB), and will operate under the conditions of the 401 Certification issued in March 2009, and perform water quality monitoring and reporting as described in the January 2009 401 WQC application. (Appendix B).

Analysis revealed that the implementation of the project would result in temporary, minor impacts to air quality, noise, and water quality. There would not be significant impacts on these resources. There are no

known sensitive cultural resources located at or near the site. The existing land use would not be changed by the proposed project, and recreation would not be significantly impacted. Aesthetics and marine traffic would also not be significantly impacted.

Impacts to environmental resources are discussed in detail in Section 5.0 and mitigation measures to avoid and minimize impacts are listed in Section 7.0 of this Draft SEA.

CONCLUSION:

Based on the findings of this analysis, and by implementation of mitigation measures identified in this Final SEA the proposed project construction would not result in significant adverse impacts to environmental resources.

**FINAL
FINDING OF NO SIGNIFICANT IMPACT
SAN DIEGO HARBOR MAINTENANCE DREDGING PROJECT
SAN DIEGO COUNTY, CALIFORNIA**

I have reviewed the attached Supplemental Environmental Assessment (SEA) that has been prepared for the proposed San Diego Harbor Maintenance Dredging Project, located in San Diego County, California. This document is supplement to the March 2009 Final Environmental Assessment (EA) and the August 2010 Supplemental Environmental Assessment (SEA) prepared by the U.S. Army Corps of Engineers, and addresses changes to the project description. The proposed project is required to maintain Federally-authorized channel configurations, and to restore and ensure safe navigability within the harbor.

The Corps prepared a Final Environmental Assessment in March 2009 (March 2009 EA), which addressed impacts related to the dredging of nearshore compatible sediment within San Diego Harbor and discharge of the sediment in the nearshore waters at Imperial Beach. The nearshore waters at Coronado Beach were included as a viable alternative for discharge of sediment. However, dredging was postponed due to delayed acquisition of necessary air quality permits.

In August 2010, the Corps prepared a Final Supplemental Environmental Assessment (August 2010 SEA), which described changes to the proposed dredging since the March 2009 EA. Changes included the dates of dredging, the dredging of the approach and entrance channels only, and inclusion of additional dredging equipment. Material in the Aircraft Carrier Turning Basin was found not suitable for disposal in the nearshore after the March 2009 EA was finalized. Dredging was again postponed due to funding constraints.

Dredging has been rescheduled for approximately 100 days between August 2012 and April 2013. The current project includes dredging of approximately 550,000 cubic yards of nearshore compatible material from the approach and entrance channels in San Diego Harbor. Sediment would be dredged using a hopper or clamshell dredge, and would be discharged in the nearshore at Imperial Beach or Coronado Beach.

Sediment was tested in accordance with applicable regulations and found to be compatible with nearshore disposal. This draft SEA provides an updated project description and discusses impacts due to implementation of the proposed project.

The proposed harbor dredging project may result in short term minor and negligible impacts to environmental resources including but not limited to: biological (including endangered wildlife species), water, air, and navigation. Environmental commitments have been developed in coordination with the resource agencies to avoid or minimize impacts to environmental resources. These minimization measures would be followed during construction of the project. The impacts related to the proposed dredging and discharge of material would be less than significant after implementation of the environmental commitments.

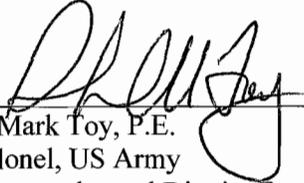
This Final SEA was prepared in compliance with all applicable laws, and regulations including but not limited to Section 404 of the Clean Water Act, the Coastal Zone Management Act, the National Historic Preservation Act, the Endangered Species Act, and the Clean Air Act.

Coordination occurred with the concerned resource agencies during the preparation of the March 2009 Final EA and August 2010 Final SEA. Coordination has also been conducted with the resource agencies during the preparation of this SEA to discuss changes to the project description and minimize the extent of impact from the updated project. A brief summary of coordination is provided in Section 1.5 of this

Final SEA. Resource agencies included the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), Environmental Protection Agency (EPA), California Coastal Commission (CCC), California Department of Fish and Game (CDFG), and San Diego Regional Water Quality Control Board (RWQCB).

I have considered the available information contained in the SEA and it is my determination that impacts resulting from the proposed San Diego Harbor Maintenance Dredging Project will not have a significant adverse effect upon the existing environment or the quality of the human environment. Preparation of an Environmental Impact Statement (EIS), therefore, is not required.

12 JUN 2012
Date



R. Mark Toy, P.E.
Colonel, US Army
Commander and District Engineer

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1.0 Introduction

The U.S. Army Corps of Engineers (Corps), as part of its continuing program of regular maintenance dredging, proposes to remove shoaled sediment along the Federal Channel of San Diego Harbor, San Diego County, California. The proposed project would involve the dredging of nearshore compatible sediment from the Federal Channel of San Diego Harbor, and the discharge of this material in the nearshore waters of Imperial Beach or Coronado Beach.

The purpose of this Final Supplemental Environmental Assessment (SEA) is to address potential impacts that may result from the maintenance dredging at San Diego Harbor and the discharge of this material in the nearshore waters.

1.1 Project Location

The proposed dredge footprint is the Federal Channel of San Diego Harbor, San Diego County, California, which is situated approximately 100 nautical miles southeast of the City of Los Angeles and 17 statute miles north of the United States/Mexico International Border (Figure 1). Only nearshore compatible material would be dredged within the approach and entrance channels from Ballast Point oceanward (from station 120+00 to station -65+00, Areas 1 and 2). The discharge site for compatible dredged material is located in the nearshore waters at Imperial Beach or the nearshore waters at Coronado Beach. Dredged material will be placed in the nearshore environment in waters -15 to -35 feet Mean Lower Low Water (MLLW). Any non-compatible material will not be dredged.

1.2 Background/History

The Corps prepared a Final Environmental Assessment in March 2009 (March 2009 EA) for the San Diego Harbor Maintenance Dredging Project. The March 2009 EA addressed impacts related to dredging of nearshore compatible sediment within San Diego Harbor and discharge of the sediment in the nearshore waters at Imperial Beach. The nearshore waters at Coronado Beach were included as a viable alternative for discharge of sediment. However, dredging was postponed due to delayed acquisition of necessary air quality permits.

In August 2010, the Corps prepared a Final Supplemental Environmental Assessment (August 2010 SEA), which described changes to the proposed dredging since the March 2009 EA. Changes included the dates of dredging, the dredging of the approach and entrance channels only, and inclusion of additional dredging equipment. Dredging was again postponed due to funding constraints. A brief summary of both environmental documents are provided in Section 1.4 of this SEA. Both environmental documents are on file at the Los Angeles District.

1.3 Authorization

Maintenance dredging of San Diego Harbor is authorized by the 1852 Rivers and Harbors Act, amended by the MILCON (Military Construction) project performed by the Navy. The approach channel was deepened by the Navy to -55 feet MLLW in the 1990's for defense purposes as part of a MILCON project. Based on statute 33 U.S.C. 562.a, Corps South Pacific Division authorized Los Angeles District to maintain the approach channel at this depth as part of its regular maintenance dredging.

As Authorized by Congress, Corps performs maintenance of the San Diego Harbor. However, in 1992, the U.S. Department of the Navy approved a Programmatic Environmental Impact Statement (EIS) for Dredged Material Disposal Related to Navy Dredging Projects in San Diego Bay. In November 1995, the Navy approved an EIS for the Development of Facilities in San Diego/Coronado to Support the Homeporting of One NIMITZ Class Aircraft Carrier. That study evaluated the environmental impacts associated with deepening the Federal Navigation Channel outside the Bay (to -55 feet MLLW); deepening the main entrance channel inside the Bay (to -47 feet MLLW); deepening the berthing area and turning basin at Naval Air Station North Island (NASNI) (to -50 feet MLLW); and nearshore replenishment at San Diego County Beaches, including Imperial Beach. Followed by the approval of the EIS, Navy dredged the Channel to -55 feet MLLW. Since the deepened depths were for defense purposes, and based on 33 U.S.C 562a, the Corps is authorized to maintain the federal channel to the new depths.

For maintenance dredging of the approach channel, the Corps would therefore dredge to -55 feet MLLW.

1.4 Past Prepared Documents

1.4.1 Environmental Assessment (EA) March 2009

The March 2009 Final EA described that approximately 336,000 cubic yards of nearshore compatible material would be dredged from the approach and entrance channels from Ballast Point oceanward and the Air Craft Carrier Turning Basin, using the Corps' hopper dredge, Essayons. Dredging was to occur over approximately four weeks. The nearshore at both Imperial Beach and Coronado Beach were analyzed as viable alternatives for disposal. Imperial Beach was chosen as the recommended disposal site since Imperial Beach is severely eroded and in great need of beach nourishment.

Dredging as described in the March 2009 EA was postponed due to delayed acquisition of necessary air quality permits.

It was later determined that nearshore disposal could not be performed at the Coronado Beach disposal site due to the lack of required cultural surveys. These surveys were performed in July 2009 and no cultural resources were detected.

1.4.2 Supplemental Environmental Assessment (SEA) August 2010

The August 2010 SEA described changes to the proposed dredging since the March 2009 EA. Changes included the dates of dredging and the dredging of the approach and entrance channels only. The March 2009 EA documented that the Aircraft Carrier Turning Basin would be dredged. However, a DMMT meeting was held in April 2009, after the March 2009 EA was finalized. At that time, after further sediment testing, the EPA recommended that the dredge material in the Turning Basin is not suitable for nearshore disposal. The Turning Basin was, therefore, removed from the proposed dredge areas in the August 2010 SEA.

The use of a clamshell dredge as an equipment option, in addition to the hopper dredge

option, was also included in the August 2010 SEA. Previously, the Corps planned to use its own hopper dredge, the Essayons, to dredge San Diego Harbor. However, due to the delays in the project and limitations of this dredge in the nearshore, the Corps could not use the Essayons for dredging, though other hopper dredges could still be used. Dredging duration with a hopper was increased to approximately 50 days and dredging with a clamshell was expected to take approximately 100 days. In the August 2010 SEA, impacts due to increased dredging duration with a hopper and due to dredging with a clamshell were analyzed for dredging in San Diego Harbor and disposal at Imperial Beach.

Dredging as described in the August 2010 SEA was postponed due to funding constraints.

1.5 Coordination with Resource Agencies

The principal agencies with which this project has been and will continue to be coordinated include: U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Environmental Protection Agency (EPA), California Coastal Commission (CCC), California Department of Fish and Game (CDFG), and California Regional Water Quality Control Board (San Diego RWQCB). The complete mailing list for copies of this Final SEA is included in Appendix A. Comments and suggestions from these agencies were incorporated in the final document to enhance the degree of environmental commitment and minimize the extent of impact from this project. Appendix B includes copies of correspondence during coordination.

1.5.1 USFWS

The Corps contacted Mr. Ken Corey in July 2011 and Mr. David Zoutendyk in December 2011 regarding updates to the proposed project and the California least tern. The Corps provided the draft SEA to USFWS during the public review period.

In February 2012 the Corps was notified that USFWS could not locate the draft SEA, which was then provided for an extended review period. The Corps coordinated further with Ms. Sandy Vissman in March and April, at which time the USFWS expressed concerns regarding dredging during the California least tern nesting season. USFWS communicated that they did not agree with the Corps' "no affect" determination for the tern if dredging were to occur during breeding season.

The Corps determined that dredging could start later, after August 1, 2012, to avoid dredging during peak breeding times. Dredging was originally proposed to occur from January 2012 to November 2012. In order to allow ample time in the dredge schedule, the Corps then proposed that dredging occur between August 1, 2012 and April 1, 2013.

By delaying the dredge schedule to outside peak nesting season for the tern, the Corps believed that a "no affect" determination could be maintained. However, USFWS disagreed and asserted that for any dredging during the tern breeding season a "may affect" determination is more appropriate, with a subsequent determination of whether effects would be adverse.

For the proposed dredging between August 1, 2012 and September 15, 2012 (during the tern breeding season) the USFWS expressed they could concur with a “may affect, not likely to adversely affect” the tern. If dredging were to occur during this time, USFWS also requested that a monitoring plan be developed to investigate the impacts of dredging, if any, on the tern and foraging.

Details of the Corps and USFWS communications regarding California least tern, Endangered Species Act (ESA) determinations, and the reasoning for each agency’s proposed determinations are included in Appendix B.

To facilitate completion of the Final EA and to be able to advertize the construction project, in May 2012 the Corps decided to defer to the USFWS recommendation in this instance and agree that this particular dredging project, scheduled to commence after August 1, 2012 "may affect, but is not likely to adversely affect" the California least tern.

As USFWS had expressed via e-mail that they concurred with the “may affect, not likely to adversely affect” the tern, the Corps and USFWS then concluded informal consultation. Formal consultation was not required.

Per USFWS request, should dredging occur between August 1, 2012 and September 15, 2012, the Corps would continue to coordinate with USFWS staff to develop a monitoring program for the CA least tern.

1.5.2 NMFS

The Corps coordinated with Mr. Dan Lawson of NMFS on July 25, 2011 regarding the proposed project. Mr. Lawson did not have any immediate concerns and did not expect any changes to the previous determination on the green sea turtle from the March 2009 EA. Correspondence letters are located in Appendix B of this EA. This Draft EA was provided to NMFS during the public review period.

The Corps also contacted Mr. Eric Chavez of NMFS in July 2011 regarding kelp and caulerpa. During coordination, Mr. Chavez indicated that NMFS recommended caulerpa surveys be performed prior to dredging. The Corps has decided to forego these recommended surveys as the Corps believes conditions in the dredge area are not likely to support caulerpa. In the past, the Corps has excluded caulerpa surveys in deep channels. Mr. Chavez also stressed the importance of avoiding sensitive marine vegetation, including eelgrass and kelp, during dredging. Avoidance of these resources is included as an environmental commitment in Section 7.0 of this draft EA.

In March 2012, Mr. Chavez communicated that eelgrass beds occurred in the vicinity of the dredge area in the Federal Channel and asked how these beds would be avoided. The Corps determined that the nearest beds were at least approximately 185 feet from the dredge boundary and that this distance would be sufficient to avoid impacts. The dredge Contractor would also receive a map of these beds and be directed to avoid impacts.

At this time Mr. Chavez also expressed concern regarding the kelp beds near the Imperial Beach nearshore disposal site. Mr. Chavez was informed that the Imperial Beach disposal site would not be used for this dredging event, and that Coronado Beach was chosen for disposal, therefore kelp beds near Imperial Beach would not be impacted.

1.5.3 EPA

The Corps coordinated with Mrs. Jorine Campopiano of the EPA in June 2011 at the monthly DMMT meeting. Mrs. Campopiano was informed of the project description and that, at the time of dredging, sediment sampling results would be older than three years old. The Corps requested to continue to use these sampling results, as additional shoaling is expected to be minimal and any additional shoaled material is expected to be clean, sandy material originating from the open ocean. Mrs. Campopiano did not express concerns regarding the continued use of these results and requested that justification be provided describing why these results are still suitable. Justification was provided in the DMMT meeting notes dated June 22, 2011 (Appendix B). The Draft EA was provided to EPA during the public review period.

In May 2012, the Corps coordinated with Mr. Allan Ota to discuss the updated dredge schedule between August 2012 and April 2013, and determine the need for verification sediment sampling. At the time of dredging under this updated schedule, sediment sampling results would be approximately 4 years old. Mr. Ota expressed that considering the dredge location in the approach and entrance channels, the material is likely clean and sandy, and that additional testing may not be required. Mr. Ota requested the October 2008 sediment sampling results to determine if existing results would suffice. The Corps included an environmental commitment to perform additional verification testing prior to dredging, if needed, and will continue to coordinate with EPA on the need for sampling.

The Corps also discussed with Mr. Ota the addition of the 2nd Coronado Beach disposal site. Mr. Ota was agreeable to the addition of the site pending the availability of beach sediment transects. If transects are not available, the Corps would also collect sediment samples from the beach prior to dredging, as indicated in the environmental commitments. Coordination with EPA would continue.

1.5.4 CCC

The Corps conducted extensive coordination with Mr. Larry Simon of the CCC during preparation of the March 2009 EA. The concurrence letter from the CCC dated February 2, 2009 is located in Appendix B. The Corps continued coordination with Mr. Simon on the project description for the draft SEA in July 2011 and December 2011. Mr. Simon indicated that the updated project description is very similar to that in the March 2009 EA and August 2010 SEA; therefore, the Corps may submit a Negative Determination (ND) with the project description. The Corps submitted the ND to the CCC along with the draft SEA for their concurrence.

After the public review period, the CCC requested information regarding the Corps'

coordination with the FWS on the California least tern. CCC determined that they would provide concurrence with the ND once coordination with FWS was complete. CCC sent a concurrence letter dated April 10, 2012, which is included in Appendix B.

In May 2012, the Corps coordinated with CCC on the addition of the 2nd disposal site at Coronado Beach. CCC agreed that impacts to the 2nd site would be similar to those analyzed for the original site and that a new ND was not required. CCC requested that the Corps send a memo for file documenting the changes to the project description.

1.5.5 CDFG

The Corps contacted Ms. Loni Adams of CDFG in July and August 2011 regarding updates to the project description.

Ms. Adams expressed concerns regarding Pismo clam and clam beds at Coronado and Imperial Beaches, particularly crushing and burial from construction equipment on the beach, as well as impacts from turbidity and sedimentation. Disposal of dredged material will occur in the nearshore, therefore there will be no impacts from crushing or burial. Impacts from turbidity will be minimized through water quality sampling at the disposal sites. Should turbidity levels reach unacceptable levels, remedial actions to reduce turbidity would be taken. Impacts to Pismo clam are discussed in Section 5.2.2.2 of the Final SEA.

Ms. Adams recommended that focused pre-construction Pismo clam surveys be performed for Coronado or Imperial Beach if they will be used for sand deposition. The Corps has decided to forego these recommended surveys as recent nearshore habitat surveys found no evidence of Pismo clam beds in the nearshore at Imperial Beach. Dead clam shells were found at the inshore portion of the northernmost transect in the nearshore at Coronado Beach, which suggests that Pismo clam beds may be nearby. However, the Coronado Beach nearshore disposal sites are very large and disposal of sediment would not be concentrated in one small area. Dispersal of sediment over such a large area is not expected to create significant impacts. Recent 2012 survey results provided by CDFG indicated presence of sexually mature Pismo clams in the surf zone in the vicinity of the Coronado and Imperial Beach disposal sites. Ms. Adams requested that these beds be protected from direct burial impacts. All dredged sediments would be disposed of in the nearshore; no sediments would be disposed of on the beach or in the surf zone, where Pismo clams have been identified. The identified beds would not be impacted by direct burial.

Water quality would be monitored during dredging and disposal activities to ensure minimized impacts to water quality and turbidity in the nearshore waters. Because clams are mobile, some individuals would be expected to move out of the disposal area as sand placement occurs. The dissipation of sand out of the water column over time would prevent direct burial of clams in the nearshore. Slow dispersal of sand from the nearshore into the surf zone and onto the beach via wave action would allow time for clams in the surf zone to move towards fresh ocean water as needed.

The Corps provided the draft SEA to CDFG and comments were included in this Final SEA.

1.5.6 RWQCB

Coordination with Ms. Jody Ebsen of the San Diego RWQCB was initiated in December 2008, in preparation of the March 2009 EA. On January 13, 2009, a request letter and an application for a 401 Water Quality Certification (WQC) were submitted to the SDRWQCB with the Draft EA. In early March 2009, the Corps inquired the status of processing the WQC. Ms. Ebsen informed the Corps via e-mail on March 2, 2009 that the 401 Certification for the project is as proposed in the 401 WQC application received by the SDRWQCB on January 15, 2009 (see Appendix B), and that all water quality sampling and reporting should be done in accordance with the 401 WQC application proposal.

The Corps contacted Ms. Ebsen via phone and e-mail in April 2010 regarding updates to the project description for the August 2010 SEA. At this time the Corps did not receive a response from the SDRWQCB. The Corps submitted an updated 401 WQC application as well as a copy of the Draft August 2010 SEA during the public review period.

For this SEA, the project is essentially the same as described in past documents. Only minor changes were made to the project description, which would not change the water quality impacts described in the January 2009 401 WQC Certification application or compliance described in the March 2009 EA. The Corps will operate under the conditions of the 401 Certification issued in March 2009, and perform water quality monitoring and reporting as described in the January 2009 401 WQC application. The Corps submitted the draft SEA to the SDRWQCB during the public review period.

In June 2012, the Corps notified the RWQCB of the additional disposal site at Coronado Beach. The Corps would continue coordination with RWQCB prior to dredging.

1.5.7 City of Imperial Beach

The Corps coordinated with the City of Imperial Beach inquiring as to whether they were interested in contributing funds to pay for the incremental cost of transporting dredged material to their designated nearshore disposal site. However, the City is taking part in a larger, regional beach nourishment project led by the San Diego Association of Governments (SANDAG) and does not have funds to contribute to the federal project.

The Corps received comments from the City of Imperial Beach on the project in October 2011. Response to comments are provided in Appendix E.

1.5.8 City of Coronado Beach

The Corps will continue to coordinate with the City of Coronado Beach regarding the placement of dredged material in the nearshore. The Coronado designated nearshore disposal sites are the least-cost, environmentally acceptable disposal sites for this

maintenance dredging project. While both the Imperial Beach and Coronado Beach nearshore disposal sites were environmentally acceptable, the Coronado Beach sites were the least-cost alternative due to their closer proximity to the dredge location. Since disposal at Coronado requires less transit time, more time can be spent dredging, allowing for higher productivity and a shorter project duration overall. Comments on the project were received from the City during the public review period and were incorporated into this Final SEA (See Appendix E).

2.0 Purpose and Need

Long shore transport of sand from the ocean has shoaled the sides of the approach/entrance channel, and other areas of the Federal Channel have developed shoals due to propeller wash from passing ships and sediment deposition from Sweetwater Channel. The San Diego Harbor maintenance dredging project is important for the continued and safe navigation of the channel by deep draft vessels using the Harbor.

The proposed project would serve the following purposes: (1) restore the channel that is subject to continual shoaling to design depths; (2) assure the continued navigation for marine traffic within the harbor; and (3) provide beach nourishment material for downcast beaches severely eroded by littoral processes. The primary benefits realized from the proposed project would be restoration of design depths and unimpeded navigation within the Federal Channel. Secondary benefits include the replenishment of the beach with placement of dredged material in the nearshore to ensure that a pleasant shoreline environment is maintained for the public.

3.0 Project Description

3.1 Project Location

The dredge footprint includes the Federal Navigation Channel of San Diego Harbor, which is situated approximately 100 miles southeast of the City of Los Angeles and 17 miles north of the United States/Mexico International Border.

The proposed dredging areas include the approach and entrance channels (from station 120+00 to station -65+00, Areas 1 and 2) (Figure 2). Only nearshore compatible material would be dredged. The dredged material would be discharged in the nearshore waters at Imperial Beach or Coronado Beach.

The Imperial Beach disposal area is located offshore of Imperial Beach, approximately 12 miles south of San Diego along the Pacific Coast, south of the Imperial Beach Pier. The material would be discharged in water depths between -15 and -28 feet MLLW, within an area defined by approximate dimensions of 1,700 feet long by 1,000 feet wide, encompassing approximately 27 acres (Figure 3). This area was used for disposal during the 2004 San Diego Harbor Central Navigation Channel Deepening Project.

The Coronado Beach disposal areas are located offshore Coronado Beach, approximately 3 miles southeast of Zuniga Jetty along the Pacific Coast. The discharge areas are located offshore of Coronado Beach extending from the eastern border of the Naval Air Station North Island (NASNI) to near the tip of Glorietta Bay Peninsula, and from just south of Glorietta Bay to Fiddler's Cove. The material would be discharged in water of depths between -15 and -35 feet MLLW, within areas of approximate dimensions 4,000 feet long by 1,000 feet wide, approximately 92 acres, and 5,400 feet long by 1,200 feet wide, approximately 150 acres (Figure 4).

3.2 Project Details

The proposed project would dredge approximately 550,000 cubic yards of material from the approach and entrance channels, from station 120+00 to station -65+00. Sediment in these areas was sampled in October 2008 and found to be compatible with nearshore sediments at the disposal beaches. Dredging would occur to depths of -45 to -55 feet MLLW, plus over depth.

The proposed action would dispose of compatible material in the nearshore at Coronado Beach or Imperial Beach.

Due to time constraints during the development of the March 2009 EA, the Corps could not perform the required cultural resources surveys at the nearshore at Coronado Beach prior to the anticipated start date for dredging. However, once the project was delayed, the Corps conducted the required cultural survey in the nearshore at Coronado Beach in July 2009. This survey was conducted in order to investigate the possibility of using the nearshore at Coronado Beach as the discharge site for dredge material.

Dredging is now scheduled to occur between August 1 2012 and April 1 2013. The maximum duration of dredging would be approximately 100 days depending on the type of dredge to be used. Dredging would occur for 24 hours per day. Permits required to comply with local noise ordinances to work during nighttime hours would be obtained by the selected construction Contractor. If dredging is delayed due to funding, inclement weather, equipment or mechanical constraints, it may occur later in 2013 or 2014. If delays occur beyond 2012, the concerned resource agencies would be notified and sediments in the dredge area would be re-sampled per coordination with EPA.

All environmental commitments identified in this Final EA would be followed during dredging operations (Section 7.0). Additional project alternatives, including the No Action alternative were presented in the March 2009 EA, on file at the Corps Los Angeles District Office.

3.3 Equipment

The removal of sediment from the channel could be accomplished with two different types of construction equipment, including (1) hopper dredge, and (2) clamshell dredge and scow. The type of equipment used largely depends on the construction contractor.

3.3.1 Hopper Dredge

Dredging operations may be conducted using a diesel-powered hopper dredge. The material would be removed via dragheads on the hopper dredge that are lowered to the ocean floor. These dragheads remove sediment by suction and deposit the sediment into the hopper located in the hull of the dredge. After sediment has been deposited into the hopper, the dragheads are pulled from the water, and the ship transits to the designated discharge area. Once at the discharge site, the hopper's split-hull opens, releasing the sediment into the ocean. Turbidity levels would be monitored by the construction contractor during dredging and disposal activities according to the environmental commitments and the RWQCB's 401 WQC to minimize impacts to water quality.

The hopper dredge for this dredging event would operate for a maximum of 50 days.

3.3.2 Clamshell and Scow

Dredging with a clamshell dredge entails a floating derrick with a bucket that is lowered under water to remove material from the ocean floor and place the material in a scow. The scow is then pushed or pulled to the disposal site with a tug boat for disposal of the dredged material. It is possible that four scows would be employed to accelerate the rate of dredging and disposal. Clamshelled sediments are removed in large consolidated clumps and tend to retain form when disposed. A small part of the material in the clamshell can be washed away due to turbulence as each load is hoisted to the surface. Turbidity levels would be monitored by the construction contractor during dredging and disposal according to the environmental commitments and the Regional Water Quality Control Board's permit to minimize impacts to water quality.

The clamshell dredge for this dredging event would operate for a maximum of 100 days.

3.4 Dredged Material

In the March 2009 EA, dredge areas 1, 2, 3, 6, 8, and 10 were found to be compatible for nearshore discharge (Figure 2). A DMMT meeting was held in April 2009, after the March 2009 EA was finalized. At that time, after further testing of Areas 6, 8, and 10 had been performed, the EPA recommended that the dredge material in these areas is not suitable for nearshore disposal. Therefore, Areas 6, 8, and 10 would not be dredged during this proposed dredging event.

Although Area 3 is suitable for nearshore disposal, time and cost constraints currently prevent dredging of this area. During this current dredging event, only areas 1 and 2 (from station 120+00 to station -65+00) would be dredged and disposed in the nearshore of Imperial Beach or Coronado Beach.

3.5 Environmental Monitoring

Environmental Monitoring will be performed for water quality. Turbidity shall be monitored during dredging to ensure that waters in the dredged area do not become too turbid for threatened and endangered birds to forage.

Impacts to green sea turtle would be avoided by regularly inspecting the hopper of the dredge for the presence of turtle during dredging operations. If the turtle is detected, dredging operations would cease and NMFS would be notified to provide direction on the continuance of the project and further consultation.

Full details of environmental monitoring and additional environmental commitments to minimize impacts to environmental resources are outlined in Section 7.0.

4.0 Affected Environment

The following paragraphs provide discussion of existing environmental resources for the dredging and discharge areas. The environmental setting is detailed in previous reports including USACOE 2003 and USACOE 2009, and is discussed below. The subject reports are hereby incorporated by reference as per 40 CFR 1502.21.

Furthermore, environmental resources for the nearshore discharge sites, Imperial Beach and Coronado Beach, are similar, and are therefore written together.

4.1 Physical Environment

4.1.1 San Diego Harbor: Maintenance Dredging Site

San Diego Bay is a closed embayment which is influenced primarily by marine waters, tides, and currents, and to a lesser degree by surface freshwater drainages and groundwater.

Two major and three minor freshwater watersheds drain to San Diego Bay. The major watersheds include the Sweetwater River, which drains to the south-central portion of the Bay, and the Otay River, which drains to the South Bay. Other sources of freshwater to San Diego Bay during storm events include minor drainages, sheetflow, flood control channels, and storm drains; however, no significant freshwater influence occurs in the project area (U.S. Navy 1992).

The narrow entrance to San Diego Bay shelters the inner harbor from ocean waves. The inner Bay is generally calm. Waves that do occur are generated by wind, primarily from the west and northwest, and generally do not exceed 2 feet in height (MBA 1990).

The study area is underlain primarily by surficial material consisting of the Quaternary-age Bay Point Formation plus areas of fill material of various origins. The Bay Point Formation is widely exposed on Coronado/North Island and is composed of marine and non-marine, poorly consolidated, fine- and medium-grained sandstone (U.S. Navy 1995).

4.1.2 Nearshore Discharge Sites: Imperial Beach and Coronado Beach

The nearshore receiver sites are located within the Silver Strand Littoral Cell. The sources of sand for beaches within the littoral cell are Tijuana River Delta, erosion of the Playas de Tijuana sea cliffs, and beach nourishment projects. The primary sink for beach sands is the shoal off the southern Zuniga Jetty at the entrance to San Diego Bay.

Nearshore currents move sand into and out of the beach receiver site, while longshore currents move sands along the shoreline. Waves and wave driven currents are responsible for eroding the shoreline in the vicinity of the nearshore receiver sites.

4.2 Biological Environment

Biological resources for the nearshore discharge sites, Imperial Beach and Coronado Beach, are

similar, and are therefore written together.

4.2.1 San Diego Harbor

4.2.1.1 Marine Vegetation

The proposed dredging would occur in the navigation channels of San Diego Bay (all deeper than -35 feet MLLW). Eelgrass exists in the shallow areas of San Diego Harbor, with larger patches occurring in the shallow South Bay (Figure 5). Eelgrass beds are known to occur as close as approximately 185 feet from the dredge area in the entrance channel.

Eelgrass is a marine flowering plant which occurs in many intertidal to moderately deep subtidal areas (0 to -23 feet MLLW) of San Diego Bay. Eelgrass beds, or meadows, provide high quality habitat for fish and other water-oriented fauna. Eelgrass provides an important foraging and nursery area for many fish species and generally supports higher diversity and abundance of fish than non-vegetated areas of similar depth (Hoffman 1986). Eelgrass beds also provide foraging habitat for a number of avian species, including the federally protected California least tern (*Sterna antillarum browni*).

In San Diego Bay, macroalgae belong to three different phyla. Close to 50 native macroalgal species are present in the Bay, nine of which belong to the phyla Chlorophyta. Twelve species of brown algae in the phyla Phaeophyta are found in the Bay. The largest phyla represented in the Bay, Rhodophyta (red algae), is represented by 25 species. Many of these species are small and may only be found attached to structures or living atop other plant or algal organisms (SDUPD 2008).

The majority of dredging would occur in subtidal areas (deeper than -35 feet MLLW) that are mostly absent of marine vegetation, including eelgrass.

4.2.1.2 Invertebrates

Infaunal benthic invertebrates are the most abundant invertebrate found in the soft bottom sediment of the Bay, and include polychaete worms, crustaceans, mollusks, and unidentified species of oligochaete and nematode worms (SDUPD 2008).

During the Bight '98 survey (Bay *et al.* 2000), a total of 1,172 megabenthic invertebrates, representing 43 taxa, were collected in San Diego Bay. The nonindigenous bivalve *Musculista senhousia* was present in more than 70% of the samples, making it the most widely distributed trawl caught invertebrate in the Bay. Other common invertebrates that were present in at least one third of the samples included two undescribed species of sponge, *Porifera* sp. SD4 and *Porifera* sp. SD5, the ascidian *Microcosmus squamiger*, the bivalve *Argopecten ventricosus*, and the gastropod *Crepidula onyx*. *Musculista senhousia* together with another nonindigenous species *Microcosmus squamiger*, accounted for over

50% of the total catch (SDUPD 2008).

4.2.1.3 Fish and Essential Fish Habitat

San Diego Bay is an important nursery and rearing area for several fish species. Up to 90 species of fish have been reported in the Bay (SDUPD 1980). Fish fauna in the Bay vary seasonally, with numerical abundance being greatest in the spring and summer (Allen 1997). Overall, the most abundant fish species present in the Bay was northern anchovy. Other abundant species included top smelt, slough anchovy, shiner surfperch, and giant kelpfish (Allen 1997).

In surveys performed in 2005 (VRG 2005), top smelt was the most abundant Baywide, with over 30% of the total catch. The Pacific sardine, common in surveys taken in the 1990's, was nearly absent from the 2005 surveys.

The study area is located within an area designated as Essential Fish Habitat (EFH) for the Coastal Pelagics and Pacific Groundfish Management Plans. (The EFH for these are to include all marine and estuarine waters from the shoreline to 200 nautical miles offshore (i.e., the Exclusive Economic Zone [EEZ])). For the Pacific and Western regions, EFH has been identified for a total of 89 species covered by three Fishery Management Plans (FMPs) under the auspices of the Pacific Fishery Management Council (NMFS 1998a). Several of these "managed" species are known to occur in San Diego Harbor (e.g., Northern anchovy, Pacific sardine, Pacific mackerel, Dover sole, Pacific sandbar, and rockfish). Also many other native marine fish in the study area undoubtedly serve as prey for many of the "managed" species.

4.2.1.4 Birds

A total of 70 waterbird species were identified from 48 surveys of North San Diego Bay (Coronado Bridge to Ballast Point at the entrance) in 1993 (U.S. Navy 1994). The most abundant species are scoters, pelicans, and buffleheads. Water-oriented bird species can be divided into several functional guilds which describe their feeding mode and habits. Birds which feed in waters in the direct vicinity of the proposed dredge footprint may include loons, grebes, cormorants, and mergansers (water column diving guild) and pelicans, terns, skimmers, and kingfishers (plunge diving guild).

4.2.1.5 Mammals

The Southern California Bight supports a great abundance and diversity of marine mammals although they are rarely seen in San Diego Bay. Species known to be regularly encountered within the Bay include California sea lion and coastal bottlenose dolphin. Those that are occasional visitors in the north channels of the Bay include the Pacific harbor seal and the gray whale. Species found within the Southern California Bight, with the potential for rare occurrences within the Bay include northern elephant seal, long-beaked common dolphin, Pacific white-sided dolphin, short-finned pilot whale, minke whale, and finback whale (SDUPD

2008).

Merkel & Associates conducted marine mammal surveys from February 2007 to March 2008 in the vicinity of the Point Loma Naval Complex. The first survey, conducted in February 2007 recorded five marine mammal species, including harbor seals (*Phoca vitulina*), California sea lions (*Zalophus californicanus*), bottlenose dolphins (*Tursiops truncatus*), Pacific white-sided dolphins (*Lagenorhynchus obliquidens*) and common dolphins (*Delphinus* sp.). In May 2007, only two of the five species previously observed within the study area were recorded, and included California sea lion and bottlenose dolphin (SDUPD 2008).

4.2.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

4.2.2.1 Marine Vegetation

Small kelp beds occur within the Imperial Beach area and are generally restricted to areas of subtidal rocks, boulders, and cobble within the photic zone (depths of 20 to 60 feet) (USIBWC 1998). Historically, the Imperial Beach kelp bed extended from approximately 0.3 mile to 1.5 miles offshore and approximately 0.9 mile north and 1.3 miles south of Imperial Beach Pier. Historically, kelp bed persistence has been relatively low to moderate off Imperial Beach.

North et al. (1993) found that kelp canopy area off Imperial Beach fluctuated between a low of approximately 50 square meters (m^2) $\times 10^3$ in 1981 to a high of 651 $m^2 \times 10^3$ in 1990. These values are extremely low compared to the extensive kelp beds off Point Loma. This likely is due to the occurrence of relatively few hard-bottom features off Imperial Beach so that kelp plants may be attached to old holdfasts or other solid objects such as hardened clay, cobbles, scattered rocks, and discarded debris (Feder et al. 1974; USIBWC 1998). These substrates are less resistant than rock reefs to erosion or movement by strong currents and waves so the plants may be swept away, forming less permanent beds.

The most recent data available from CDFG do not show kelp beds offshore of Coronado Beach (2009a). This data shows that a kelp bed is located offshore of Imperial Beach (CDFG 2009a) (Figure 6). No kelp is located within the nearshore disposal site.

Eelgrass is known near Zuniga Jetty near NASNI, however it is not known to extend into the Coronado Beach discharge areas (Karen Green, SAIC, pers. comm., December 2008).

Additional algae species present in the vicinity included the reds *Bossiella orbigniana*, *Corallina chilensis*, *C. gracila*, two species of *Gelidium*, four species of *Gigartina*, *Microcladia coulteri*, and *Rhodomenia pacifica*; the brown *Desmarestia herbacea*; and two species of the green algae (*Ulva*).

4.2.2.2 Invertebrates

Dexter (1977) surveyed subtidal areas of cobblestone boulders near the mouth of the Tijuana River Estuary and identified 12 invertebrate species. The most common species were barnacles (*Balanus nubilis*), batstars (*Asterina miniata*), and four decapod crustaceans (*Holopagurus* spp., *Mimulus foliatus*, *Panulirus interruptus*, and *Pugettia producta*). Trawl surveys in the vicinity of the receiver sites collected 25 invertebrate species (San Diego 1999). The most abundant species collected included white sea urchin (*Lytechinus pictus*), seastar (*Astropectin verrilli*), and shrimp (*Crangon nigromaculata* and *Sicyonia ingentis*).

Pismo clam (*Tivela stultorum*) is an important invertebrate species that once supported a significant commercial fishery. Pismo clams live in sandy areas from the intertidal zone to depths of 80 feet and may come together in beds in certain areas. Pismo clams can move rapidly sediment due to the development of a foot. They use the foot to bury themselves to a depth of approximately 2 to 6 inches. The minimum legal size for Pismo clam harvesting is 4.5 inches and is reached at about the age of 5 years.

Pismo clam has been surveyed by the California Department of Fish and Game since 1948 at several California beaches including those at Pismo Beach, Morro Bay, Cayucos, Monterey County, and from Santa Barbara County to San Diego County. From 2000 to 2005 only Coronado Beach has undergone an annual survey by CDFG. These surveys indicated that the Pismo clam population was relatively stable (CDFG 2006). Reports from clam diggers and divers at that time indicated that significant numbers of Pismo clams continue to be harvested from some of the beaches in southern California.

Surveys performed by CDFG found evidence of Pismo clam on the beaches at Imperial Beach in December 2008 and Coronado Beach in February 2009. Coronado Beach was the only surveyed beach site that met or exceeded the minimum legal size requirement. Clams at Coronado Beach averaged 56.8 mm in size, and Imperial Beach averaged 20.9 mm. Both Coronado and Imperial Beach had many Pismo clams in the 9 to 20 mm size range, which are considered to be less than 1 year old (CDFG 2009b). CDFG also reported that clams were found north of Silver Strand State Beach in 2010, and could be present on the flat sandy beaches from Coronado to Mexico (L. Adams, pers. comm., August 2011).

Onshore survey work performed in November 2008 by SAIC (SAIC 2009) at Coronado Beach found one mature Pismo clam within the southern portion of the survey site, however the northern portion of the onshore site was not surveyed. Within their survey area, no evidence of Pismo clam beds was noted on the sand surface in the lower intertidal zone. The extent of the population was not determined with the survey, which involved a limited sampling effort.

Onshore surveys at Imperial Beach found two juvenile Pismo clams in the survey area (SAIC 2009). No indicators of established Pismo clam beds were observed on the sand surface in the low tide zone. Focused surveys for Pismo clams were

not conducted, and the extent to which Pismo clam beds occur near these sites was not addressed by the survey.

Onshore surveys at Imperial Beach, performed for the San Diego Regional Beach Sand Project II (AECOM 2011), found subadult-sized Pismo clams and relatively large shells north of the Imperial Beach pier, indicating presence of a Pismo clam bed nearby. Two juvenile Pismo clams (<1 inch) were collected downcoast of the pier.

Survey work performed by SAIC in the nearshore at Imperial Beach and Coronado Beach took place in January and February 2009, and extended from outside the surf zone to water depths of 22 to 32 feet. No indicators of Pismo clam beds were observed on the sand surface in the nearshore at Coronado Beach in two of the three transects taken. However, dead clam shells were scattered along the inshore portion of the 3rd, northernmost transect, which suggests Pismo clam beds were nearby. No indicators of Pismo clam beds were observed on the sand surface in the nearshore survey area at Imperial Beach.

Recent 2012 survey results provided by CDFG indicated the presence of sexually mature Pismo clams in the surf zone in the vicinity of the Coronado and Imperial Beach disposal sites.

4.2.2.3 Fish and Essential Fish Habitat

Over 100 fish species have been documented in southern California kelp beds (Feder et al. 1974), while Quast (1971) described almost 60 species. Some of the most common inhabitants of kelp forests in the region likely include seniorita (*Oxyjulis californica*), kelp surfperch (*Brachyistius frenatus*), blacksmith (*Chromis punctipinnis*), rockfishes (*Sebastes* spp.), kelp bass (*Paralabrax clathratus*), Garibaldi (*Hypsypops rubicundus*), and sheephead (*Semicossyphus pulcher*). Similar fish species occur in the Imperial Beach kelp beds, also including leopard sharks (*Triakis semifasciatus*), opaleye (*Girella nigricans*), halfmoon (*Medialuna californiensis*), giant kelpfishes (*Heterostichus rostratus*), and several surfperch species (*Embiotocidae*) (USIBWC 1998).

Trawl surveys in the vicinity of the beach receiver sites reported between 3 and 18 fish species (SCCWRP 1999). Commonly collected species included barred sand bass (*Paralabrax nebulifer*), yellowchin sculpin (*Icelinus quadriseriatus*), speckled sanddab (*Citharichthys stigmaeus*), Pacific sanddab (*C. sordidus*), and California halibut (*Paralichthys californicus*). Similarly, the City of San Diego collected 25 demersal fish species at trawl stations along the 100-foot isobath near the receiver site (San Diego 1996). Flatfishes predominated trawl samples, including Pacific sanddab, longfin sanddab (*C. xanthostigma*), English sole (*Pleuronectes vetulus*), and California tonguefish (*Symphurus atricauda*).

Pelagic (open water) fishes are species that spend little or no time in contact with

the bottom. Common pelagic species likely to occur in the vicinity of the beach receiver sites include schooling fishes such as northern anchovy (*Engraulis mordax*), Pacific sardine (*Sardinops sagax*), chub mackerel (*Scomber japonicus*), topsmelt (*Atherinops affinis*), jacksmelt (*Atherinopsis californiensis*), and Pacific butterfish (*Peprilus simillimus*) (USIBWC 1998; SANDAG and U.S. Navy 2000). Other species include blue sharks (*Prionace glauca*), Pacific barracuda (*Sphyræna argentea*), white seabass (*Atractoscion nobilis*) and several rockfish species (*Sebastes* spp.). Some species may move in and out of the beach receiver sites such as yellowtail (*Seriola lalandi*), yellowfin tuna (*Thunnus albacares*), and Pacific bonito (*Sarda chiliensis*) (USIBWC 1998).

The nearshore receiver sites are located within an area designated as EFH for two Fishery Management Plans (FMP): Pacific Groundfish and Coastal Pelagics FMPs (NMFS 1998). Of the 86 fish species that are federally managed under these two plans, approximately 32 likely occur in the vicinity of the receiver sites.

The California grunion (*Leutesches tenuis*) is common in Southern California in nearshore waters from the surf to a depth of -60 feet MLLW. Grunion travel from their habitat in nearshore waters to specific sandy beaches just after certain full and new moons in conjunction with their spawning, which occurs from March to August. Grunion in San Diego beaches are typically found on the long, gently sloping beaches with moderately fine grain size. Grunion are managed as a game species by the California Department of Fish and Game (SANDAG and U.S. Navy 2000).

4.2.2.4 Birds

Birds that commonly forage in nearshore waters near the discharge areas include California brown pelicans, numerous species of gulls, terns, loons, and grebes (U.S. Navy 1992b, 1995a; USFWS 1994). The gulls, including western, ring-billed, California, and Heermann's, are generalist feeders taking a variety of prey items at the water surface. Brown pelicans and Forster's, Caspian, royal, common, elegant, and California least terns are all common in the region. These birds forage aerially, diving for fishes. Several species of loons and grebes also occur; these birds dive from the surface to pursue fish and crustaceans underwater.

4.2.2.5 Mammals

Mammals most likely to be observed in the vicinity of the nearshore receiver sites include two pinniped species (California sea lion [*Zalophus californianus*] and harbor seal [*Phoca vitulina richardsi*]); dolphins, including common dolphin (*Delphinus delphis*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), bottlenose dolphin (*Tursiops* sp.) and Risso's dolphin (*Grampus griseus*); and, during seasonal migrations, California gray whales (*Eschrichtius robustus*) (Bonnell and Dailey 1993). Other species that may occur uncommonly in offshore areas of the general project region include minke whales (*Balaenoptera*

acutotostrata), pilot whales (*Globicephala* sp.), killer whales (*Orcinus orca*), and beaked whales (e.g., *Mesoplodon* spp.), among others. The San Diego Basin is used as a foraging area by pinniped species associated with the Los Coronados Islands rookery and may be part of their migratory route from Mexican colonies moving to and from the islands of the Southern California Bight (USIBWC 1998).

However, with the exception of some pinnipeds, most marine mammal species are commonly observed further offshore (e.g., deeper than 100 feet) and are not expected to be resident in the immediate study area.

4.3 Threatened and Endangered Species

Federally-listed Threatened or Endangered species which are known, or likely, to occur in the project area include: green sea turtle (*Chelonia mydas*), western snowy plover (*Charadrius alexandrinus nivosus*), and California least tern (*Sterna antillarum browni*).

4.3.1 San Diego Harbor

4.3.1.1 Green Sea Turtle

Green sea turtles are federally listed as threatened in coastal California regions and endangered for breeding colony populations off of Florida and the Pacific coast of Mexico. The two closest breeding populations to the San Diego Bay are located in Mexico at Isla Revillagigedos and Michoacan. The green sea turtles are the only marine reptiles found in San Diego Bay. These turtles have generally occurred in the South Bay, attracted by the thermal discharge from the South Bay Energy Facility. Adult green sea turtles are herbivorous, feeding on red algae, sea lettuce, and eelgrass.

Stinson (1984) used telemetry tags to track green sea turtles from 1976 to 1983 within San Diego Bay. During this study, turtles appeared seasonally from late October until early May and exclusively occupied the south bay in the vicinity of a power plant cooling effluent. Individual turtles were always located within 2.5 miles of the effluent channel and did not venture into either the central or north bay. No turtles were sighted or tracked within the bay during the summer months. The turtles would travel along the deeper contours of the south bay individually or in loose groups of two to seven animals while foraging.

The number of turtles using the Bay varies but is estimated to range from 30 to 60 animals, based on tagged animals recovered in and around the South Bay Energy Facility cooling channel (SDUPD 2008).

4.3.1.2 California Least Tern

The California least tern is federally and state listed as endangered. The least tern is a seasonal migrant which nests on sandy beaches from Baja California, Mexico to San Francisco, California between April and September. The least tern is also considered a plunge diver, and generally feeds within 2 miles of its nest site in

estuaries, rivers, streams, and nearshore waters. The least tern is present in the Bay mid-April to late August, and is known to forage in the open waters of the ocean and Bay.

The number of least terns in the San Diego Bay area has increased since their listing in 1970. After a period of apparent instability during the eighties, the population has been increasing with San Diego Bay-wide breeding numbers climbing from 141 pairs in 1991 to 1,611-1,638 pairs in 2006 (SDUPD 2008).

California least terns nest in colonies at several areas on the beaches adjacent to San Diego Bay (Figure 7). In 2006 it was estimated at 1,611-1,638 pairs, or approximately 22-23 percent of the state-wide population. Recently, least terns have nested at seven to nine locations around San Diego Bay. These include: North Delta Beach, South Delta Beach, Naval Amphibious Base (NAB) ocean beaches, NASNI, as well as Lindbergh Field, the South Bay National Wildlife Refuge (formerly Western Saltworks), Chula Vista Wildlife Reserve, D Street Fill/Sweetwater Marsh, and Silver Strand State Beach (a single record of a pair in 2004) (SDUPD 2008).

A study performed by Atwood and Minsky (1983) concluded that 75% of California least terns foraged within 0.75 mile of nesting sites, but foraging also occurred up to 1.86 miles away, although anecdotal observations have been documented of California least terns several miles from shore during the nesting season.

Water bird surveys conducted by the U.S. Navy in 1993 in San Diego Bay found California least terns foraged in both shallow and deep water habitats, and avoided intermediate waters and developed areas such as marinas and piers. Several foraging studies have been conducted in the Los Angeles Harbor. The 1982, 1984, and 1985 surveys found that least terns foraged over shallow water generally shallower than -20 feet MLLW in the Outer Harbor, especially near the nesting site, but not in the Inner Harbor (KBC 1997). The California least tern has been reported to forage in shallow waters of bays, lagoons, estuaries, tidal marshes, river mouths, ponds and lakes (Thomson et al. 1997). However, a significant amount of foraging also occurs offshore in deep-water habitats (KBC 2003). The dredging and disposal sites may be utilized as foraging habitat by California least terns. Studies on use areas in San Diego Bay found that California least terns' utilization of habitat within the dredging area was medium to low (U.S. Navy 1994).

4.3.1.3 Western Snowy Plover

The western snowy plover is federally listed as threatened and is a state species of special concern. Western snowy plovers occur in the San Diego Bay area and on the salt work levees in the south Bay, both as uncommon winter migrants and as breeding populations. The nesting season for plovers is from March 1 to

September 15 and preferred nesting habitat includes sand spits, dune-backed beaches, beaches at creek and river mouths, and salt pans associated with lagoons and estuaries (USFWS 1999). It forages on marine-estuarine invertebrates and terrestrial and marine-associated insects, including those associated with kelp wrack washed ashore on sandy beaches.

Western snowy plovers are known to nest at several sites within the project vicinity. In 2006, 34% of the 126 nesting sites in San Diego county were in the San Diego Bay area at several sites (in decreasing order of importance—NAB Coronado [Ocean], NASNI, Silver Strand State Beach [Ocean], Naval Radio Receiving Facility (NRRF), Saltworks, and NAB Coronado [Bay]). San Diego Bay now holds much of the remaining nesting grounds for snowy plover in Southern California. Much of the local nesting habitat is located on the undeveloped Naval training beaches (SDUPD 2008).

Critical habitat for the plover was designated in 1999 (USFWS 1999) and includes several areas in the greater San Diego area, with the closest to the proposed dredging site being located along the Silver Strand and south of Imperial Beach Pier (Figure 8). New critical habitat was proposed in 2011, the closest to the dredge area being at NASNI and onshore of the Coronado Beach disposal areas (Figure 8). Plovers forage by probing in intertidal areas, and thus would not forage within the proposed dredge footprint.

4.3.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

State or federally listed threatened and endangered species that likely occur in the vicinity of the beach receiver sites, or are otherwise of high concern because of status and vulnerability, include the following:

4.3.2.1 Western Snowy Plover

Known nesting sites in the vicinity of the receiver sites include NAB Coronado [Ocean], NASNI, Silver Strand State Beach [Ocean], NRRF, Saltworks, and NAB Coronado [Bay] (SDUPD 2008). Snowy plover are also known to nest at the Tijuana Estuary/Tijuana Slough National Wildlife Refuge and Border Field State Park (AECOM 2011). Wintering and migratory birds are also present, foraging and resting on beaches of the region (USFWS 1993a). Area beaches south of Coronado Beach along the Silver Strand, and north and south of the city of Imperial Beach are designated critical habitat for this species (USFWS 1999). There is critical habitat immediately onshore of the southern Coronado discharge site, and recently proposed critical habitat is onshore of the northern Coronado discharge site (Figure 8).

4.3.2.2 California Least Tern

This State- and federally listed endangered species nests at various locations near the receiver sites including North Delta Beach, South Delta Beach, NAB ocean beaches, NASNI, as well as Lindbergh Field, the South Bay National Wildlife

Refuge (formerly Western Saltworks), Chula Vista Wildlife Reserve, D Street Fill/Sweetwater Marsh, and Silver Strand State Beach (a single record of a pair in 2004) (SDUPD 2008). Nesting also occurs near Imperial Beach at the Tijuana River Estuary. The tern forages in the open waters of the ocean and Bay. This species is present in the vicinity of the nearshore disposal sites from mid-April to late August, wintering in Mexico.

4.4 Water Quality

Water quality in San Diego Bay varies, primarily due to tidal flushing and currents within the Bay. Water quality can also be influenced locally by freshwater inputs, including urban runoff from storm drains. Commonly measured water quality parameters (e.g., salinity, temperature, and dissolved oxygen) may vary throughout the Bay, forming a gradient with waters in the North Bay being similar to ocean conditions, waters in the South Bay being more affected by shallow depths and insolation, and waters in the Central Bay being intermediate in character.

Bay circulation may be driven by wind, tides, temperature, and density gradients associated with seasonal, tidal, and diurnal cycles. The ebb and flood of tides within the Bay circulate and mix ocean and Bay waters, and also transport organisms, especially plankton, in and out of the entrance. Tides produce currents, induce changes in salinity, and alternately expose wet portions of the shoreline. Tidal flushing and mixing are important for dispersing pollutants, maintaining water quality for marine life, and moderating water temperature that has been affected by exchange with the atmosphere or heating, such as by the South Bay Power Plant (SDUPD 2008).

4.4.1 San Diego Harbor

4.4.1.1 Temperature/Salinity

Surface water temperatures near the entrance channel range from lows of 54°F to 58°F in winter to 71°F to 74°F in the summer. Temperatures in the South Bay can be slightly warmer, 59°F in winter and 74°F in summer. During 1993 surveys, the warmest temperature was 84.7° F in south Bay, and the coolest temperature, 59.2° F, was just north of the Coronado Bridge in January. The average surface temperature is estimated to be 63.3° F.

The salinity of ocean water can be affected by freshwater inflow, temperature, evaporation, and mixing depth. Salinity is relatively constant in the north end of the Bay because of high exchange rates with the ocean, but can vary considerably in the South Bay. Salinities near the Bay entrance approach those of the nearby open ocean (31.2 to 31.4 practical salinity units [psu] [Largier 1997]). In contrast, south Bay evaporation and poor flushing produce salinities as high as 37 psu in late summer (Ford 1968; Ford and Chambers 1973), decreasing to lows of 22 psu following heavy rains (Largier 1997).

Freshwater contribution to the Bay comes primarily from the Otay and Sweetwater Rivers and secondarily from several creeks. Freshwater input is now limited to surface runoff from urban areas (e.g. the over 200 storm drains and intermittent flows from several rivers and creeks after storms), and for

approximately nine months of the year, the Bay receives no significant amount of fresh water. This can cause south Bay to become hypersaline, or saltier than seawater, in excess of 35 parts per thousand (ppt) in dry seasons (SDUPD 2008).

4.4.1.2 Dissolved Oxygen

Dissolved oxygen (DO) varies with water temperature, depth, and location within the Bay. Although no direct information has been obtained at this writing, well-mixed areas within the Bay near the entrance channel should maintain DO concentrations similar to nearshore ocean conditions which vary with season and water depth. Engineering Science (1988) found that surface DO values ranged from 7.6 to 10.1 milligrams per liter (mg/l). In the South Bay, DO can vary in relation to other environmental factors such as limited water exchange rates and circulation, higher water temperatures, and oxygen uptake by organisms for respiration or decomposition of organic matter. MBA (1988) reports DO values in the Bay as low as 5 mg/l.

4.4.1.3 Chemical Contaminants

Many areas of San Diego Bay's shoreline have been listed as impaired water bodies under Clean Water Act (CWA) Section 303[d] by the California State Water Resources Control Board (SWRCB) due to identified pollutants. The most recent list was approved by the USEPA in June, 2007. Pollutants include bacteria, pesticides, heavy metals, and organic compounds while areas of concern continue to be marinas, shipyards, and outlets of creeks. The San Diego RWQCB has identified five of these listed sites to be "toxic hot spots" due to multiple pollutants and toxic effects that require immediate clean-up (SDUPD 2008). The project activities would not occur within nor affect the impaired areas.

Today urban runoff is the largest source of pollutants in the region, which contains chemical and bacterial pollutants and debris from human activity.

4.4.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

4.4.2.1 Temperature/Salinity

Temperature and salinity are important properties of seawater because they affect the layering and mixing of many water quality parameters, particularly in offshore areas.

Ocean water temperatures vary seasonally, with minimum temperatures of approximately 57°F in winter and maximum temperatures of 71°F in summer (USACOE 1978). Depth-related differences in water temperatures occur during summer, with surface water temperatures up to 50°F warmer than those in deeper waters. A thermocline, or rapid change in temperature with depth, occurs within water depths of 30 to 65 feet (Largier 1995). The City of San Diego (1996) reported temperatures of 57 to 71°F and 51 to 57°F in surface and bottom waters, respectively, offshore from Imperial Beach during July 1995 through June 1996. Similar temperatures were observed during the summer of 1994 Southern

California Bight Pilot Project (SCBPP; SCCWRP 1999).

Salinity values for the nearshore waters are generally uniform, ranging from around 33 to 34 parts-per-thousand. Seasonal decreases in salinities within nearshore, surface waters adjacent to the mouth of the Tijuana River may occur following storm-related discharges of freshwater and/or intermittent historical discharges of sewage released into the river. Salinity values from 33.4 to 33.8 parts-per-thousand were measured by the City of San Diego (1996) in offshore waters along the 100 foot bottom contour, and similar values were obtained during the SCBPP at two sites along the 65-foot bottom contour (SCCWRP 1999).

4.4.2.2 Dissolved Oxygen

Dissolved oxygen represents the concentration of oxygen present in seawater. It is controlled by combined effects of oxygen production by attached and planktonic plants, biological respiration, gas exchange with the atmosphere, and oxidation of organic matter.

Concentrations of dissolved oxygen typically are within the range of 6.5 to 10 milligrams per liter (mg/L), but levels may drop below 5 mg/L at depths of 200 feet (USACOE 1978, 1995a). Measurements conducted by the City of San Diego (1996) showed decreasing concentrations with increasing water depth and distance from shore, and mean values were highest during the summer and early fall. At the 100-foot depth contour, mean values in summer ranged from 7.7 mg/L in July to 8.9 mg/L in October (USIBWC 1998). Dissolved oxygen values declined in winter and increased again in the spring, with the exception of a low value of 6.9 mg/L in April that coincided with an upwelling event.

Concentrations measured at two sites along the 65-foot bottom contour during the SCBPP ranged from 6.5 to 10.9 mg/L (SCCWRP 1999).

4.4.2.3 Clarity/Turbidity

Water clarity is important to the transmittance of light, which is needed to support photosynthesis by attached and planktonic plants. Light transmittance is affected by the amount of particles, including biological (e.g., plankton) and non-biological (e.g., suspended sediments), and dissolved organic matter present in seawater. Water clarity in nearshore waters is affected by wave and current-induced resuspension of sediments and by stormwater runoff and river discharges following rainfall events, as well as the presence of planktonic algae (e.g., diatoms and dinoflagellates).

Sampling conducted by the City of San Diego (1996) indicated values for light transmittance from 75% to 87%, with some general reductions associated with storm activity, particularly in shallower, nearshore waters. As mentioned, turbidity levels in nearshore and surfzone waters are expected to be relatively higher than those in offshore waters due to the presence of greater amounts of suspended sediments. Light transmittance values measured during the SCBPP

survey ranged from 59% to 84 % at two sites along the 60-foot bottom contour (SCCWRP 1999).

4.4.2.4 Nutrients

Nutrients such as nitrates and phosphates are important for supporting the growth of attached and planktonic plants. Discharges from the Tijuana River and Estuary likely represent an important seasonal source of nutrients to nearshore waters within the beach receiver sites. Upwelling events also contribute nutrients to surface waters. No nutrient data were collected during the City of San Diego baseline monitoring program for the International Wastewater Treatment Plant or during the SCBPP. Regardless, nutrient concentrations in waters off the beach receiver sites are expected to be similar to levels reported elsewhere in the Southern California Bight: nitrates at 5 to 200 nanomoles per liter; phosphates at 100 to 500 nanomoles per liter; and ammonium at 300 nanomoles per liter (Eganhouse and Venkatesan 1993).

4.4.2.5 Chemical Contaminants

The NOAA Mussel Watch program has monitored chemical contaminants in seawater at a site on the Imperial Beach north jetty since 1986 by collecting and analyzing the tissues of filter-feeding mussels, which are used as a sentinel organism for marine water quality. Results from 1986 through 1993 showed significant declines in concentrations of mercury, selenium, total chlordane, and total PCBs, but significant increases in total PAHs. Total DDT concentrations in mussel tissues were characterized as high (i.e., concentrations greater than the national mean plus one standard deviation for the log-normal distribution) during each of four years and total dieldrin concentrations were considered high during one of four years (O'Connor and Beliaeff 1995). These trends likely reflect changes over time in the magnitudes of regional input sources.

Furthermore, discharge from the Tijuana River may result in higher levels of contaminants and lower water quality at Imperial Beach than at Coronado Beach, due to Imperial Beach's proximity to the mouth of the River.

4.5 Air Quality

The climate of San Diego County is characterized by warm dry summers and mild wet winters. It is heavily influenced by the Pacific High which shunts low-pressure systems away from the area during much of the year. This high-pressure phenomenon is the driving force for the dominant onshore circulation and helps create the subsidence and solar radiation types of temperature inversions which contribute to local air quality problems.

The marine subsidence inversion occurs on summer days (typically late afternoon after the ambient air has warmed) when a cool, onshore flow of marine air undercuts a large dome of warm air. The resultant inversion layer (cool air near the surface, warmer air above) creates a barrier to vertical circulation throughout its thickness of approximately 300 to 600 meters (1,000 to 2,000 feet) above ground. This lack of circulation traps pollutants within the cooler marine

layer. As this stagnant air layer moves inland, additional pollutants are added from activities at ground level. These pollutants react in sunlight to form photochemical smog (measured and expressed as ozone), and adversely effect ambient air quality, especially in the vicinity of the foothills.

Another common type of inversion is created when near surface air cools by radiating heat (rendering it heavier than the air above it) while the air mass above remains relatively warmer. If this phenomenon persists, it traps surface-based emissions such as carbon monoxide (CO) and nitrogen oxides (NO_x).

At San Diego International Airport Lindbergh Field, the annual mean temperature is 62.9°F; the annual mean maximum is 70.3°F and the annual mean minimum is 55.4°F. Below freezing temperatures rarely occur. Temperatures above 90°F occur frequently. Precipitation in the study area averages 10 inches annually. The rainy season is essentially November through April (90% of annual precipitation occurs during this period). Winds are light and variable. Prevailing wind direction is west-northwest (onshore). Annual mean wind velocity is 6.7 miles per hour (mph). Days are typically clear and sunny with night and morning cloudiness common throughout the year.

4.5.1 San Diego Harbor

The closest SDAPCD air quality monitoring station in the San Diego Air Basin (SDAB) is in downtown San Diego, located at 330A Twelfth Street, approximately 2 miles east of the project area. The next closest, the Chula Vista monitoring station, is located approximately 9 miles to the southeast. No ambient air quality monitoring stations are located at San Diego Bay. The downtown monitoring station is primarily influenced by sources located in the industrial area around San Diego International Airport Lindbergh Field, and is not representative of conditions at the Bay. The Chula Vista monitoring station, although farther away, is more representative of conditions at the Bay because it is directly down wind from the harbor and the prevailing onshore winds. The Chula Vista station monitors ozone (O₃), CO, NO₂, sulfur dioxide (SO₂), and PM₁₀.

4.5.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

The meteorology/climate, and ambient air quality would be the same as described above.

4.6 Noise

4.6.1 San Diego Harbor

There are no federal or state standards limiting construction noise. Many cities and counties have provision in their noise ordinance that addresses construction noise levels and time of operation. San Diego Municipal Code Article 9.5 discusses noise abatement and control. Section 59.5.0404 addresses construction noise specifically, stating that "It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays... or Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise unless a permit has been applied for an granted

beforehand by the Noise Abatement and Control Administrator.”

The project area is located within a relatively high noise area typical of port and industrial areas. The noise levels are further increased by aircraft operating both out of NASNI and San Diego International Airport Lindbergh Field. Vehicular traffic in the area also contributes to the overall noise environment.

Noise studies conducted for the Navy homeporting project (U.S. Navy 1995) indicate that community noise equivalency levels (CNEL) in the harbor range between 60 and 67 dBA.

4.6.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

The Imperial Beach nearshore disposal site is located approximately 1,000 feet offshore and the Coronado Beach nearshore disposal sites are located approximately 2,000 feet offshore.

Chapter 9.32.020 Paragraph H of the City of Imperial Beach Municipal Code states “The use of any tools, power machinery or equipment so as to cause noises disturbing to the comfort and repose of any person residing or working in the vicinity, or in excess of seventy-five decibels, between the hours of ten p.m. and seven a.m., except when the same is necessary for emergency repairs required for the health and safety of any member of the community.” However, an exemption from the provisions can be obtained by submitting a written application to the City Manager.

Three major sources of noise exist in Imperial Beach: vehicular traffic along major arterial roadways, helicopter noise from the Imperial Beach Naval Outlying Landing Field (Ream Field), and temporary construction activities.

Sensitive noise receptors in the vicinity of the beach receiver site are generally residences, commercial facilities, and recreational areas along Seacoast Drive. It is estimated that ambient noise levels at the receptor locations vary from approximately 55 dBA to 60 dBA.

Section 41.10.040 of the City of Coronado Municipal Code states that “it shall be unlawful for any person, between the hours of 7:00 p.m. and 7:00 a.m. of any day or on legal holidays and Sundays to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create a disturbing, excessive or offensive noise unless a noise control permit has been applied for and granted beforehand by the Noise Control Officer.”

Sensitive noise receptors in the vicinity of the beach receiver sites are generally residences, hotels, commercial facilities, and recreational areas along Silver Strand Boulevard. A comprehensive traffic noise study was performed for and in the City of Coronado in 1998. The purpose of the study was to provide a legally adequate and defensible noise contour map for the City of Coronado General Plan Noise Element

(RECON 1998). Traffic noise levels were monitored at many points in the city. The noise study found that average noise levels along City streets ranged from 63 to 75 dBA CNEL.

To address issues related to the proposed 24-hour dredging operations, noise measurements were taken late at night on February 21-22, 2001 at representative receiver locations in the City of Coronado. The baseline monitoring indicated that late-night noise levels were affected mainly by local traffic, with additional effects caused by distant traffic on the Coronado Bridge and aircraft operations at Lindbergh Field.

4.7 Land Use and Recreation

4.7.1 San Diego Harbor

Urban uses dominate the San Diego Bay region and shoreline, with the exception of the south Bay. Industrial uses along the Bay include shipyards, boatyards, docks and wharves, shipping and trade companies, aerospace and airport industries, and manufacturing. Commercial businesses are represented by retail stores, hotels, conference centers, cruise ships, restaurants, marinas, office buildings, and salt ponds. Public uses include parks, beaches, bike trails, promenades, boat launch ramps, municipal buildings, and community centers. Only a few residential areas immediately abut the Bay tidelands, with condominiums, apartment houses, and homes located not far from the shoreline (SDUPD 2008).

The Tenth Avenue Marine Terminal is the center of commercial shipping activity for operations of the SDUPD, and handles bulk loading/unloading and distribution of various materials.

The San Diego Bay area is popular for recreation and there are several parks and beaches for the Bay where the main recreational activities are sailing, boating, picnicking, bicycling, swimming, diving, water skiing, and fishing. Marinas throughout the Bay provide slips with full amenities including guest facilities, picnic areas, and pump-out stations.

The largest concentration of industrial facilities is along the waterfront in the City of San Diego's Barrio Logan Community, stretching south along Harbor Drive from the former Campbell Shipyards through what is called the Belt Street industrial area to the National Steel and Shipbuilding Company (NASSCO) shipyard.

Government and institutional uses include, among others, the San Diego International Airport Lindbergh Field, two U.S. Coast Guard (USCG) installations, Scripps Pier, and numerous military installations.

4.7.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

Coronado beach includes various land uses including residential and hotels, and commercial operations including restaurants and shopping areas catering to tourists and local residents.

Recreation at Coronado Beach includes sun bathing, swimming, jogging, picnicking, bicycling, and hiking/walking.

Imperial Beach is generally characterized by a mixture of land uses including residential, open space, recreational, and commercial. Residential areas include oceanfront condominiums and apartments. Commercial operations include restaurants and specialty shops catering to tourists and local residents. Open space areas include the Tijuana River National Estuarine Research Reserve, which includes Border Field State Park.

Recreation at Imperial Beach includes surfing (short- and long-board), bodyboarding, bodysurfing, sun bathing, swimming, jogging, sightseeing, bird watching, horseback riding, picnicking, bicycling, hiking/walking, and various types of fishing (e.g., pier, boat, beach).

4.8 *Aesthetics*

4.8.1 San Diego Harbor

The aesthetic character of San Diego Harbor is comprised of waterfront oriented facilities including a mixture of residential, and marine-related commercial, recreational, and industrial uses. San Diego Bay also supports several military facilities. The scenic and visual resources of the project area are dominated by the harbor and these nearshore facilities.

4.8.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

The aesthetic character of Coronado Beach is dominated by beachfront residences and hotels. The NASNI is visible from Coronado Beach and naval planes and helicopters can be seen flying overhead.

The aesthetic character of Imperial Beach is dominated by beachfront residences. The U.S. Naval Radio Station is located just north of Imperial Beach and contributes to the aesthetic character. The Imperial Beach Naval Air Station is located at the southern end of Imperial Beach, and naval planes and helicopters can be seen flying overhead.

4.9 *Cultural Resources*

4.9.1 San Diego Harbor

The probability of a prehistoric site or a shipwreck of potential historical significance existing within the project area is considered extremely remote (Pettus 1996). Shipwrecks are routinely removed by the San Diego Harbor Patrol. The potential for encountering other deposits of *in situ* cultural materials is considered highly unlikely.

4.9.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

The remains of the 1909 Imperial Beach Pier are located in the vicinity of the existing pier (Macfarlane Archaeological Consultants 2004). This area has been previously

disturbed by dredge discharge from earlier dredging projects. This discharge site has been subjected to an underwater remote sensing survey by a team of underwater archeologists in 2003 (Macfarlane Archaeological Consultants 2004). No historic properties were identified. Macfarlane Archaeological Consultants (2004:29) identified an “unidentified cage-like feature” located northwest of the 1909 pier ruins; they recommended avoidance of this potential cultural resource.

In November 2008, EDAW, Inc. conducted a cultural resources records search for the City of Coronado Opportunistic Beach Fill project (Dolan 2008), located on the beach between the Naval Air Station North Island and the Naval Amphibious Base. EDAW’s records search scope of analysis included the project area. EDAW examined cultural resources documents and maps at the South Coastal Information Center at San Diego State University and at the San Diego Museum of Man. Roy Pettus conducted an underwater survey offshore from Coronado Beach and Silver strand in 1985 (Pettus 1996); it is not known whether Pettus’ survey area coincided with the current project area. In addition, Dolan (2008) points out that one shipwreck, CA-SDI-11,069, is located offshore near the Naval Amphibious Base. This shipwreck is commonly known as the *Monte Carlo* or *McKittrick*. Built in 1921, this vessel was originally used as a tanker and later used for gambling. Since 1985 the Corps has been placing sand on top of the shipwreck in order to prevent site disturbance (Dolan 2008). Finally, Dolan (2008) recommended avoidance of the *Monte Carlo* shipwreck and monitoring of beach berm construction in the vicinity of the shipwreck.

The Corps conducted a cultural resources remote sensing survey of the northern Coronado Beach disposal area in July 2009. Results of the survey indicated that there are several small magnetometer anomalies scattered in the Coronado Beach disposal area, but they do not appear to relate to a cultural resources (e.g., shipwreck or other historic debris). Therefore, there are no known cultural resources or historic properties within the northern Coronado Beach discharge area.

The southern Coronado Beach disposal area was previously used as a borrow site for the Shore Protection Improvement Project at the U.S. Naval Amphibious Base in 1985.

4.10 Marine Traffic

4.10.1 San Diego Harbor

The SDUPD maintains navigational aides outside the main shipping channel. According to records maintained by the SDUPD Marine Operations Department, 513 commercial vessels (including barges) docked at their facility during 2000. In addition, another 101 cruise ships use their facility. It is estimated that naval/military vessels account for approximately two to three times the amount of commercial traffic within the deep water channel main shipping lane, especially with major berthing facilities at NASNI and Naval Station San Diego (NAVSTA). Even with this traffic level, the San Diego Bay is relatively uncongested when compared to other west coast ports.

Marine safety issues within San Diego Bay are handled by both the USCG and the San

Diego Harbor Police, an arm of the SDUPD. All commercial traffic in the Bay is the responsibility of the USCG. The Harbor Police frequently become involved, however, with marine safety enforcement associated with small vessels. Federal Aids to Navigation are maintained by the SDUPD General Services Department boat crew, with oversight provided by the USCG.

4.10.2 Nearshore Receiver Sites: Imperial Beach and Coronado Beach

Minimal marine traffic is anticipated in the vicinity of the nearshore receiver sites.

5.0 Environmental Effects

This Final Supplemental Environmental Assessment (SEA) addresses dredging operations that would occur during maintenance dredging of the Federal Channel at San Diego Harbor and discharge of nearshore compatible material in the nearshore waters at Imperial Beach or Coronado Beach. It is estimated that construction may take a maximum of 50 days using a hopper dredge or a maximum of 100 days using a clamshell dredge. Dredging is scheduled to occur between August 1 2012 and April 1 2013. Impacts due to implementation of the proposed project are presented below. Additional project alternatives, including the No Action alternative were presented in the March 2009 EA, under separate cover. Impacts to the additional, southern Coronado Beach disposal site would be similar to those analyzed for the original, northern site.

5.1 Physical Environment

5.1.1 San Diego Harbor: Maintenance Dredging Site

Modifications to the existing bottom topography of the Federal Navigation Channel should be expected as a result of the proposed dredging project. Local, but minor, changes to the bathymetry would result because of the removal of marine sediments from the Federal Channel. Impacts to the Harbor bathymetry would not be considered significant as sediment would only be removed in the Federal Channel to authorized depths, in areas that have previously been dredged.

5.1.2 Discharge at Imperial Beach or Coronado Beach

Modifications to the existing bottom topography of the discharge areas should be expected as a result of the proposed project. Local, but minor, changes to the bathymetry would result because of deposition of marine sediments in the nearshore. This sediment would dissipate over time via wave action, eventually washing onto and replenishing the beach. Nearshore discharge would produce a positive effect through probable increases in beach recreational usage following the nearshore deposition.

The proposed discharge in nearshore waters would not cause or contribute to the erosion of existing downcoast beaches and should result in temporary beach accretion because material would be returned to the intertidal zone. Material would be discharged in nearshore waters in the most desirable location for the purposes of beach nourishment and the avoidance of impacts to sensitive biological resources. Disturbances resulting from dredge material discharge would not significantly degrade the value of intertidal and subtidal beach habitats, as impacts would be temporary and localized. No significant cumulative adverse effects on the terrestrial or aquatic ecosystems would occur as a result of the proposed project.

5.2 Biological Environment

5.2.1 San Diego Harbor: Maintenance Dredging Site

5.2.1.1 Marine Vegetation

Any benthic flora within the immediate project area would be eliminated by the dredging activities because of site excavation and substrate removal. Given the depths of dredging, minimal vegetation is expected to occur within the dredge footprint; therefore, the proposed dredging project would not cause any adverse impacts to marine vegetation. Any impacts to marine algae and meioflora are localized, minimal, and not significant.

Eelgrass is present near the dredge area in the entrance channel, as close as approximately 185 feet, which is sufficient distance to avoid impacts from dredging to the eelgrass beds. The dredge Contractor would also receive a map of the beds and be directed to avoid impacts. No impacts to eelgrass would occur.

5.2.1.2 Invertebrates

Dredging activities inherently cause a disturbance and redistribution of bottom sediments which may persist for the duration of the operation. Some invertebrates, especially small crustaceans and mollusks of the infauna, may be relocated with the dredged material and deposited in the discharge site. Some would be smothered, some would become food for opportunistic shorebirds, and others would survive at the new location.

Invertebrates, epifauna, and infauna may be exposed to suspended sediment concentrations during dredging and up to 24 hours later. Dredging operations may cause some clogging to gills and suspension feeding apparatuses, resulting in smothering to invertebrates in the immediate vicinity. Impacts are expected to be minor since dredged sediment would be composed primarily of beach compatible sands and few silts. Invertebrates are expected to recover from the disturbance upon completion of the project. The impacts to invertebrates are minimal, temporary, and not significant.

5.2.1.3 Fish and Essential Fish Habitat

Dredging of waterways to improve navigation or harbor facilities could affect fish resources in a variety of ways. The dredging process could result in direct loss of foraging habitat, but perhaps even more significant is the turbidity associated with this activity. Some fish may avoid the immediate project area during dredging operations because of the increased turbidity, noise levels, and oxygen depletion caused by dredging bottom sediment. The dredging operation will be monitored to ensure that any substantial increases in turbidity or decreases in dissolved oxygen are restricted to the immediate area around the dredge (see Section 7.0). Any such dredge-related impacts would be temporary, controlled, and therefore, insignificant. Greater potential for impacts would exist if there were substantial amounts of fine sediments in the dredging areas; however, testing of samples of material to be dredged indicated that grain sizes are predominately of coarser grain beach compatible grain sands. This material settles quickly instead of remaining suspended in the water column.

Dredging may benefit fish in the area as dredging activities sometimes suspend

infauna and epifauna to temporarily enhance fish feeding activities. However, impacts may also occur if fish congregate near the surface to feed on suspended benthic organisms or to avoid turbidity, where they may become prey for plunge diving birds. Impacts to EFH is minimum and short term, and it would not result in a significant, adverse impact.

5.2.1.4 Birds

Dredging activities may temporarily degrade water quality and increase ambient noise levels, which could cause disturbances to some birds. Increased levels of activities within the harbor may decrease waterfowl use of the water for resting and the use of any nearby structures for roosting; however boat traffic within the Harbor is often heavy, consisting of large Navy and commercial vessels, and the addition of the dredge would not significantly increase activity levels.

Dredging activities may enhance feeding opportunities for plunge diving birds as fish may congregate near dredge sediments to feed on suspended benthic organisms. (KBC 2011).

Furthermore, birds and marine mammals are expected to acclimate to the dredge's monotonous, non-threatening noise (Climo 1987, Gentry 1990). Dredging operations would be temporary, localized, and not significant.

5.1.2.5 Marine Mammals

San Diego Harbor does not constitute essential feeding or breeding habitat for any marine mammal species that may be present in the area. Sea lions would likely avoid the dredging activities; therefore, no significant impacts to these mammals are expected. Similarly, the proposed dredging operation is not expected to adversely affect any other marine mammals. Any short-term disruptions to pre-dredge foraging or movement behaviors would be temporary and not significant, as wildlife activities are expected to return to normal upon project completion.

5.2.2 *Discharge at Imperial Beach or Coronado Beach*

5.2.2.1 Marine Vegetation

Less than significant impacts to marine vegetation are expected as the sandy nearshore discharge areas have minimal marine vegetation. Eelgrass and kelp communities are at such distance from the zone of discharge as to be beyond the area of impact. Any sensitive marine vegetation would be avoided during sediment discharge.

5.2.2.2 Invertebrates

The potential biological and physical effects of using dredged material for beach replenishment include coverage and disturbance of fauna by dredged material, and temporary turbidity increase within the nearshore disposal areas, which can

cause clogged gills and breathing apparatuses. The turbidity levels are expected to be relatively low because the dredged material would be composed of predominantly sandy material with particle sizes larger than silts or clays; impacts to turbidity may be adverse but short term in nature. The invertebrate community is expected to recolonize the area after disposal activities are complete. Given the short term and temporary nature of impacts, no significant impacts are expected.

Survey work in the nearshore at Imperial Beach and Coronado Beach outline that no indicators of Pismo clam beds were observed in the nearshore at Imperial Beach (SAIC 2009). The identification of dead clam shells at the inshore portion of a transect at the north end of the northern nearshore Coronado disposal site suggest that clam beds may be nearby. Onshore surveys indicate that Pismo clams occur at Imperial Beach, generally north of the pier. Beds were also found in the surf zone approximately 0.75 mile south of the pier during 2012 surveys. The nearshore disposal site at Imperial Beach is located just south of the pier. Pismo clams, including those exceeding the legal size limit, were also detected onshore and in the surf zone at Coronado Beach.

Impacts to Pismo clam due to nearshore disposal are expected to be negligible and therefore not significant. No sediment would be disposed of directly on the beach, therefore no impacts from crushing or burial by construction equipment would occur. Water quality would be monitored during dredging and disposal activities to ensure minimized impacts to water quality and turbidity in the nearshore waters. Because clams are mobile, some individuals would be expected to move out of the disposal area as sand placement occurs. The dissipation of sand out of the water column over time would prevent direct burial of clams in the nearshore. Slow dispersal of sand from the nearshore into the surf zone and onto the beach via wave action would allow time for clams in the surf zone to move towards fresh ocean water as needed.

All dredged sediments would be disposed of in the nearshore; no sediments would be disposed of on the beach or in the surf zone, where Pismo clams have been identified. Since Pismo clams generally inhabit the surf zone and disposal would occur in the nearshore, and since surveys did not definitively observe clam beds in the nearshore, impacts to Pismo clam would be minimal, localized, temporary, and not significant. Observed beds would not be impacted by direct burial. Water quality monitoring would further minimize impacts to the clam from turbidity during nearshore disposal. While nearshore surveys at Coronado Beach suggested that clam beds may be nearby, the nearshore disposal sites are very large and disposal of sediment would not be concentrated in one small area. Dispersal of sediment over such a large area would not create significant impacts.

5.2.2.3 Fish and Essential Fish Habitat

Some fish may avoid the immediate discharge area due to increases in suspended sediments. Water quality monitoring would be performed during dredging and disposal to minimize impacts to turbidity. Other fish species may be attracted to

the discharge area and surf zone to feed on mollusks, crustaceans, and other organisms which may have been caught up in, or exposed by, the dredged material. However, impacts may also occur if fish congregate near the surface to feed on suspended benthic organisms or to avoid turbidity, where they may become prey for plunge diving birds. Turbidity levels are anticipated to subside upon completion of the nearshore disposal operations.

Dredged material would be discharged in nearshore waters and sandy disposed sediments are expected to dissipate relatively quickly out of the water column. Sands would replenish the beach gradually over time via wave action. No material would be placed in the surf zone therefore impacts to spawning grunion are expected to be negligible and not significant.

Given the temporary and localized nature of discharge, and that discharge would occur in the nearshore and would replenish the beach over a long period of time, no significant impacts are expected.

5.2.2.4 Birds

Discharge activities would occur in the nearshore, therefore impacts to nesting birds are not expected. Dredging activities may attract many birds to the discharge areas to feed on invertebrates that may have been dredged up and exposed in the dredged material as it is released into the water. Disposal activities may also cause fish to congregate near dredge sediments to feed on suspended benthic organisms or to avoid turbidity plumes (KBC 2011), enhancing feeding opportunities for plunge diving birds. Turbidity during disposal may impact visibility for foraging for some birds. Dredge material is composed mostly of sandy material, which is expected to dissipate relatively quickly out of the water column. Furthermore, water quality monitoring would be performed during dredging and disposal activities, which would minimize impacts of turbidity on foraging birds. No significant adverse impacts to birds are expected from this project.

5.2.2.5 Mammals

Some marine mammals could be found near the discharge sites. If marine mammals did appear in the nearshore discharge area, they are expected to avoid the immediate work area, and would not be affected by discharge activities. No adverse impacts are expected to marine mammals from this project.

5.3 Threatened and Endangered Species

The following paragraphs discuss impacts for dredging as well as dredge material discharge.

5.3.1 San Diego Harbor: Maintenance Dredging Site AND Discharge at Imperial Beach or Coronado Beach

5.3.1.1 California least tern

The March 2009 EA and August 2010 SEA included environmental commitments

that restricted dredging outside the California least tern nesting season (April 1 to September 15) to avoid impacts to this species. The Corps determined that this restriction is unnecessary for the proposed project. A recent study drafted by Keane Biological Consulting, researching the impacts of dredging to foraging California least tern, indicated that terns foraging in San Diego Bay are not adversely affected by dredging or beach nourishment operations.

A similar effort being conducted by the Corps' San Francisco District (Joseph Viola, pers. comm., July 2011) has found that California least tern forage within 3.5 miles of their nesting site. California least tern typically forage (75% of foraging) within 0.75 mile of their nesting site (Atwood and Minsky 1983, KBC 2011).

The dredge area is located approximately 1 mile from the nearest least tern nesting colony at NASNI. The Imperial Beach nearshore disposal site is located approximately 1 mile from the nearest least tern nesting colony at the Tijuana River estuary and the Coronado Beach nearshore disposal sites are located approximately 2 miles from the nearest least tern colony. While the nearshore disposal beaches and dredge locations are located within foraging range from nesting sites, successful foraging dives have been observed in turbid water and immediately adjacent to dredging equipment (KBC 2011). It is hypothesized that turbidity plumes may create a "curtain" that causes small fish to group together near the edge of plumes, and may cause small fish to move into illuminated surface waters and avoid darker waters below. This may suggest that foraging success of plunge diving birds may even be enhanced by increased turbidity (KBC 2011). Furthermore, California least tern are known to forage in a wide variety of habitats near their nesting sites and do not exclusively forage in one or two areas (KBC 2011). Temporarily shifting to nearby sites would not adversely affect foraging success or nesting behaviors.

The proposed dredge sediment is coarse, sandy material, which is expected to dissipate quickly after disposal in the nearshore and in the dredge area. Water quality monitoring will be performed including turbidity monitoring to ensure minimal impacts to water quality.

The March 2009 EA determined that the proposed dredging project may affect, not likely to adversely affect the California least tern and informal Section 7 consultation was completed with USFWS at that time. Concurrence was received from USFWS in February 2009 (Appendix B). Based on recent research results and anecdotal evidence, the Corps now considers that the project would not affect the California least tern. The Corps coordinated updates to the project, as described in this Final SEA, with USFWS (See Section 1.5 for details on coordination).

During coordination the USFWS expressed concerns regarding dredging during the California least tern nesting season. USFWS communicated that they did not

agree with the Corps' "no affect" determination for the tern if dredging were to occur during breeding season.

For the proposed dredging between August 1, 2012 and September 15, 2012 (during the tern breeding season) the USFWS expressed they could concur with a "may affect, not likely to adversely affect" the tern. If dredging were to occur during this time, USFWS also requested that a monitoring plan be developed to investigate the impacts of dredging, if any, on the tern and foraging.

Details of the Corps and USFWS communications regarding California least tern, Endangered Species Act (ESA) determinations, and the reasoning for each agency's proposed determinations are included in Appendix B.

To facilitate completion of the Final EA and to be able to advertize the construction project, the Corps decided to defer to the USFWS recommendation in this instance and agree that this particular dredging project, scheduled to commence after August 1, 2012 "may affect, but is not likely to adversely affect" the California least tern.

Per USFWS request, should dredging occur between August 1, 2012 and September 15, 2012, the Corps would continue to coordinate with USFWS staff to develop a monitoring program for the CA least tern.

5.3.1.2 Green Sea Turtle

Based on coordination with NMFS, impacts to green sea turtle would be avoided by regularly inspecting the hopper of the hopper dredge, if used, for the presence of turtle remains. If the turtle is detected, dredging operations would cease and NMFS would be notified to provide direction on the continuance of the project and further consultation. Dredging and discharge would occur far from known populations of green sea turtle which are known to stay near the South Bay Power Plant while residing in the harbor during winter months. Therefore, the proposed project may affect, not likely to adversely affect the green sea turtle. Informal Section 7 Consultation was initiated with NMFS regarding the green sea turtle in December 2008. A letter of concurrence from NMFS regarding impacts to green sea turtle was received on March 4, 2009 (Appendix B). Additional coordination was performed with NMFS in July 2011 in preparation of this SEA. See Section 1.5 for details on correspondence and coordination.

Discharge operations will occur in the nearshore environment of the Pacific Ocean and would not occur in the vicinity of the power plant, therefore it is expected that the proposed discharge would not affect this species.

5.3.1.3 Western Snowy Plover

The U.S. Fish and Wildlife Service agreed that dredging and discharge would not affect the western snowy plover.

Food supply, nest-site availability, and predators are the environmental factors with potential to decrease the nest density of the snowy plover, and subsequently its continued existence and recovery (Page et al. 1983). Several human factors can decrease the quality and quantity of plover habitat (Stenzel et al. 1981), including vehicular or pedestrian traffic in plover nesting or foraging habitat; destruction of eggs by pedestrian or vehicular traffic; and harassment of adults during egg-laying, incubation, and parental care. Regular beach grooming activities can also significantly influence the invertebrate (prey) populations (M. Holmgren, pers. comm., 2004; Dugan 2001; Dugan et al. 2003). Since these impacts are not expected to be associated with dredging or discharge operations, the proposed project would not affect this species.

Dredging activities will take place far off-shore from known snowy plover habitat within the harbor. Dredge material deposited in the nearshore is expected to disperse via wave action over the course of several months to replenish the beach. No material will be disposed of onshore or near snowy plover habitat.

In conclusion, this project is not expected affect the Western snowy plover or its habitat.

5.4 Water Quality

The following paragraphs discuss impacts for dredging as well as nearshore discharge.

5.4.1 San Diego Harbor: Maintenance Dredging Site AND Discharge at Imperial Beach or Coronado Beach

Temporary physical and chemical changes in water quality characteristics may result because of re-suspension of bottom sediments during dredging activities. Any contaminants present could become ecologically active upon disturbance by these activities. Core samples taken from the proposed dredging areas at San Diego Harbor in October 2008 indicated fines in accordance with Corps standards of less than 38%. Contaminants do not typically adhere to large-grained sands; therefore, contaminants are not expected in the dredged material. Chemical testing conducted in October 2008 confirmed that contaminant levels in the sand do not exceed lower effects bases screening levels (ERLs), and are within the range acceptable for nearshore discharge. Sediments were found compatible with those of the nearshore disposal beaches. Given these results the effects of these activities on water quality are expected to be minimal.

The grain size (mechanical) and chemical analysis results were coordinated with the concerned resource agencies during preparation of the March 2009 EA. Meetings are conducted with members of the Dredge Materials Management Team (DMMT) to discuss the details of dredging projects. Participants in these DMMT meetings typically include EPA, Corps, RWQCB, and CCC. These resource agencies did not express concerns regarding the discharge of clean material in the nearshore for beach replenishment. Additional coordination occurred during preparation of this EA. See Section 1.5 of this SEA for details on coordination.

Dredging and disposal impacts may include temporary increases in turbidity and suspended solids levels along with the associated decreases in dissolved oxygen in the immediate vicinity of the dredging and disposal operations. Increased turbidity would result in a decrease in light penetration and cause a general decline in aquatic primary productivity. Any appreciable turbidity increase may cause clogging of respiratory and feeding apparatuses of fish and filter feeders. Motile organisms, however, are expected to evacuate and avoid the dredging and disposal areas and temporarily relocate to an undisturbed area. Due to the small percentage of fines in the dredged material and the high percentage of coarse, sandy material, disposed material is expected to settle out of the water column relatively quickly. Increases in turbidity would be minimized and restricted to the immediate vicinity of the operation.

Dredging activities are expected to contribute to only a small percentage of the total turbidity found in the ocean when compared with that created by natural erosion of the beach, storm run-off from terrestrial habitats, and re-suspension of solids by waves, currents, and maritime traffic. High levels of turbidity resulting from the dredging and discharge operations are usually restricted to the immediate vicinity of the dredging and discharge areas and tend to dissipate rapidly. For these reasons, the proposed dredging and discharge project is not expected to cause significant changes in water quality. Furthermore, dredging and discharge activities shall adhere to the requirements and controls set forth by the California Regional Water Quality Control Board. Water quality monitoring would be performed during dredging operations to minimize impacts due to the implementation of the proposed project. These activities shall include monitoring of turbidity and dissolved oxygen levels. Section 7.0 discusses environmental commitments related to water quality monitoring requirements.

The chemical and physical analysis of the sediment sampling in October 2008 indicated a predominance of sand and the absence of significant levels of contaminants; therefore no significant impacts to water quality are expected.

Turbidity levels associated with clamshell dredging within the dredge footprint would be slightly higher than that for a hopper dredge, as the dredged material is carried to the surface in an open bucket and dumped into an adjacent barge. Although there is some overflow water generated from the barge, the amount of water transported with dredged material is much less than that generated by a hopper dredge. Based on an evaluation of turbidity associated with various types of dredging equipment, surface turbidity plumes from clamshell dredging operations can extend approximately 1,000 feet downstream of the dredge (depending on currents), with the surface plume dissipating rapidly within 1 to 2 hours of cessation of operations (USACE 1978).

The use of a clamshell dredge would also result in a slightly longer construction schedule due to the mode of operation of the dredge compared to the hopper dredge. However, given the short term nature of the dredging, the quality and grain size of the sediment, and the environmental commitments to reduce turbidity impacts, impacts would be less

than significant.

Water quality monitoring would be performed during dredging operations to minimize impacts due to the implementation of the proposed project. With this monitoring, impacts to water quality using a hopper or clamshell dredge are expected to be minimal and not significant.

5.5 Air Quality

A hopper or clamshell dredge would be used for dredging. The proposed dredging activities in San Diego Harbor are subject to Federal, state, and county air quality regulations and standards. The Corps' Contractor would obtain and observe San Diego APCD or State Air Resources Board (ARB) permits, therefore impacts to air quality are not expected to be significant. New regulations allow the dredge operator to obtain either individual permits from the local APCD/Air Quality Management District, or a single state-wide permit from the ARB.

The following paragraphs discuss impacts for dredging as well as nearshore disposal.

5.5.1 San Diego Harbor: Maintenance Dredging Site AND Discharge at Imperial Beach or Coronado Beach

The proposed project would dredge a maximum of 550,000 cubic yards of nearshore compatible material. For purposes of assessing air quality impacts it was assumed that the dredging would require a maximum of 50 days using a hopper dredge and a maximum of 100 days using a clamshell dredge.

Implementation of this alternative would not cause any long term air quality impacts. This alternative is not expected to result in any changes in the number of vessel calls or the size of vessels operating within the harbor. Therefore, this alternative would not result in any increases in long-term emissions.

Short-term emissions during the dredging activity are not expected to result in any significant air quality impacts. Emission rates from dredging operations were estimated using EPA emission data. Detailed emission calculations are provided in Appendix C. A summary of the evaluation is provided below.

Emission rates were estimated for use of a hopper dredge and use of clamshell dredge with a scow towed by a tug boat. Emission factors for all criteria air pollutants emitted by the dredge equipment were derived from EPA guidance (USEPA 2000). The construction schedule for the hopper dredge would be a maximum of 50 days. The schedule for the clamshell dredge would be a maximum of 100 days. Emission factors for the dredges were derived from emission estimates from dredge manufacturers.

As shown in Appendix C, dredging operations are expected to result in emissions which are all below SDAPCD's as well as Federal threshold. None of the pollutant exceeds State or Federal thresholds. Therefore, it is concluded that dredging and discharge would not be subject to either General Conformity or New Source Review permitting.

Therefore, no significant long-term air quality impacts would occur.

Furthermore, the dredge and discharge sites are offshore and not immediately adjacent to any sensitive receptors. Project related emissions would be minimal and temporary, and would not result in significant impacts to local air quality.

No additional emissions would be associated with discharge in the nearshore waters beyond those discussed previously.

As shown in Appendix C, the emissions of the other pollutants would be less than the significance thresholds. Therefore, there would be no significant short-term or long-term air quality impacts from implementation of dredging and discharge.

If any equipment requires permits to operate, the selected Contractor would obtain them prior to construction.

5.6 Noise Level

The following paragraphs discuss impacts for dredging as well as nearshore discharge.

5.6.1 San Diego Harbor: Maintenance Dredging Site AND Discharge at Imperial Beach or Coronado Beach

For a relatively long-term noise exposure resulting from construction activities, a CNEL (Community Noise Equivalent Level) up to 65 decibels (dBA) is generally acceptable for noise sensitive land uses, including residences, schools, hospitals, and churches. A CNEL up to 75 dBA is often considered acceptable for office building and other commercial activities. However, for short-term construction activities, levels considerably higher may be acceptable because of the temporary nature of the activity. A CNEL up to 90 dBA for noise sensitive land uses and up to 100 dBA for offices and commercial activities would not be considered unacceptable and is in fact found in the vicinity of many construction sites in many urban areas throughout the country.

Any impacts from the noise generated by the dredging equipment at beaches onshore of the dredge and disposal sites are dependent upon the distance from the equipment. Noise levels from a point source decrease in inverse proportion to the square of the distance from the sound source (e.g., at distances greater than 50 feet from the source, every doubling of the distance decreases the noise by approximately 6 dB).

Dredge equipment may generate noise up to approximately 80 to 90 decibels at 50 feet, while dredge and disposal activities would be located approximately 1,000 to 2,000 feet offshore of sensitive land uses. Since sound is dampened over distance, dredging equipment is expected to generate noise on the beach at approximately 50 to 60 decibels, which is noted in the “quiet” range. Noise at the nearshore disposal sites would be intermittent, occurring only when the hopper dredge or tug and barge transit to the nearshore to dispose sediment.

Automobiles, recreational boats and vehicles, commercial fishing boats, Navy vessels, and large commercial ships are the major contributors to the ambient noise environment at San Diego Harbor and nearby beaches. Noise levels increase during heavy summer recreational utilization. Noise studies conducted for the Navy homeporting project (U.S. Navy 1995) indicate that community noise equivalency levels (CNEL) in the harbor range between 60 and 67 dBA. These levels would be generally consistent with the activities onshore from the project area.

Section 4.6 outlines the limits for construction noise in the proposed dredge and disposal locations. Any permits required by the City of San Diego, the City of Imperial Beach, and the City of Coronado Beach to dredge and dispose during nighttime hours and meet noise ordinances would be obtained by the selected Contractor.

Ambient noise levels on the beach and within the Harbor are such that the dredge would not be a significant new noise source. Dredge equipment would only be present in the nearshore for short periods of time during disposal of material from the hull of the hopper dredge or from the scow. After disposal, the dredge/scow would be transported back to the dredge area until the next disposal cycle. Noise levels at the disposal beach in the “quiet” range will not have an adverse effect on surrounding land uses.

Dredging and disposal would occur for a maximum of 100 days, and noise levels would return to ambient conditions upon project completion; impacts would be temporary and not significant.

5.7 Land Use and Recreation

5.7.1 San Diego Harbor: Maintenance Dredging Site

The proposed dredging would not change land use as identified by the general plan and policies. Potential impacts of the proposed activities affecting the existing land use are not expected to occur.

Dredging may temporarily interfere with water-based recreational activities within the immediate vicinity of the dredge footprint. These activities include boating and fishing. The environmental impacts and disturbances to such activities are expected to be minimal due to the large size of the harbor and the current use of the harbor by larger vessels than the dredge, including Navy and commercial ships. Dredging would only occur within the Federal Navigation Channel, leaving the remainder of the harbor free for use for recreation.

Impacts to water-based recreation would be temporary, localized, and not significant. The Corps would coordinate with the Coast Guard District regarding dredging activities; therefore, impacts to recreational vessels would be insignificant.

5.7.2 Discharge at Imperial Beach or Coronado Beach

The proposed discharge of compatible material would not change land use as identified

by the general plan and policies. Potential impacts of the proposed activities affecting the existing land use are not expected to occur.

Disposal activities may temporarily interfere with water-based recreational activities within the immediate vicinity of the disposal footprint. These activities may include boating, fishing, kite surfing, kayaking, and paddling. Impacts to such activities are expected to be temporary and localized.

Discharge would occur for a maximum of 100 days, therefore impacts on recreation would be temporary. Furthermore, dredge equipment would only be present in the nearshore for short periods of time during discharge of material from the hull of the hopper dredge or from the scow. After disposal, the dredge/scow would be transported back to the dredge area until the next disposal cycle. At the discharge sites, beach replenishment would provide wider, sandy beaches which would improve recreational opportunities onshore.

Impacts to recreation near the discharge sites would be temporary, localized, and not significant.

5.8 Aesthetics

5.8.1 San Diego Harbor: Maintenance Dredging Site

The aesthetic qualities of the dredge area would not be significantly impaired as a result of the presence of the dredge. The dredge would operate for a maximum of 100 days, therefore impacts would be temporary and not significant. Furthermore, aesthetics in the harbor currently include many types of large vessels including Navy aircraft carriers and commercial transport ships. Therefore, addition of the dredge to the harbor would not significantly impact aesthetics here.

5.8.2 Discharge at Imperial Beach or Coronado Beach

The dredge would operate for a maximum of 100 days, therefore impacts on aesthetics due to the presence of the dredge in the nearshore would be temporary. Furthermore, dredge equipment would only be present in the nearshore for short periods of time during discharge of material from the hull of the hopper dredge or from the scow. After disposal, the dredge/scow would be transported back to the dredge area until the next disposal cycle. At the discharge sites, beach replenishment would provide wider, sandy beaches, enhancing the aesthetic character of the area. Impacts to aesthetics at the discharge site would not be considered significant.

5.9 Cultural Resources

5.9.1 San Diego Harbor: Maintenance Dredging Site

San Diego Harbor was previously dredged during the 2003 channel deepening. Therefore, dredging activities that occur within the dredge footprint will not likely impact any areas that have not been previously disturbed by dredging activities. These

previously disturbed areas likely do not contain historic properties. Any maintenance dredging within the San Diego Harbor has no potential to cause effects to historic properties.

5.9.2 Discharge at Imperial Beach or Coronado Beach

Since the Imperial Beach discharge site has been used previously for dredge material discharge (USACOE 2003), it is unlikely that additional discharge activities would affect historic properties. The proposed project as planned will not affect historic properties that are listed in, or eligible for listing in the National Register of Historic Places. Any project activity that occurs at the Imperial Beach discharge site has no potential to cause effects to historic properties.

Impacts to cultural resources are not anticipated because there are no known historic properties within the northern nearshore Coronado Beach discharge area. However, the *Monte Carlo* shipwreck (CA-SDI-011,069) is located outside of but near the southern boundary of the Coronado Beach disposal site. It is recommended that this shipwreck be avoided by all disposal activities.

Since the southern nearshore Coronado Beach discharge site has been used previously as a borrow site for shore protection (USACOE 1985), it is unlikely that discharge activities would affect historic properties.

An environmental commitment is included in Section 7.0 this Final SEA for dealing with unexpected cultural resource discoveries during implementation of this project. Therefore, no adverse effects to historic properties are expected due to implementation of the proposed project.

5.10 Marine Traffic

5.10.1 San Diego Harbor: Maintenance Dredging Site

Water-related impacts may occur with vessel traffic in the Harbor. Because various types of vessels will traverse the dredge area, there will be a slight potential for vessels to collide with edge or support vessels. Equipment will be properly marked and notifications will be posted to minimize potential concerns. The dredge operator shall move the dredge equipment for U.S. Coast Guard and Harbor Patrol law enforcement and rescue vessels if necessary.

Vessel traffic will not significantly increase over current conditions, and impacts would be temporary and localized. As a benefit, replenishment of sand at local beaches will result from the proposed project.

5.10.2 Discharge at Imperial Beach or Coronado Beach

No marine traffic is anticipated in the vicinity of the nearshore discharge sites, therefore no impacts to marine traffic are expected to occur.

6.0 Compliance

The proposed action has been reviewed and determined to be in compliance with all applicable laws and regulations, including:

- a) National Environmental Policy Act
- b) ER -200-2
- b) Clean Water Act
- c) Endangered Species Act
- d) Coastal Zone Management Act
- e) Clean Air Act
- f) National Historic Preservation Act
- g) Magnuson-Stevens Fishery Management and Conservation Act
- h) Fish and Wildlife Coordination Act

This Final SEA is written in compliance with NEPA and applicable environmental regulations. Environmental Commitments provided in this Final SEA and any acquired permits would be followed during implementation of the proposed project, which will be overseen by Corps staff.

Compliance is included below.

6.1 National Environmental Policy Act (NEPA) of 1969 (42USC4321 et seq., PL 91-190); Council on Environmental Quality Regulations for Implementing NEPA, 40 CFR Parts 1500 to 1508; USACE Regulations for Implementing NEPA, 33 CFR Part 220.

This SEA has been prepared in accordance with the requirements of NEPA of 1969 (42 USC 43221, as amended) and the CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), dated 1 July 1988. NEPA requires that agencies of the Federal Government shall implement an environmental impact analysis program in order to evaluate "major federal actions significantly affecting the quality of the human environment." A "major federal action" may include projects financed, assisted, conducted, regulated, or approved by a federal agency. NEPA regulations are followed in the preparation of this SEA.

Section 102 of the NEPA requires that all federal agencies use a systematic, interdisciplinary approach to protection of the human environment; this approach will ensure the integrated use of the natural and social sciences in any planning and decision making that may have an impact upon the environment.

Council of Environmental Quality's (CEQ) Regulations on implementing NEPA (40 C.F.R. § 1500 et seq.). These regulations provide for the use of the NEPA process to identify and assess the reasonable alternatives to proposed actions that avoid or minimize adverse effects of these actions upon the quality of the human environment.

The NEPA was established to ensure that environmental consequences of federal actions are incorporated into Agency decision-making processes. It establishes a process whereby parties

most affected by impacts of a proposed action are identified and opinions solicited.

This SEA has been prepared to address impacts and develop environmental commitments associated with the proposed project. As per NEPA regulations, the Draft SEA and the Draft Finding of No Significant Impact (FONSI) were circulated for public review to appropriate resource agencies, environmental groups, and other interested parties. Comments received during the public review period were incorporated into this Final SEA, as appropriate. The Final SEA with a signed FONSI would be provided to parties who commented on the Draft SEA for their file.

ER-200-2-2, 33 CFR 230, March 1988 - This regulation provides guidance for implementation of the procedural provisions of the National Environmental Policy Act (NEPA) for the Civil Works Program of the Corps. It supplements Council on Environmental Quality (CEQ) regulations 40 CFR 1500-1508, 29, 1978, in accordance with the CEQ regulations. Wherever the guidance in this regulation is unclear or not specific, the reader is referred to the CEQ regulations. This regulation is applicable to all Corps responsibility for preparing and processing environmental documents in support of civil works functions.

6.2 Clean Water Act of 1972 (33 USC 1251 et seq.)

The Clean Water Act (CWA) was passed to restore and maintain chemical, physical, and biological integrity of the Nation's waters. Specific sections of the CWA control the discharge of pollutants and wastes into aquatic and marine environments. Under Section 404, the Corps issues permits for discharge of dredge or fill materials into waters of the U.S. including wetlands and other special aquatic sites. A Section 404(b)(1) analysis was prepared for the March 2009 EA and August 2010 SEA (Appendix D) to comply with Clean Water Act. The project impacts to water quality have not changed since the drafting and submittal of the previous 404(b)(1) analyses, therefore the project would operate based on those past evaluations.

The Corps does not issue itself a permit for civil works projects. Therefore, a Section 404(b)(1) analysis was prepared with previous documentation to comply with the Clean Water Act. Section 404(b)(1) addresses project related impacts to the waters of the United States and provides appropriate mitigation measures to minimize impacts. Section 230.10(a)(2) of the 404(b)(1) guidelines states that an alternative is practicable if it is available and capable of being done after taking into consideration costs, existing technology and logistics in light of overall project purposes.

In January 2009, the Corps applied for a Section 401 Water Quality Certificate (WQC) and submitted a request to California Regional Water Quality Control Board, San Diego Region (RWQCB). In the beginning of March 2009, the Corps coordinated with the RWQCB via phone and e-mail to determine the status of the Section 401 WQC for the proposed project. The RWQCB informed the Corps via e-mail on March 2, 2009 that the 401 Certification for the project is as proposed in the 401 WQC application received by the SDRWQCB on January 15, 2009 (see Appendix B), and that all water quality sampling and reporting should be done in accordance with the 401 WQC application proposal.

For this SEA, the project is essentially the same as described in past documents. Only minor changes were made to the project description, which would not change the water quality impacts described in the January 2009 401 WQC Certification application or compliance described in the March 2009 EA. The Corps will operate under the conditions of the 401 WQC issued in March 2009, and perform water quality monitoring and reporting as described in the January 2009 401 WQC application. The Corps submitted the draft SEA to the SDRWQCB during the public review period.

This SEA is prepared in compliance with the Section 404 of the Clean Water Act. Environmental commitments are included in Section 7.0 to minimize impacts to waters of the United States.

6.3 Endangered Species Act of 1973 (16 USC 1531 et seq.)

The Endangered Species Act (ESA) protects threatened and endangered species by prohibiting federal actions that would jeopardize continued existence of such species or result in destruction or adverse modification of any critical habitat of such species. Section 7 of the Act requires consultation regarding protection of such species be conducted with the U.S. Fish and Wildlife Service (USFWS) and/or the *National Oceanic and Atmospheric Administration's (NOAA)* National Marine Fisheries Service (NMFS) prior to project implementation. During the planning process, the USFWS and the NMFS evaluate potential impacts of all aspects of the project on threatened or endangered species. Their findings are contained in letters that provide an opinion on whether a project will jeopardize the continued existence of endangered species or modify critical habitat. If a jeopardy opinion is issued, the resource agency will provide reasonable and prudent alternatives, if any, that will avoid jeopardy. A non-jeopardy opinion may be accompanied by reasonable and prudent measures to minimize incidental take caused by the project.

Informal consultation was initiated with USFWS regarding the California least tern, western snowy plover, and California brown pelican and with NMFS regarding the green sea turtle for the March 2009 EA. Letters of concurrence with the Corps determination were received from the USFWS and NMFS in 2009 (Appendix B).

The March 2009 EA determined that the proposed dredging project may affect, not likely to adversely affect the California least tern and informal Section 7 consultation was completed with USFWS at that time. Based on recent research results and anecdotal evidence, the Corps now considers that the project would not affect the California least tern. The Corps continued coordination with USFWS after the public review period, at which time USFWS expressed concerns regarding dredging during the California least tern nesting season. USFWS communicated that they did not agree with the Corps' "no affect" determination for the tern if dredging were to occur during breeding season. For the proposed dredging between August 1, 2012 and September 15, 2012 (during the tern breeding season) the USFWS expressed they could concur with a "may affect, not likely to adversely affect" the tern.

To facilitate completion of the Final EA and to be able to advertize the construction project, the Corps decided to defer to the USFWS recommendation in this instance and agree that this

particular dredging project, scheduled to commence after August 1, 2012 "may affect, but is not likely to adversely affect" the California least tern.

Details of the Corps and USFWS communications regarding California least tern, Endangered Species Act (ESA) determinations, and the reasoning for each agency's proposed determinations are included in Appendix B.

Coordination with NMFS in July and August 2011 and in March 2012 indicated that there were no additional concerns regarding the updated project.

See details related to coordination with the USFWS and NMFS in Section 1.5 of this Final SEA. Environmental commitments have been included in this Final SEA to avoid and minimize effects to Federally listed species (Section 7.0). The proposed project is in compliance with the Endangered Species Act.

6.4 Coastal Zone Management Act of 1976 (PL 92-583; 16 USC 1456 et seq.)

Under the Coastal Zone Management Act (CZMA), any federal agency conducting or supporting activities directly affecting the coastal zone must demonstrate the activity is, and proceed in a manner, consistent with approved State's Coastal Zone Management Program, to the maximum extent practicable. As no federal agency activities are categorically exempt from this requirement, the Corps prepared and submitted a Coastal Consistency Determination (CCD) to the California Coastal Commission in 2009 during preparation of the March 2009 EA. Formal and informal coordination was initiated with CCC staff during preparation of the March 2009 EA.

The Corps coordinated the project description with the CCC in July and December 2011 in preparation of the Draft SEA. CCC indicated that the updated project description is very similar to that in the March 2009 EA; therefore, the Corps may submit a request for a ND in order to document the project description. The Corps submitted the ND to the CCC along with the draft SEA. Concurrence was received in a letter dated April 10, 2012 (Appendix B).

6.5 Clean Air Act of 1969 (42USC7401 et seq.); CAA Amendments of 1990 (PL101-549)

Air quality regulations were first promulgated with the Clean Air Act (CAA) (42 U.S.C. § 7401-7671q), which was passed in 1970 and amended in 1990 and 1997. The CAA is intended to protect the Nation's air quality by regulating emissions of air pollutants. Section 118 of the CAA requires that all Federal agencies engaged in activities that may result in the discharge of air pollutants comply with state and local air pollution control requirements. Section 176 of the CAA prohibits federal agencies from engaging in any activity that does not conform to an approved State Implementation Plan.

Project emissions are not expected to exceed "de minimis" levels established as a criteria for a finding of conformity. Therefore, the project is consistent with the SIP and meets the requirements of Section 176(c). Dredging operations are expected to result in emissions which are all below SDAPCD's as well as Federal threshold major source thresholds. None of the pollutant exceeds State or Federal thresholds. Therefore, the project is in compliance with the

CAA.

6.6 National Historic Preservation Act of 1966 (16 USC 470 et seq.)

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires federal agencies to take into account the effects of their undertakings on cultural resources eligible for the National Register of Historic Places (National Register). The action must demonstrate compliance with the NHPA, Public Law 89-665; 16 U.S.C. 470-470m, as amended, 16 U.S.C. 460b, 470l-470n, and 36 CFR 800, as amended (August 5, 2004).

In accordance with 36 CFR 800.3, the Corps sent a letter to the California State Historic Preservation Officer (SHPO) with the cultural resources technical report. The Corps sent a consultation letter and project area map to the Native American Tribes named by the NAHC advising them of this proposed project and the Corps' determinations. The Corps is in compliance with Section 106 of the NHPA.

6.7 Magnuson-Stevens Fishery Management and Conservation Act, as amended.

The March 2009 EA and this Final SEA contains an EFH Assessment as required by the Magnuson-Stevens Act. Although construction would occur within Essential Fish Habitat, the Corps has determined that the proposed project would not result in a substantial, adverse impact. In compliance with the coordination and consultation requirements of the Act, the draft SEA was sent to NMFS for their review and comment.

Coordination was initiated with NFMS in February 2009. Further coordination occurred in July 2011 in preparation of the draft SEA. Comments received after the public review period were incorporated into the Final SEA.

This Final SEA is in compliance with the Magnuson-Stevens Fishery Management and Conservation Act.

6.8 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) requires the Corps to consult with the USFWS whenever the waters of any stream or other body of water are proposed to be impounded, diverted, or otherwise modified. The Corps' coordination with the USFWS and the CDFG on the project began during preparation of the March 2009 EA and continued during preparation of this Final SEA. See Section 1.5 for additional coordination details with the USFWS and CDFG.

7.0 Environmental Commitments

Following is a summary of both general and resource commitments that have been developed to reduce the impact associated with construction of the proposed project. The Corps has committed to implement each of the following measures.

- a. Prior to construction, the Corps will provide a 14-day notification of planned activities to appropriate agencies and post information bulletins of scheduled work time and areas at appropriate offices. The Corps will work with its Public Affairs Office to distribute information to the community prior to dredging and the dredge Contractor will place signs at the disposal beach. Equipment will be appropriately marked and lighted.
- b. Should dredging occur between August 1, 2012 and September 15, 2012, the Corps will continue to coordinate with USFWS staff to develop a monitoring program for the CA least tern. The focus of the monitoring program would be to demonstrate whether dredging activities affect terns in any way, and to add to knowledge about tern foraging behavior in San Diego Harbor and nearshore waters.
- c. The Corps shall regularly inspect the hopper of the hopper dredge, if used, for the presence of turtle during dredging operations. If any turtle remains are discovered within the hopper, dredging activity will cease and NMFS will be contacted immediately.
- d. If any marine mammals or green sea turtles appear to be in danger of injury from dredging operations, the Contractor shall cease operations until the animal has left the dredge vicinity.
- e. Any sensitive marine vegetation found in the dredge area or discharge area, including kelp or eelgrass, would be avoided.
- f. The Corps Contractor shall obtain all applicable air permits and comply with federal, state, and local air and noise regulations.
- g. The Corps shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters, and to minimize interference with, disturbance to, and damage of fish and wildlife.
- h. The Corps' Contractor shall take noise readings near any sensitive receptors onshore from the dredge and disposal areas to ensure minimal noise disturbance during nighttime hours.
- i. The Corps' Contractor will monitor turbidity at the dredge and nearshore discharge site. This monitoring will ensure that turbidity levels will not substantially impact foraging of the California least tern or water quality. A

monitoring report would be submitted to the USFWS and RWQCB.

- j. All minimization measures identified in the 401 WQC request letter and application will be followed during dredging and discharge activities, as per correspondence with RWQCB on March 2, 2009. All commitments identified in this Final SEA would be followed to minimize impacts to water quality.
- k. All dredging and fill activities will remain within the boundaries specified in the plans. There will be no dumping of fill or material outside of the project area or within any adjacent aquatic community.
- l. The Corps' Contractor shall mark the dredge and all associated equipment in accordance with U.S. Coast Guard regulations. The contractor must contact the U.S. Coast Guard two weeks prior to the commencement of dredging. The following information shall be provided: the size and type of equipment to be used; names and radio call signs for all working vessels; telephone number for on-site contact with the project engineer; the schedule for completing the project; and any hazards to navigation.
- m. The Corps' Contractor shall move equipment upon request by the U.S. Coast Guard and harbor patrol law enforcement and rescue vessels.
- n. Disposal will be limited to the nearshore waters at Imperial Beach or Coronado Beach to minimize impacts to the western snowy plover and Pismo clam.
- o. Any permits required by the City of San Diego and the City of Imperial Beach or City of Coronado Beach to dredge and dispose during nighttime hours and meet noise ordinances would be obtained by the Contractor.
- p. Only areas that contain nearshore compatible sediment, as determined by sediment sampling completed in October 2008 and approved by the EPA, will be dredged. Any non-compatible material will be left in place.
- q. Prior to dredging, as needed and as coordinated with the EPA, the Contractor shall collect sediment samples from the dredge area and from beach transects at the southern Coronado Beach disposal site, to perform confirmatory testing for grain size in order to update the October 2008 sediment sampling results. The need for and locations of sampling will be determined per coordination with EPA. Samples would be collected and analyzed and results coordinated with EPA prior to dredging.
- r. Pursuant to 36 C.F.R. § 800.13, in the event of any discoveries during dredging of either human remains, archeological deposits, or any other type of historic property, the dredging supervisor shall notify the Corps of Engineers' Archeology Staff within 24 hours (Mr. Steve Dibble at 213-452-3849 or Mr. John Killeen at 213-452-3861). The dredging supervisor shall immediately suspend all work in

any area(s) where potential cultural resources are discovered. The dredging shall not resume in the area surrounding, i.e., immediately adjacent to, the potential cultural resources until the Corps of Engineers re-authorizes dredging, per 36 C.F.R. § 800.13.

8.0 Conclusion

The Corps has concluded that the proposed San Diego Harbor Maintenance Dredging Project has been designed and scheduled to avoid, minimize, and mitigate the probable effects on the environment. Minimization measures will be implemented to avoid an adverse effect on water quality and threatened and endangered species. Dredging and placement of dredged materials at Imperial Beach or Coronado Beach will occur in the nearshore. Non-compatible sediment (unsuitable for placement in the nearshore) will not be dredged.

This Final SEA, and coordination with the appropriate public agencies, indicates that the proposed project would not have a significant impact upon the existing environment or the quality of the human environment. As a result, preparation of an Environmental Impact Statement (EIS) is not required.

9.0 List of Preparers

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10.0 References

Adams, Loni

2011 Personal communication with Loni Adams, California Department of Fish and Game, regarding Pismo clam. August.

AECOM

2011 Revised Environmental Assessment/Final Environmental Impact Report for the San Diego Regional Beach Sand Project II. Prepared for San Diego Association of Governments and U.S. Army Corps of Engineers. May 27.

Allen, L.G.

1997 *Fisheries Inventory and Utilization of San Diego Bay, San Diego, California*. 3rd Annual Report. FY 1996-97. Prepared for U.S. Navy, Naval Facilities Engineering Command (NAVFACENGCOM), Southwest Division, and San Diego Unified Port District (SDUPD), San Diego, CA. California State University of Northridge, Northridge, CA.

Atwood, J. L. and D. E. Minsky

1983 *Least tern foraging ecology at three major California breeding colonies*. *Western Birds*. 14: 57-72.

Bay, S.M., D. Lapota, J. Anderson, J. Armstrong, T. Mikel, A.W. Jirik, and S. Asato

2000 Southern California Bight 1998 Regional Monitoring Program: IV. Sediment Toxicity. Southern California Coastal Water Research Project. Westminster, CA.

Bittler, Thomas

2008 Personal communication with Thomas Bittler, Engine Technical Communicator with The Halton Co., regarding emissions information for the Caterpillar generator sets. e-mail communication December.

Bonnell, M.D. and W.D. Dailey

1993 *Marine Mammals*. Pages 604-681, In: M.D. Dailey, D.J. Reish, and J.W. Anderson (eds.), *Ecology of the Southern California Bight*. University of California Press, Berkeley, CA.

California Air Resources Board

2008 Standards and Designations. <http://www.arb.ca.gov/desig/desig.htm>

California Department of Fish and Game (CDFG)

2006 Annual Status of the Fisheries Report. Section 6: Pismo Clam.

2009a California Natural Resource Data. Kelp Data 2009.

<http://www.dfg.ca.gov/marine/gis/naturalresource.asp>

2009b Pismo Clam Survey Data Summary, May 2008 – March 2009.

Climo, L.

1987 The effect of blast-generated noise on breeding seabirds at Saint George Island, Alaska. (unpublished report.) U.S. Fish & Wildlife Service Homer, AK.

Coronado Beach, City of

2008 Coronado Municipal Code. <http://www.codepublishing.com/ca/coronado/>

Dolan, Christy

2008 Coronado Opportunistic Beach Fill (EDAW No. 08080200.02), November 24, 2008 letter report from EDAW, Inc. to Mr. Brian Leslie, Moffatt & Nichol, 1660 Hotel Circle North – Suite 200, San Diego, CA 92108. Report on file at Moffatt & Nichol.

Dexter, D.M.

1977 Biological Baseline Studies of the Imperial Beach Erosion Control Project Area. Prepared for the U.S. Army Corps of Engineers, Los Angeles District, by the Center for Marine Studies, San Diego State University, San Diego, CA.

Dugan, J.

2001 Ecological Impacts of Beach Grooming on Exposed Sandy Beaches. Coastal Ocean Research. R/CZ-174: 3.1.2001-2.29.2004. http://www-csgc.ucsd.edu/RESEARCH/PROJPROF_PDF/RCZ174.pdf

Dugan, J.E., D.M. Hubbard, M.D. McCrary, and M.O. Pierson.

2003 The response of macrofauna communities and shorebirds to macrophyte wrack subsidies on exposed sandy beaches of southern California. *Estuar. Coastl. Shelf Sci.* 58S:133-148.

Engineering Science

1988 *Tijuana Oceanographic Engineering Study*. Volume 1. Ocean Measurement Program. Prepared for the City of San Diego, San Diego, CA.

Feder, H.M., C.H. Turner, and C. Limbaugh

1974 Observations on fishes associated with kelp beds in southern California. California Dept. Fish and Game Fish Bull. No. 160. 144 pp.

Ford, R.F.

1968 Marine organisms of south San Diego Bay and the ecological effects of power station cooling water. A pilot study conducted for San Diego Gas & Electric Co., San Diego. Environmental Engineering Laboratory Tech. Rept. on Contract C-188.

Ford, R.F., and R.L. Chambers.

1973 Thermal Distribution and biological studies of the South Bay Power Plant. Prepared for the San Diego Gas & Electric Co., Environmental Engineering Laboratory Tech. Rept.

Gentry, R.L.

1990 Response to northern fur seals to quarrying operations. Marine Mammal Science 6(2):151-155.

Green, Karen

2008 Personal communication with Karen Green, SAIC, regarding biological resources at Coronado Beach. December.

Hoffman, R.S.

1986 *Fishery Utilization of Eelgrass Zostera Marina Beds and Non-Vegetated Shallow Water Areas in San Diego Bay*. Administrative Report SRW-68-4. National Marine Fisheries, Southwest Region.

Holmgren, Mark

2004 Communication with Mark Holmgren, Associate Director of the Museum of Systematics and Ecology, UCSB, regarding the biology of the Western snowy plover. Email communications April/May 2004.

Imperial Beach, City of

2008 Imperial Beach Municipal Code. <http://qcode.us/codes/imperialbeach/>

Keane Biological Consulting (KBC)

1997 *Foraging Study of the California Least Tern in the Los Angeles Harbor, 1996 Breeding Season*. Final Report. Prepared for the Port of Los Angeles, Environmental Division.

- 2003 Monitoring of California least tern foraging, Port of Los Angeles Channel Deepening Project, 2003 Nesting Season, and comparison with 2001 and 2002 survey results. Port of Los Angeles harbor deepening project. Prepared for U.S. Army Corps of Engineers, Los Angeles District, under contract with Aspen Environmental Group, January.
- 2011 California Least Foraging Study with Respect to Proposed Dredging Locations. Final Draft Report. Prepared for U.S. Army Corps of Engineers, Los Angeles District. September.

Largier, J.L.

- 1995 San Diego Bay Circulation: A Study of Water in San Diego Bay for the Purpose of Assessing, Monitoring and Managing the Transport and Potential Accumulation of Pollutants and Sediment in San Diego Bay. Prepared for the California State Water Resources Control Board and the California Regional Water Quality Control Board, San Diego Region (Interagency Agreement #1-188-190-0).
- 1997 Seasonally hypersaline estuaries in Mediterranean-climate regions. *Estuarine, Coastal and Shelf Science* (submitted).

Macfarlane Archaeological Consultants

- 2004 Imperial Beach Cultural Resources Underwater Remote Sensing Survey. Prepared for Statistical Research, Inc., and US Army Corps of Engineers, Los Angeles District. Contract No. DACW09-03-D-00005, Task Order No. 3 (March 29, 2004), Offshore Imperial Beach, San Diego County, California. Report on File at Los Angeles District Office.

Michael Brandman Associates, Inc. (MBA)

- 1988 *South San Diego Bay Enhancement Plan*. Volume One/Resources Atlas on Bay History, Physical Environment and Marine Ecological Characterization. Prepared for the SDUPD and California Coastal Conservancy. March 1990.
- 1990 *South San Diego Bay Enhancement Plan*. Volume 2/Resources Atlas. Prepared for San Diego Unified Port District.

National Marine Fisheries Service (NMFS)

- 1998 *Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies*. NMFS, Habitat Conservation Division Office, SW Regional Office, EFH Federal Agency primer, November.

North, W.J., D.E. James, and L.G. Jones

1993 History of kelp beds (*Macrocystis*) in Orange and San Diego counties, California. *Hydrobiol.* 260/261:277-283. R

O'Connor, T.P. and B. Beliaeff

1995 Recent Trends in Coastal Environment Quality: Results from the Mussel Watch Project. National Oceanic and Atmospheric Administration, National Ocean Service. Silver Spring, MD.

Page, G. W., Lynne E. Stenzel, David W. Winkler, and Christopher W. Swarth.

1983 Spacing out at Mono Lake: breeding success, nest density, and predation in the snowy plover. *Auk* 100: 13-24.

Pettus, Roy

Archaeological Sensitivity Study for the Marine Cultural Resources Potential of the Proposed San Diego-Coronado Bay Bridge Seismic Retrofit Project, San Diego, California. Prepared by GEOARCH. Prepared for Caltrans, District 11, San Diego, CA.

Quast, J.C.

1971 Fish fauna of the rocky inshore zone. *Nova Hedwegia.* 32:481-507.

San Diego Association of Governments (SANDAG) and U.S. Navy

2000 Final EIR/EA for the Regional Beach Sand Project. Prepared by KEA Environmental. June.

San Diego Air Pollution Control District (SDAPCD)

2008 Facility Emissions for San Diego County. 1997 to 2007.
<http://www.sdapcd.org/toxics/FacEmiss/facilities.html>

San Diego, City of

1996 International Wastewater Treatment Plant, Baseline Ocean Monitoring Report. Metropolitan Wastewater Department, Environmental Monitoring & Technical Services Division. San Diego, CA.

2008 San Diego Municipal Code. <http://www.sandiego.gov/city-clerk/officialdocs/legisdocs/muni.shtml>

San Diego Unified Port District (SDUPD)

1980 *Final Environmental Impact Report on the Port Master Plan*. SDUPD, Environmental Management Department, San Diego, CA.

1990 *Annual Report, Fiscal Year 1989/90*. Document No. 26313. San Diego, CA.

1999 *Port of San Diego Annual Report, Fiscal Year 1997/98*.

San Diego Unified Port District (SDUPD), Naval Facilities Engineering Command, U.S. Navy

2008 San Diego Natural Resources Management Plan. Draft. June.

Science Applications International Corporation (SAIC)

2009 *Coastal Habitat Survey of Onshore and Nearshore Receiver Sites Proposed in the Coastal Regional Sediment Management Plan, San Diego, California*.

Southern California Coastal Water Research Project (SCCWRP)

1999 Spatial Characterization of Four Water Column Parameters on the Mainland Shelf of Southern California in July 1994. Pages 89-100, In: S.B. Weisberg and D. Hallock (eds.), Southern California Coastal Water Research Project Annual Report 1997-1998. Westminster, CA.

Stinson, M.L.

1984 *Biology of Sea Turtles in San Diego Bay, California, and the Northwestern Pacific Ocean*. M.S. Thesis, San Diego State University. 578 pp.

Thompson, B.C., J.A. Jackson, J. Burger, L.A. Hill, E.M. Kirsch, and J.L. Atwood.

1997 Least Tern (*Sterna antillarum*). In *The Birds of North America*, No. 290 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.

U.S. Army Corps of Engineers (USACOE), Los Angeles District

1978 *Final Environmental Impact Statement: Imperial Beach Erosion Control Project*, San Diego County, California. September.

1985 *Specifications for Shore Protection Improvement U.S. Naval Amphibious Base*, Coronado, San Diego County, California. May.

1995 *Environmental Evaluation (EE) for the Silver Strand Shoreline Protection Project*. February.

- 2003 San Diego Harbor Central Navigation Channel Deepening Feasibility Report and EIS/EIR. September.
- 2009 *Final Environmental Assessment for the San Diego Harbor Maintenance Dredging Project, San Diego County, California.* March.
- 2010 *Final Supplemental Environmental Assessment for the San Diego Harbor Maintenance Dredging Project, San Diego County, California.* August.
- 2011 *Personal communication, Joseph Viola, San Francisco District.* July.

U.S. Army Corps of Engineers (USACOE)

- 1978 Prediction and Control of Dredged Material Dispersion around Dredging and Open-Water Pipeline Discharge Operations. Synthesis of Research Results, Dredged Material Research Program, Technical Report DS-78-13. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.
- 2003 Economic Technical Report, San Diego Harbor Deepening.

U.S. Department of the Navy (U.S. Navy)

- 1992a *Draft Feasibility Study for Future NIMITZ Class Carriers at Naval Air Station, North Island, San Diego, California.* Prepared by NAVFACENGCOM, Southwest Division, San Diego, CA.
- 1992b *Draft Programmatic Environmental Impact Statement for Dredged Material Discharge Related to Navy Dredging Projects in San Diego Bay.* Prepared by NAVFACENGCOM, Southwest Division, San Diego, CA.
- 1994 *Waterbird Survey - North and Central San Diego Bay, 1993.* Prepared for Naval Air Station, North Island. Prepared by NAVFACENGCOM, Southwest Division, San Diego, CA.
- 1995 *Final Environmental Impact Statement for the Development of Facilities in San Diego/Coronado to Support the Homeporting of One NIMITZ Class Aircraft Carrier.* November 1995. Prepared by NAVFACENGCOM, Southwest Division, San Diego, CA.

U.S. Environmental Protection Agency (USEPA)

- 2000 Analysis of Commercial Marine Vessel Emissions and Fuel Consumption Data. EPA/420/R-00-002. February 2000.

U.S. Fish and Wildlife Service (USFWS)

- 1993a Determination of Threatened Status for the Pacific Coast Population of the Western

Snowy Plover. Final Rule. Federal Register, April 5.

1993b Endangered and threatened wildlife and plants. *Federal Register* 50 CFR 17.11 & 17.12. Aug. 23, 1993.

1994b Colonial sea birds and the western snowy plover nesting in South San Diego Bay, 1993. Prepared by D. Stadtlander and J. Konecny.

1999 Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover: Final Rule. Federal Register 64:68508-68544.

VRG Vantuna Research Group

2006 Fisheries Inventory and Utilization of San Diego Bay, San Diego, California for Surveys Conducted In April And July 2005. By Dan Pondella, John Froeschke and Beth Young, Moore Laboratory of Zoology, Occidental College, Los Angeles, CA.



U.S. Army Corps
of Engineers
Los Angeles District

Base Map: 2010 Microsoft Corporation
and its data suppliers (Bing Map Hybrid)



0 1 2 4
Miles

U.S. Army Corps of Engineers, 2012

Figure 1

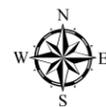
San Diego Harbor
Maintenance Dredging

Project Location



U.S. Army Corps
of Engineers
Los Angeles District

Base Map: Eagle Aerial. 2009. WSD_S_2009_sp6



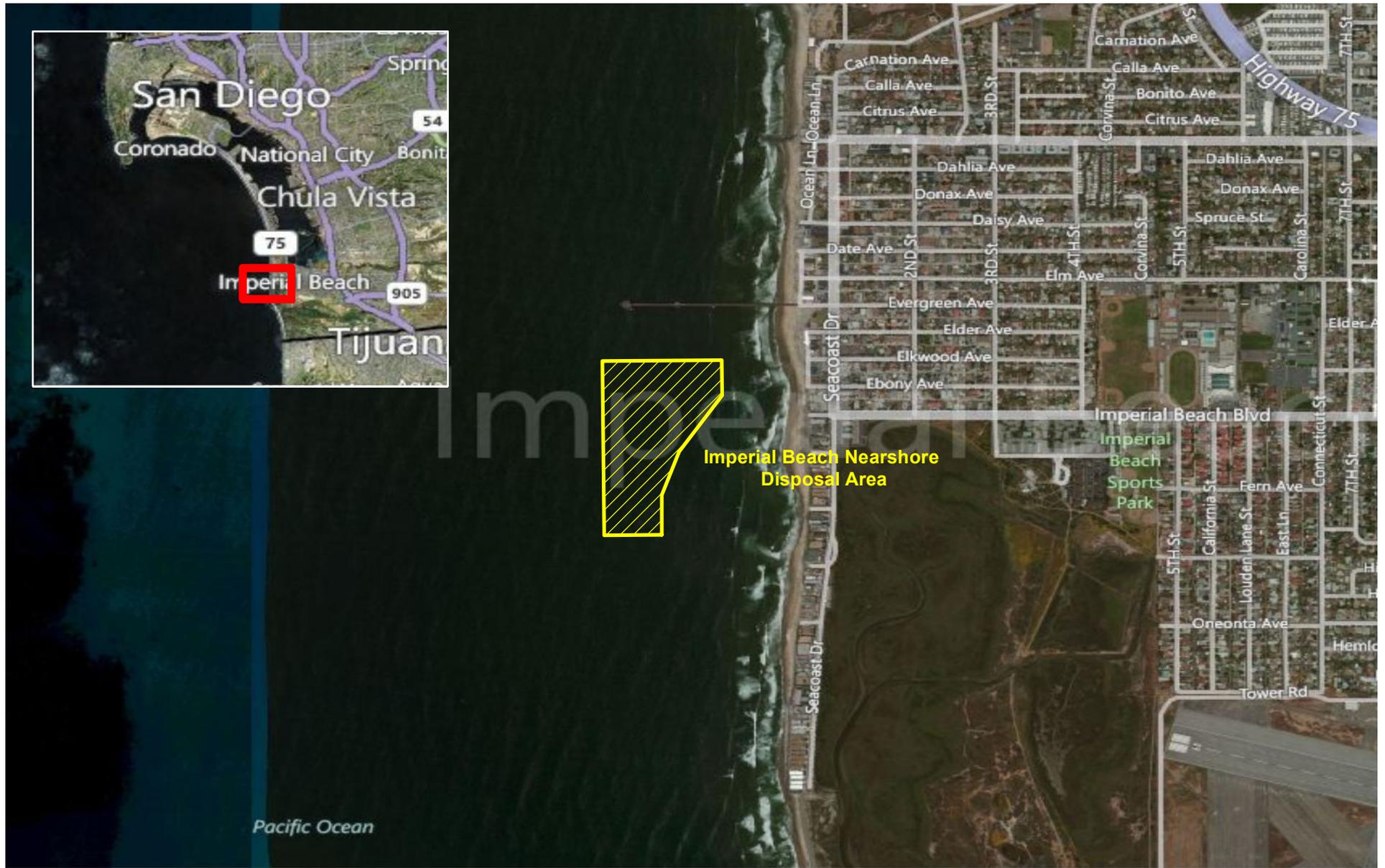
0 0.5 1 2
Miles

U.S. Army Corps of Engineers, 2012

Figure 2

San Diego Harbor
Maintenance Dredging

Dredge Areas



U.S. Army Corps
of Engineers
Los Angeles District

Base Map: 2010 Microsoft Corporation
and its data suppliers (Bing Map Hybrid)



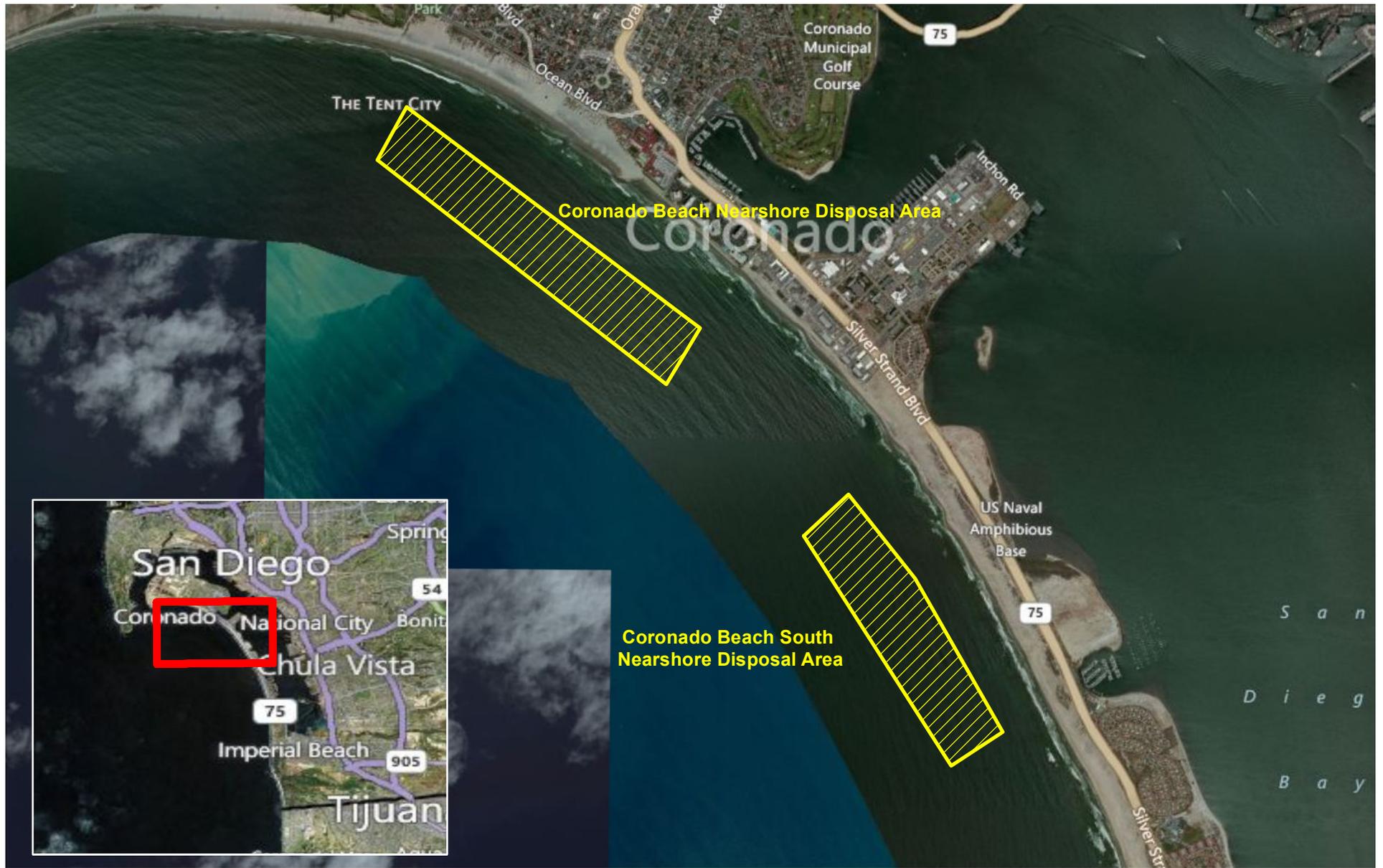
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Feet

U.S. Army Corps of Engineers, 2012

Figure 3

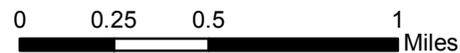
San Diego Harbor
Maintenance Dredging

Imperial Beach Nearshore
Disposal Area



U.S. Army Corps
of Engineers
Los Angeles District

Base Map: 2010 Microsoft Corporation
and its data suppliers (Bing Map Hybrid)

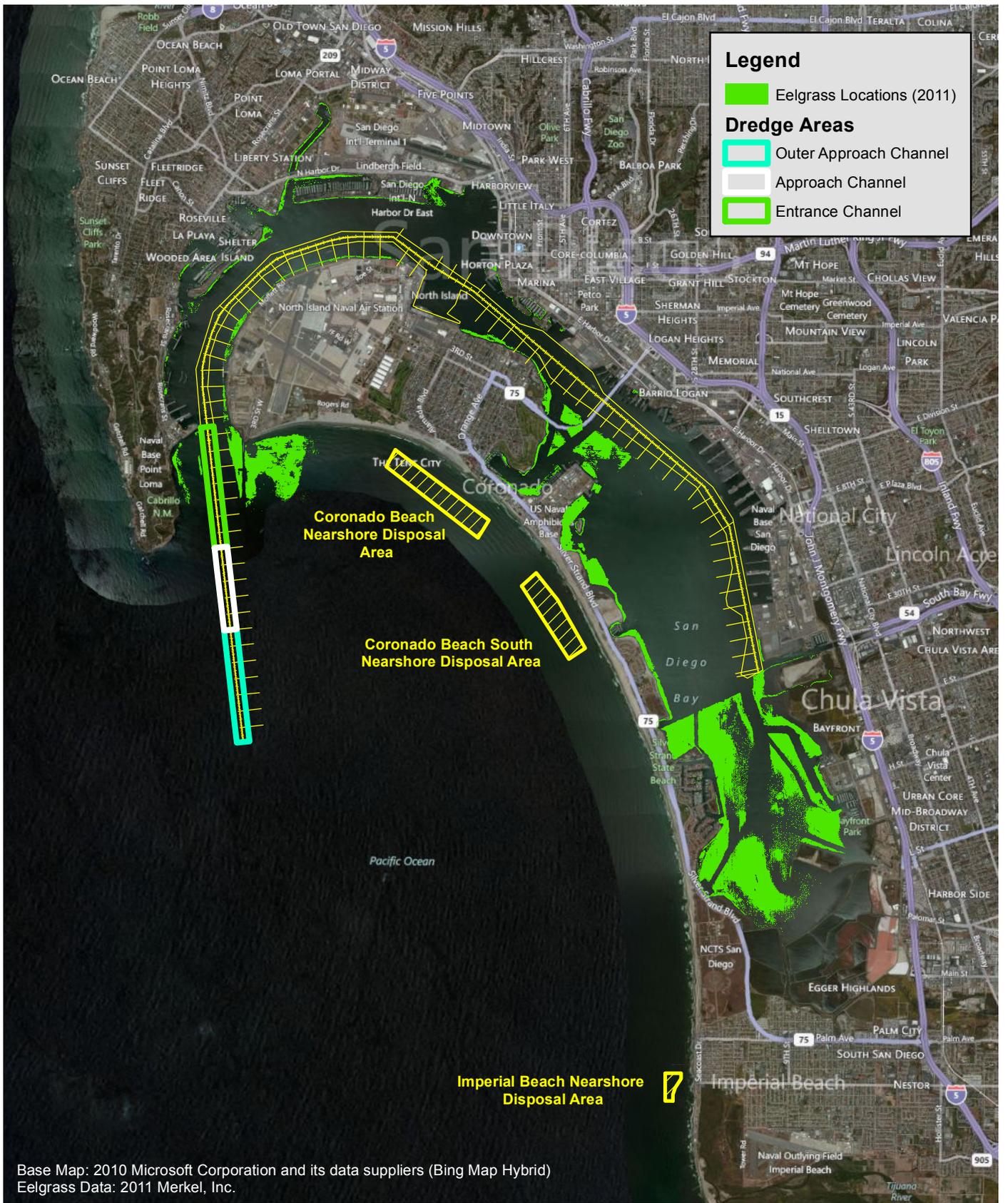


U.S. Army Corps of Engineers, 2012

Figure 4

San Diego Harbor
Maintenance Dredging

Coronado Beach Nearshore
Disposal Areas



U.S. Army Corps
 of Engineers
 Los Angeles District



0 0.5 1 2 Miles

U.S. Army Corps of Engineers, 2012

Figure 5

San Diego Harbor
 Maintenance Dredging
 Eelgrass



U.S. Army Corps
of Engineers
Los Angeles District



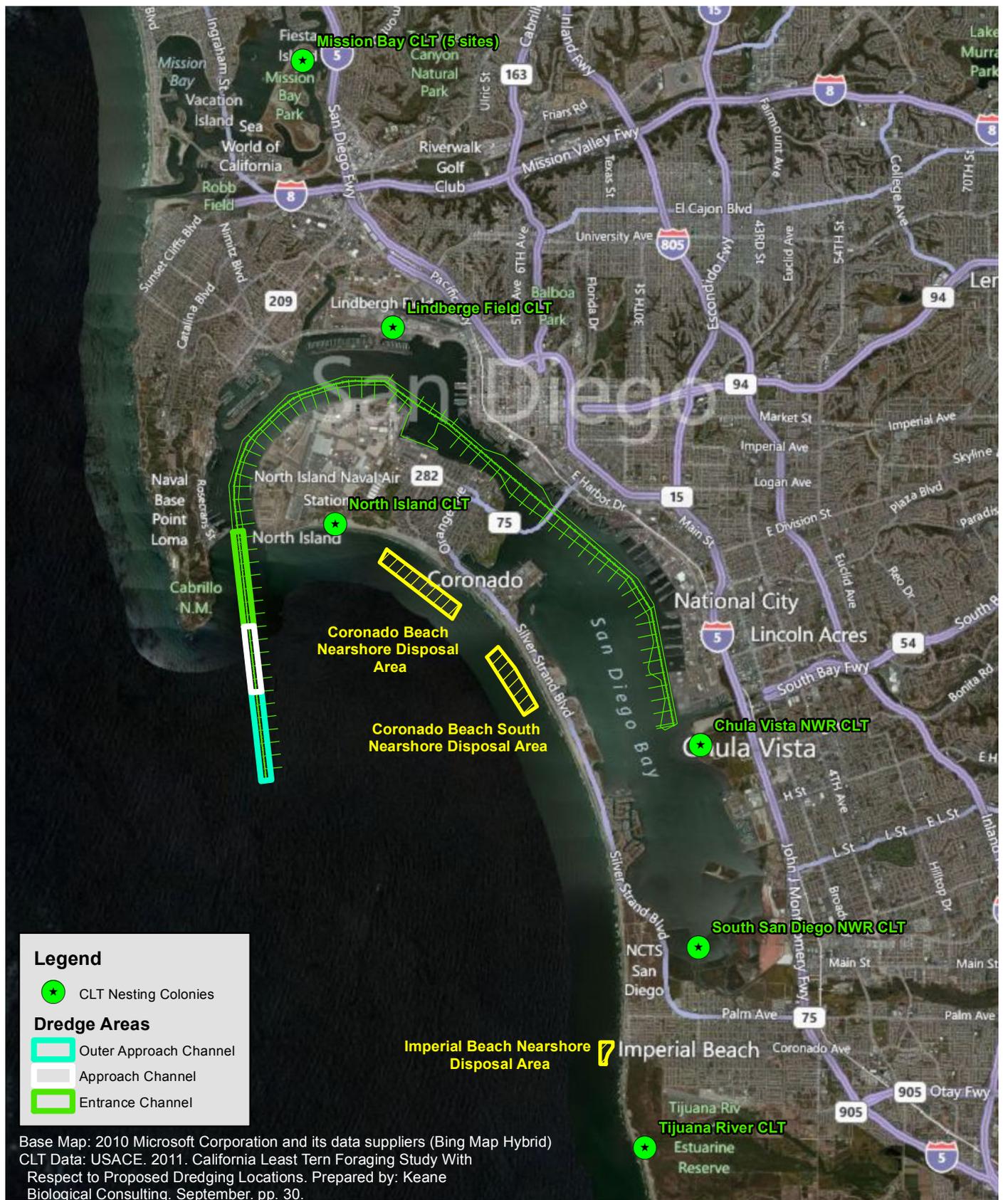
0 0.5 1 2 Miles

U.S. Army Corps of Engineers, 2012

Figure 6

San Diego Harbor
Maintenance Dredging

Kelp



U.S. Army Corps
of Engineers
Los Angeles District

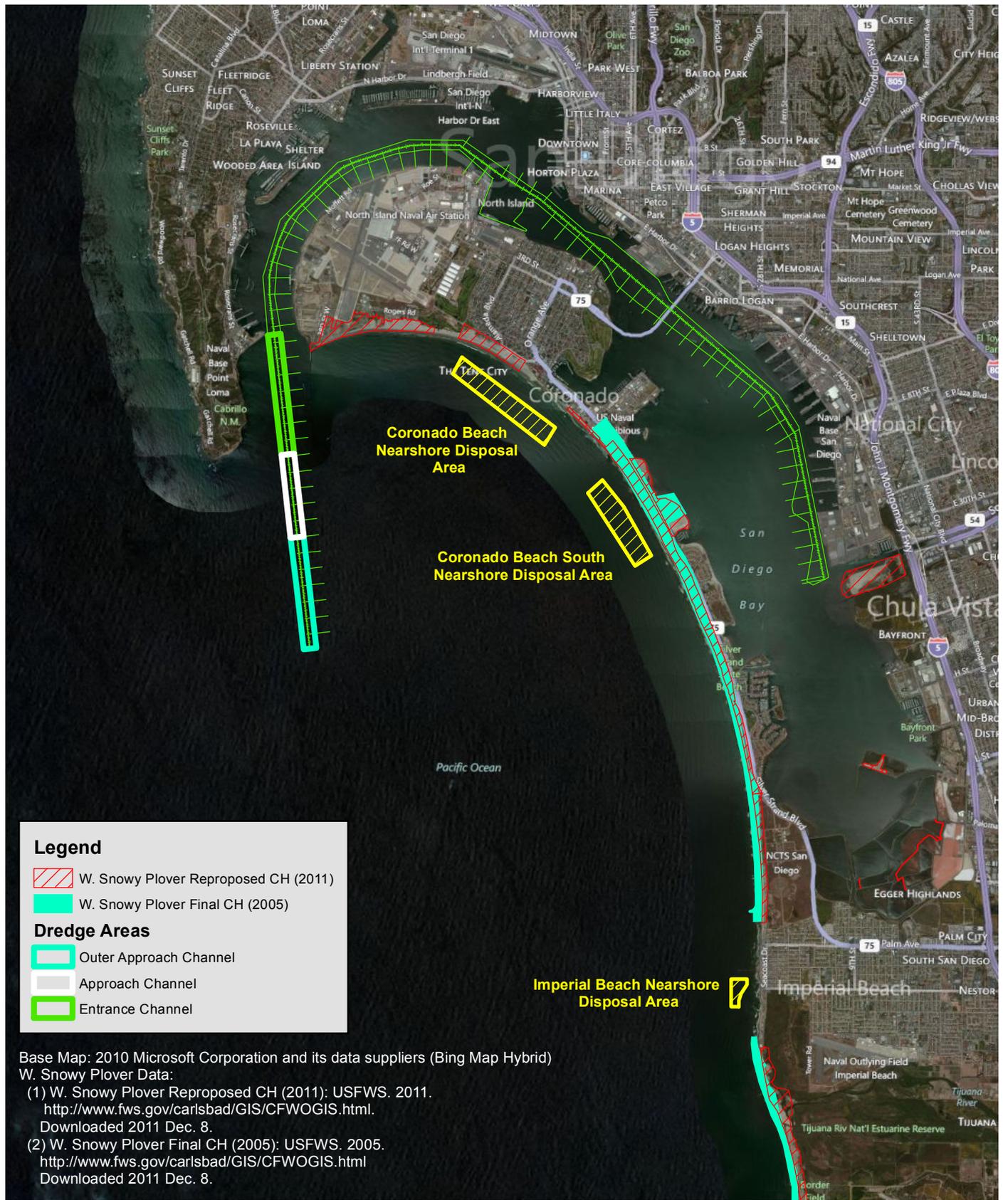


0 1 2 4 Miles

U.S. Army Corps of Engineers, 2012

Figure 7

San Diego Harbor
Maintenance Dredging
California Least Tern (CLT)
Nesting Colonies



U.S. Army Corps
of Engineers
Los Angeles District



0 0.5 1 2 Miles

U.S. Army Corps of Engineers, 2012

Figure 8
San Diego Harbor
Maintenance Dredging
Western Snow Plover
Critical Habitat

Appendix A: Mailing List

City of San Diego
Environmental Services Department
9601 Ridgehaven Court
San Diego, CA 92123

California State Parks
San Diego Coast District
4477 Pacific Highway
San Diego, CA 92110-3136

Environmental Health Coalition
401 Mile of Cars Way Suite 310
National City, CA 91950

Save Our Bay, Inc.
409 Palm Ave., Ste. 100
Imperial Beach, CA 91932
Attn: William Claycomb

LT Shauna Marshall
MDSU-1 CO 1-1 OIC
4050 Surface Navy Blvd
San Diego, CA 92136-5288

Seaport Village
849 W. Harbor Dr., Ste. D
San Diego, CA 92101

Commander
U.S. Coast Guard
2710 NORTH HARBOR DRIVE
SAN DIEGO, CA 92101
Attn: Marine Safety Office

City of Coronado
Mayor Casey Tanaka
1825 Strand Way
Coronado, CA 92118

State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

San Diego Coast Keeper
2825 Dewey Road, Suite 200
San Diego CA 92106

Clayton Phillips
Tijuana River National Estuarine Research Reserve
301 Caspian Way
Imperial Beach, CA 91932

Chris Redfern
Audubon Society
4010 Morena Blvd Suite 100
San Diego, CA 92117-4547

Rick Basinet
Coastal IPT, NAVFAC SOUTHWEST
NBSD, Bldg 291
2730 McKean Street
San Diego, CA 92136-5198

Marine Terminals Corps.
1701 Harbor Bay Pkwy, Suite 200
Alameda, CA 94502

Office of Media and Public Affairs
Health and Human Services Agency
County of San Diego
1700 Pacific Highway, Rm. 320
San Diego, CA 92101

Manager
Harbor House Restaurant
831 West Harbor Drive
San Diego, CA 92101

Manager
Marriott Hotel & Marina
333 West Harbor Dr.
San Diego, CA 92101-7700

U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, CA 92009
Attn: Jon Avery

Star & Crescent Boat
P.O. Box 120751
San Diego, CA 92112

State Water Resources Control Board
1001 I Street
Sacramento, CA 95814
ATTN: Chairman

Dick Cloward
San Diego Port Tenants Assoc.
2390 Shelter Island Dr., Ste. 210
San Diego, CA 92106-3156

Dr. Charles Lester
Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
Attn: Larry Simon

National Marine Fisheries Service
Attn: Eric Chavez
501 West Ocean Blvd., Suite 4200
Long Beach, CA 90802

Dr. Knox Mellon
State Historic Preservation Officer
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001

California Department of Fish & Game
4949 View Ridge Avenue
San Diego, CA 92123
Attn: Loni Adams

U.S. EPA
Regional Administrator
75 Hawthorne Street
San Francisco, CA 94105-3930
Attn: Allan Ota

Shelby Tucker
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101-4231

Mitchell A. Perdue, CRM
Coastal IPT, NAVFAC SOUTHWEST
NBSD, Bldg 291
2730 McKean Street
San Diego, CA 92136-5198

Sierra Club
San Diego Chapter
8304 Clairemont Mesa Blvd, #101
San Diego, CA 92111

City of Imperial Beach
825 Imperial Beach Blvd
Imperial Beach, CA 91932
Attn: Greg Wade

City of Coronado
Attn: AnnMcCaull
Community Development Department
1825 Strand Way
Coronado, CA 92118

Port of San Diego Administration
Admin Building
3165 Pacific Highway
San Diego, CA 92101-1128
Attn: Eileen Maher

Imperial Beach Branch
San Diego County
810 Imperial Beach Blvd.
Imperial Beach, CA 91932

California Department of Parks and Recreation
Office of Historic Preservation
1416 9th Street, Room 1442,
Sacramento, CA 95814
ATTN: State Officer

Coronado Public Library
640 Orange Avenue
Coronado, CA 92118

San Diego Central Library
Govt. Publications Dept.
820 "E" Street
San Diego, CA 92101

State Clearing House
1400 Tenth Street, Room 121
Sacramento, CA 95814

San Diego Air Pollution Control District
10124 Old Grove Road San Diego, CA 92131-1649
Attn: Jorge Talavera

City of Imperial Beach
825 Imperial Beach Blvd
Imperial Beach, CA 91932
Attn: Mayor Jim Janney

Commander Edan Antoine
U.S. Third Fleet
53690 Tomahawk Dr. Suite 338
San Diego, CA 92147-5004

U.S. Army Corps of Engineers
South Pacific Division, CESPD-PDC
1455 Market St, 20th Floor
San Francisco, CA 94103
ATTN: Nedenia Kennedy

California Air Resources Board
9480 Telstar Avenue, Suite 4
El Monte, CA 91731

Environmental Protection Agency,
Region IX
75 Hawthorne Street
San Francisco, CA 94105
ATTN: Allan Ota

City of San Diego
City Planning & Community Investment Community
Planning & Urban Form Divisions 202 C Street, MS 5A
San Diego, CA 92101

Mr. David Gibson, Executive Officer
California RWQCB, San Diego Region
Attn: Jody Ebsen
9174 Sky Park Court, Suite 100
San Diego, California 92123

Lisa Seneca
Coastal IPT, NAVFAC SOUTHWEST
NBSD, Bldg 291
2730 McKean Street
San Diego, CA 92136-5198

Surfrider Foundation
Marco Gonzales
P.O. Box 6010
San Clemente, CA 92674-6010

Serge Dedina, Ph.D.
Executive Director
WiLDCOAST
925 Seacoast Dr.
Imperial Beach, CA 91932

Mr. Robert Smith
U.S. Army Corps of Engineers
Regulatory Division
6010 Hidden Valley Rd., Ste 105
Carlsbad, CA 92009

Edwin Romero, Chairperson
Barona Group of the Capitan Grande
1095 Barona Road
Lakeside, California 92040

Bobby L. Barrett, Chairperson
Viejas Band of Mission Indians
PO Box 908
Alpine, California 91903

Allen E. Lawson, Chairperson
San Pasqual Band of Mission Indians
PO Box 365 Diegueno
Valley Center, California 92082

Ron Christman
Kumeyaay Cultural Historic Committee
56 Viejas Grade Road
Alpine, California 92001

Johnny Hernandez, Spokesman
Santa Ysabel Band of Diegueno Indians
PO Box 130
Santa Ysabel, California 92070

Kenneth Meza, Chairperson
Jamul Indian Village
P.O. Box 612
Jamul, California 91935

Mark Romero, Chairperson
Mesa Grande Band of Mission Indians
P.O. Box 270
Santa Ysabel, California 92070

Danny Tucker, Chairperson
Sycuan Band of the Kumeyaay Nation
5459 Sycuan Road
El Cajon, California 92021

Paul Cuero
Kumeyaay Cultural Heritage Preservation
36190 Church Road, Suite 5
Campo, California 91906

Clint Linton
P.O. Box 507
Santa Ysabel, California 92070

Carmen Lucas
Kwaaymii Laguna Band of Mission Indians
P.O. Box 775
Pine Valley, California 91962

Rebecca Osuna, Spokesperson
Inaja Band of Mission Indians
309 S. Maple Street
Escondido, California 92025

Steve Banegas, Spokesperson
Kumeyaay Cultural Repatriation Committee
1095 Barona Road
Lakeside, California 92040

Mr. Cy R. Oggins
Div. of Env. Planning & Mgmt.
CA State Lands Commission
100 Howe Ave., Suite 100-South
Sacramento, California 95825

Mark Taylor
Marine Terminal Superintendent
Maritime Division
Port of San Diego
3165 Pacific Highway
San Diego, CA 92101-1128

Appendix B: Correspondence

Correspondence from March 2009 Final EA



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

January 12, 2009

Office of the Chief
Planning Division

Mr. Peter Douglas
Executive Director
California Coastal Commission
Attn: Mr. Larry Simon
45 Fremont, Suite 2000
San Francisco, California 94105

Dear Mr. Douglas:

The U.S. Army Corps of Engineers (Corps) submits the Coastal Consistency Determination (CCD) for the proposed San Diego Harbor Maintenance Dredging Project to the California Coastal Commission (CCC) for your review and concurrence (enclosure). The proposed dredge footprint is the Federal Channel of San Diego Harbor, San Diego County, California, which is situated approximately 100 nautical miles southeast of the City of Los Angeles and 17 miles north of the United States/Mexico International Border. Discussion related to the Proposed Action's compliance with the Coastal Zone Management Act (CZMA) is provided in the enclosed CCD.

It is estimated that construction may take approximately four weeks. Dredging is scheduled to occur in March 2009. If dredging is delayed due to funding, weather, or mechanical constraints, it may occur in 2010 or 2011. Dredging is not scheduled to occur from April 1 to September 15 to avoid the breeding season for the California least tern. However, if dredging needs to extend into the beginning of April a biological monitor will be present during dredging and disposal to monitor the presence/absence of the tern in San Diego Bay. Daily monitoring reports would be provided to the USFWS for review for all days of dredging and disposal during the breeding season. If the tern arrives in San Diego Bay during dredging or disposal, activities would stop and USFWS would be consulted to provide direction on the continuance of the project. If delays occur, the Corps will notify CCC and other concerned agencies.

Beach compatible material would be discharged in the nearshore at Imperial Beach. The dredging and disposal would be scheduled to avoid California Least Tern nesting season, and minimize impacts to Western Snowy Plover.

The following are the specific proposed actions for maintenance dredging of San Diego Harbor: (1) dredging of beach compatible sediment in the Federal Channel to authorized project depths; (2) discharge of beach compatible dredged material in the nearshore at Imperial Beach; (3) and environmental monitoring.

The proposed project would serve the following purposes: (1) restore the channel that is subject to continual shoaling to design depths; (2) assure the continued navigation for marine traffic within the harbor; (3) avoid intrusion of dredging activities into the critical seasons of vulnerable species; and (4) provide beach nourishment material for downcast beaches severely eroded by littoral processes. The primary benefits realized from the proposed project would be restoration of design depths and unimpeded navigation within the Federal Channel. Secondary benefits include the replenishment of the beach with placement of dredged material in the nearshore.

Between November and December 2008, the Corps coordinated the proposed project with Mr. Larry Simon of your staff. CCC was informed of the decision to dredge only beach compatible material and that the Corps would submit the draft CCD by the first week of January 2009. The Corps requests that the CCC place the CCD for this project on the February 2009 hearing agenda to meet the critical timeframe for project construction.

A Draft Environmental Assessment (DEA) will be provided to your office during the public review period.

Your timely concurrence with this CCD would be greatly appreciated to allow dredging to commence on the desired schedule. If you have any questions regarding this project, please contact Ms. Erin Hardison, Project Biologist/Environmental Coordinator, at 213-452-3864 or at erin.l.hardison@usace.army.mil.

Thank you for your time and attention to this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Josephine R. Axt". The signature is fluid and cursive, with a large initial "J" and "R".

Josephine R. Axt, Ph.D.
U.S. Army Corps of Engineers
Chief, Planning Division

Enclosure

CALIFORNIA COASTAL COMMISSION

45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200



February 2, 2009

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Erin Hardison
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: **ND-001-09**, Negative Determination, Army Corps of Engineers Maintenance
Dredging, San Diego Harbor

Dear Ms. Axt:

The Coastal Commission staff has reviewed the above-referenced negative determination for the Army Corps' proposed maintenance dredging of approximately 330,000 cu.yds. of beach-compatible sandy material from the San Diego Federal Channel, with nearshore disposal in waters offshore Imperial Beach, just south of the Imperial Beach pier. The disposal site is a 27 acre offshore area with water depths between -15 and -28 ft. MLLW, the same site the Commission authorized and the Corps used for the 2004 Federal Channel Deepening project (consistency determination no. CD-090-02). The project is scheduled for March 2009, and the Corps has committed to completing the project before the least tern nesting season (which begins April 1). If dredging is delayed past March 30, the Corps has agreed it would only continue to dredge/dispose if no terns are present (and only if approved by the U.S. Fish and Wildlife Service). The project includes water quality monitoring, and provisions to minimize turbidity and water quality impacts at both the dredge and disposal sites.

Under the federal consistency regulations, a negative determination can be submitted for an activity "which is the same as or similar to activities for which consistency determinations have been prepared in the past." The Commission staff **agrees** with the Corps that this project is similar to previously-authorized activities, including CD-90-02. This concurrence assumes and is contingent upon the Commission staff also being notified if dredging extends past March 30. With this understanding, we therefore **concur** with your negative determination made pursuant to 15 CFR Section 930.35 of the NOAA implementing regulations. Please contact Mark Delaplaine of the Commission staff at (415) 904-5289 if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Douglas".

(for) PETER M. DOUGLAS
Executive Director

cc: San Diego Coast District Office



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

January 15, 2009

Office of the Chief
Planning Division

Mr. Jim Bartel
Field Supervisor
U.S. Fish and Wildlife Service
Attention: Ms. Lauren White
6010 Hidden Valley Road
Carlsbad, California 92009

Dear Mr. Bartel:

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C.A. §§1531 *et seq.*) the U.S. Army Corps of Engineers (USACE) requests initiation of informal consultation (50 CFR §402.14) concerning potential effects of a Federal action, San Diego Harbor Maintenance Dredging Project, on green sea turtle (*Chelonia mydas*), California least tern (*Sterna antillarum browni*); California brown pelican (*Pelecanus occidentalis californicus*) and western snowy plover (*Charadrius alexandrinus nivosus*). This Draft Environmental Assessment (DEA) addresses impacts that may result from the maintenance dredging of beach compatible material in the Federal Channel at San Diego Harbor, and its disposal in the nearshore at Imperial Beach. The California least tern and California brown pelican are endangered under Federal and State listing; the western snowy plover is a federally threatened species and special concern species for the State; the green sea turtle is listed as federally threatened.

The Draft EA describes the affected resources and evaluates the potential impacts to those resources as a result of the proposed project. The purpose of the proposed project is to dredge approximately 333,000 cubic yards of beach compatible sediment from the Federal Channel at San Diego Harbor, and to beneficially reuse the dredge material by disposing in the nearshore waters (-15 to -18 feet Mean Lower Low Water [MLLW]) at Imperial Beach. A diesel powered hopper dredge would be used to perform the maintenance dredging.

Coronado Beach was designated as a viable alternative disposal area. However, disposal at Imperial Beach is the recommended alternative as Imperial Beach is severely eroded and in great need of beach nourishment. Other alternatives considered included the No Action Alternative, onshore disposal, ocean disposal, upland disposal, and use of a clamshell dredge. However, these alternatives were not found to be feasible and were removed from further consideration.

Informal coordination occurred with Ms. Lauren White of your staff in August and September 2008, and January 2009, regarding project impacts on Federally listed endangered and

threatened species. Ms. White indicated that dredging would be acceptable if conducted outside the breeding season for the California least tern, which occurs between April 1st and September 15th. However, if dredging extended into the beginning of April, Ms. White agreed that a biological monitor could be present during dredging and disposal to monitor the presence/absence of the tern in San Diego Bay. Daily monitoring reports would be provided to the U.S. Fish and Wildlife Service (USFWS) for review for all days of dredging and disposal during the breeding season. If the tern arrives in San Diego Bay during dredging or disposal, activities would stop and USFWS would be consulted to provide direction on the continuance of the project.

The USFWS also requested water quality and turbidity monitoring during dredging and disposal activities to minimize impacts to foraging for the least tern and the brown pelican.

No impacts to western snowy plover were found, as disposal would occur in the nearshore. Disposal of sediment would not take place on the beach and would not disturb nesting snowy plovers in the vicinity of the disposal area. No impacts to green sea turtle were found, as dredging and disposal would not occur near known populations of green sea turtle.

The additional principal agencies with which this project has been coordinated include: National Marine Fisheries Service (NMFS), Environmental Protection Agency (EPA), California Coastal Commission (CCC), California Department of Fish and Game (CDFG), and California Regional Water Quality Control Board (San Diego RWQCB). Coordination with these agencies is on-going.

A Draft EA is enclosed for your information. Sections 3.3, 4.3, and 7.0 of the Draft EA provide details related to the impact analysis for the federally and state listed species, and associated mitigation measures.

Mitigation Measures:

- a. The Corps shall implement a Water Quality Monitoring Plan, and monitor turbidity at the dredge and beach disposal site. This monitoring will ensure that turbidity levels would not impact the foraging California least tern and California brown pelican.
- b. Dredging and disposal would not be performed during the months of April 1st to September 15 to avoid impacts to sensitive species. However, if dredging extended into the beginning of April a biological monitor would be present during dredging and disposal to monitor the presence/absence of the California least tern in San Diego Bay. Daily monitoring reports would be provided to the USFWS for review for all days of dredging and disposal during the breeding season. If the tern arrives in San Diego Bay during dredging or disposal, activities would stop and USFWS would be consulted to provide direction on the continuance of the project.

- c. The Corps shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife.
- d. Beach disposal will be limited to the nearshore waters at Imperial Beach to minimize impacts to nesting Western snowy plover.
- e. Only areas that contain beach compatible sediment, as determined by sediment sampling completed in October 2008 and approved by the EPA, will be dredged. Any non-compatible material will be left in place.

Any disturbances to California least tern and California brown pelican would be localized, be of very short duration, and affect few, if any individuals. Dredging activities would occur far offshore from known snowy plover habitat within the harbor. Dredge material deposited in the nearshore is expected to disperse via wave action over the course of several months to replenish the beach. No large quantities of material will be disposed of on or near snowy plover habitat. Dredging and disposal would not occur near known populations of green sea turtle. Coordination regarding the green sea turtle is on-going with the National Marine Fisheries Service.

Impacts to special status species, including California least tern, would be less than significant. Based on coordination with USFWS, and to ensure that dredging-related turbidity would not adversely affect California least tern or the California brown pelican, the aforementioned mitigation measures would be implemented. Based on this impact analysis it has been determined that the proposed project may affect, not likely to adversely affect the California least tern and California brown pelican. Dredging and disposal operations would not affect the green sea turtle and the western snowy plover.

Your timely response to our determination on the federally listed species, within 30 days to complete the Informal Section 7 Consultation, is appreciated. Your response will be included in the Final EA. Should you have any questions, please contact Ms. Erin Hardison, Project Biologist/Environmental Coordinator, at 213-452-3864 or at erin.l.hardison@usace.army.mil.

Sincerely,


Josephine R. Axt, PhD
Chief, Planning Division

Enclosure



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-SDG-09B0156-09I0408

FEB 20 2009

Dr. Josephine R. Axt
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
Los Angeles, California 90053-2325

Attention: Ms. Erin Hardison, CESPL-PD-RN

Subject: Informal Section 7 Consultation for the San Diego Harbor Maintenance Dredging Project, San Diego County, California

Dear Dr. Axt:

This is in response to your letter dated January 15, 2009, received in our office on January 16, 2009, requesting U.S. Fish and Wildlife Service (Service) concurrence with your finding that the San Diego Harbor Maintenance Dredging Project: will have no effect on the federally listed endangered western snowy plover (*Charadrius alexandrinus nivosus*, plover); and may affect, but is not likely to adversely affect, the federally listed endangered California brown pelican (*Pelecanus occidentalis californicus*, pelican) and California least tern (*Sternula antillarum browni*, tern), pursuant to the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). Our evaluation is based on information provided in your letter and the Draft Environmental Assessment for the proposed project (dated January 2009).

The proposed project involves the dredging of approximately 333,000 cubic yards of beach compatible sediment from the Federal Channel in San Diego Bay, and beneficial reuse of the dredged material by discharging it in nearshore waters (-15 to -28 feet Mean Lower Low Water) at Imperial Beach. The U.S. Army Corps of Engineers (Corps) proposes to implement the following measures to avoid and/or minimize potential impacts to federally listed species:

- a. The Corps will implement a Water Quality Monitoring Plan, and monitor turbidity at the dredge and beach discharge site. This monitoring will ensure that turbidity levels will not impact foraging of the tern and the pelican.
- b. Dredging and discharge will not be performed from April 1 to September 15 to avoid the least tern breeding season. However, if dredging and discharge is necessary after March 31, a biological monitor will be present during dredging and discharge to



monitor the presence/absence of the tern in San Diego Bay and offshore of Imperial Beach. Daily monitoring reports will be provided to the Service for review for all days of dredging and discharge after March 31. If the tern arrives in San Diego Bay or offshore of Imperial Beach before project completion, all dredging or discharge will stop and the Service will be consulted to provide direction on the continuance of the project and to determine if formal consultation is necessary.

- c. The Corps will keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife.
- d. Beach disposal will be limited to the nearshore waters at Imperial Beach to minimize impacts to the plover.
- e. Only areas that contain beach compatible sediment, as determined by sediment sampling completed in October 2008 and approved by the U.S. EPA, will be dredged. Any non-compatible material will be left in place.

Provided that the proposed measures are implemented, the Service concurs that the project will have no effect on the plover, and may affect, but is not likely to adversely affect the pelican and the tern. Therefore, we believe the interagency consultation requirements of the Act have been satisfied. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

We appreciate your coordination on this project. Should you have any questions regarding this letter, please contact Lauren White at (760) 431-9440, extension 371.

Sincerely,

A handwritten signature in black ink, appearing to read "Karen A. Goebel", with a long, sweeping horizontal flourish extending to the right.

Karen A. Goebel
Assistant Field Supervisor



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

January 13, 2009

Office of the Chief
Planning Division

Mr. John H. Robertus
Executive Officer
California Regional Water Quality Control Board
San Diego Region
Attn: Jody Ebsen
9174 Sky Park Court, Suite 100
San Diego, California 92123

Dear Mr. Robertus:

The U.S. Army Corps of Engineers (Corps) requests a Section 401 Water Quality Certification (WQC) for the proposed San Diego Harbor Maintenance Dredging Project, San Diego County, California. The Corps staff is coordinating with Ms. Jody Ebsen of your staff. A copy of the public review draft Environmental Assessment (EA) for San Diego Harbor Maintenance Dredging is enclosed for your information.

The maintenance dredging would last over a period of four weeks. The proposed maintenance dredging is scheduled for March 2009. The construction may be delayed due to funding, weather events, and mechanical constraints. It may occur during 2010 or 2011. If delays occur, the Corps will notify the San Diego Regional Water Quality Control Board (RWQCB).

Beach compatible material would be discharged in the nearshore at Imperial Beach. The dredging and disposal would be scheduled to avoid California Least Tern nesting season (April 1st to September 15th), and minimize impacts to Western Snowy Plover. However, if dredging extended into the beginning of April a biological monitor would be present during dredging and disposal to monitor the presence/absence of the tern in San Diego Bay, as per coordination with the U.S. Fish and Wildlife Service (USFWS). Daily monitoring reports would be provided to the USFWS for review for all days of dredging and disposal during the breeding season. If the tern arrives in San Diego Bay during dredging or disposal, activities would stop and USFWS would be consulted to provide direction on the continuance of the project.

The following are the specific proposed actions for maintenance dredging of San Diego Harbor: (1) dredging of beach compatible sediment in the Federal Channel to authorized project depths; (2) discharge of beach compatible dredged material in the nearshore at Imperial Beach; (3) and environmental monitoring.

A detailed project description is provided in Section 3.0 of the Draft EA, and impacts on biological resources, water quality, and mitigation measures are provided in sections 5.2, 5.4, and 7.0 respectively.

Project construction could result in temporary increases in turbidity, however impacts would be short-term. Mitigation measures would minimize impacts and include water quality monitoring during dredging and disposal.

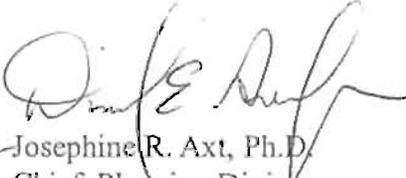
Section 404(t) of the CWA requires the Corps to comply with the State or Regional Boards' substantive and procedural requirements pertaining to the discharge of dredged or fill material including structural discharges. However, this Section does not authorize the payment of fees as a condition of compliance with these requirements. Fundamentally, as an agency of the Federal government, legal determinations preclude the Corps from paying fees, except where Congress has clearly and unambiguously waived Federal sovereignty.

This letter, and the enclosed application, satisfies the requirements of the Clean Water Act to request Section 401 WQC, or a waiver of certification, pursuant to 33 CFR 336.1(a)(1). The Corps requests that your office expedite the processing of this application.

We would appreciate issuance of Section 401 WQC latest by last week of February 2009 to meet the critical timeframe for the proposed dredging in March 2009 and avoid impacts to federally listed species. If we do not hear from your office by the end of February 2009, we will assume your office has provided a waiver for the proposed maintenance dredging in San Diego Harbor. We greatly appreciate the input provided by Ms. Jody Ebsen of your staff on this project. If you have any questions regarding the proposed project, please contact Ms. Erin Hardison, Corps' Project Environmental Coordinator, at (213) 452-3864 or at erin.l.hardison@usace.armv.mil.

Thank you for your attention to this document.

Sincerely,


Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure

San Diego Harbor Maintenance Dredging 401 Certification09C-004.txt
From: Jody Ebsen [JEbsen@waterboards.ca.gov]
Sent: Monday, March 02, 2009 10:56 AM
To: Hardison, Erin L SPL
Subject: San Diego Harbor Maintenance Dredging 401 Certification09C-004

Attachments: Jody Ebsen.vcf

This is just to verify that the 401 Certification for this project is as proposed in the 401 application received by the Regional Board on January 15, 2009. All water quality sampling and reporting should be done in accordance with the application proposal.

If you have any question please let me know.
JE

Jody Ebsen, M. Sc., P. G.
Engineering Geologist
Office (858) 636-3146
CRWQCB, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123
Fax (858) 571-6972

EMAIL ADDRESS/WEB PAGE:
e-mail: JEbsen@waterboards.ca.gov
Web: www.waterboards.ca.gov/sandiego

Following the Governor's Order the Regional Board office will be closed the 1st and 3rd Fridays of each month.



REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

February 25, 2009

Mr. Rod McInnis
National Oceanic Atmospheric Administration
National Marine Fisheries Service
Attn: Ms. Christina Fahy
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802

Dear Mr. McInnis:

Pursuant to Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C.A. §§1531 *et seq.*), the U.S. Army Corps of Engineers (Corps) requests concurrence from the National Oceanic Atmospheric Administration (NOAA) with our determination of may affect, but is not likely to adversely affect the federally threatened green sea turtle (*Chelonia mydas*) for the San Diego Harbor Maintenance Dredging Project, San Diego County, California. Our intent is to satisfy requirements of the ESA for Section 7 Consultation through the informal consultation process, as provided in 50 CFR 402.13.

The purpose of the proposed project is to perform maintenance dredging of the Federal Channel at San Diego Harbor (no more than 336,000 cubic yards of beach compatible sediment), and to beneficially reuse the dredge material by disposing in the nearshore waters (-15 to -28 feet Mean Lower Low Water [MLLW]) at Imperial Beach. A diesel powered hopper dredge would be used to perform the maintenance dredging. Focus areas for dredging include the Federal Channel from Ballast Point oceanward.

A Draft Environmental Assessment (EA) has been prepared and addresses impacts that may result from the maintenance dredging of beach compatible material in the Federal Channel at San Diego Harbor, and its discharge in the nearshore at Imperial Beach. The Draft EA describes the affected resources and evaluates the potential impacts to those resources as a result of the proposed project. A copy of the Draft EA was sent on January 28, 2009 to Mr. Eric Chavez of your office for public review. Description of the project and alternatives has been provided in Section 3.0 of the Draft EA.

Informal coordination occurred with Mr. Dan Lawson of your staff in January 2009 regarding impacts to the green sea turtle. Mr. Lawson indicated that the turtle population known to inhabit the Bay spends much of its time near the South Bay Power Plant, however, turtles are known to migrate and forage throughout the Bay. Foraging is currently expected to occur closer to the power plant during winter months. Although the dredging operations would occur during winter months and far from the South Bay Power Plant, dredging could have an affect on green sea

turtles that may migrate within the Federal Channel. Mr. Lawson further indicated that NOAA may require a biological monitor present on the dredge to monitor for presence of the sea turtle in the vicinity of the dredge and within the hopper of the dredge. If a turtle is observed, NOAA would be contacted and further coordination would occur regarding continuation of dredging. If any turtle remains are found inside the dredge, dredging would have to cease and NOAA would be contacted immediately.

Coordination occurred with Ms. Tina Fahy of your staff on February 23, 2009. Ms. Fahy stated that the Navy performed surveys near the Turning Basin, which is a possible dredge area, and that the turtle had previously been found within this area. If during dredging activities, a decision is made to dredge the Turning Basin, the Corps would coordinate with your office prior to initiating dredging within the Turning Basin and discuss any requirements to dredge the area.

Preliminarily, the Corps made a no effect determination for the green sea turtle based on original research which is outlined in the Draft EA. It is assumed the green sea turtle would not be common within the dredge footprint, and dredging activities would occur during winter months when the turtle tends to stay close to the South Bay Power Plant. Details are outlined in the Draft EA (see Sections 4.3 and 5.3). The Corps provided an overview of the dredging site, and agreed to provide a biological monitor for the green sea turtle and submit a request letter to initiate informal coordination as soon as possible. The Corps indicated it would provide an updated project description and map of dredge areas, as well as a letter requesting informal consultation by February 25, 2009, which has been done. The Corps requests that NOAA provide concurrence with our determination within one week, by March 4, 2009, to meet the critical schedule to initiate maintenance dredging by the beginning of the second week of March 2009 to avoid impacts to the Federally listed California least tern. Ms. Fahy said that if the Corps provided this information to her, she would review it and respond to us as soon as possible.

Coordination further occurred with Mr. Lawson on February 25, 2009 regarding the details of monitoring requirements. He indicated that, given the 24-hour operation of the dredge, nighttime monitoring may not be practical. He indicated that monitoring could occur during the day and that the hopper of the dredge should be checked consistently for the presence of turtles. When asked whether monitoring requirements for the approach and entrance channel would be different than for the Turning Basin, he indicated that there were no set boundary limits in the Bay in terms of monitoring. Mr. Lawson requested that a draft copy of this letter be sent to him and Ms. Fahy, in order to begin drafting a response. He also requested a figure outlining the focus dredge areas and more information on the dredge and its operation. Mr. Lawson indicated that NOAA would try to provide a response to the Corps by March 4, 2009, so that dredging could commence on-schedule.

The Corps initiated coordination with Mr. Eric Chavez of your office regarding Essential Fish Habitat (EFH) and Caulerpa in December 2008. Coordination with Ms. Tina Fahy and Mr. Dan Lawson was initiated regarding ESA and green sea turtle in January 2009. In addition to

coordination with your agency, the Corps has coordinated the proposed project with resource agencies including: Environmental Protection Agency (EPA), California Coastal Commission (CCC), California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), and California Regional Water Quality Control Board (San Diego RWQCB). Coordination with these agencies is on-going (see Section 1.0 of the Draft EA for details).

The Final EA would provide updated information, which would include the Corps' determination on green sea turtle, and further coordination with NOAA. The Final EA would also include minimization/mitigation measures regarding the green sea turtle. Sections 3.3, 4.3, and 7.0 of the Draft EA provide details related to the preliminary impact analysis for the federally listed green sea turtle. The following minimization measures would be included in the Final EA to minimize impacts to the green sea turtle.

Minimization Measures:

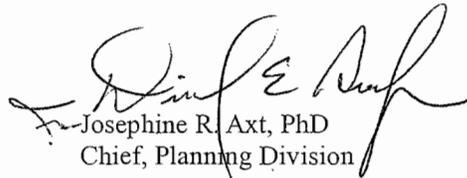
- a. The Corps shall have a qualified biological monitor present on the dredge to monitor for the presence of the green sea turtle in the vicinity of the dredge and within the hopper. If a green sea turtle is observed near the dredge, NOAA will be contacted and further coordination would occur regarding dredging activities. If any turtle remains are discovered within the hopper, dredging activity will cease and NOAA will be contacted immediately.
- b. If a decision is made to dredge the Turning Basin, NOAA would be notified to discuss requirements to dredge this area.
- c. The Corps shall implement a Water Quality Monitoring Plan, and monitor turbidity at the dredge and nearshore discharge site
- d. The Corps shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife.
- e. Only areas that contain beach compatible sediment, as determined by sediment sampling completed in October 2008 and approved by the EPA, will be dredged. Any non-compatible material will be left in place.

Dredging and discharge would occur far from known populations of green sea turtle and it would occur during winter months, when the turtle is currently known to stay near the South Bay Power Plant.

Based on coordination with NOAA, and to ensure that dredging operations would not adversely affect green sea turtle, the aforementioned minimization measures would be implemented. Based on this impact analysis it has been determined that the proposed project may affect, but is not likely to adversely affect the green sea turtle.

Your timely response to our determination on the green sea turtle, by March 4, 2009 to complete the Informal Section 7 Consultation, is appreciated. Should you have any questions, please contact Ms. Erin Hardison, Project Biologist/Environmental Coordinator, at 213-452-3864 or at erin.l.hardison@usace.army.mil.

Sincerely,



Josephine R. Axt, PhD
Chief, Planning Division



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

In response, refer to:
2009/00685:DDL

MAR 4 2009

Josephine Axt
Chief, Planning Division
Department of the Army
Los Angeles District Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

Dear Ms. Axt:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the U.S. Army Corps of Engineers (Corps) February 25, 2009, letter initiating informal consultation on dredging activities, termed the San Diego Harbor Maintenance Dredging Project, planned for the Federal Channel in San Diego Bay, California. NMFS has also reviewed the supporting background information provided by the Corps, including a copy of the Draft Environmental Assessment (DEA), sent to our office on January 28, 2009, and updated copies of the proposed dredging footprint for this project, sent on February 25, 2009. NMFS offers the following comments pursuant to section 7 of the Endangered Species Act (ESA).

Proposed Project

The proposed project would involve maintenance dredging of beach compatible sediment along the Federal Channel of San Diego Harbor to restore design depths and assure safe navigation of the channel by deep draft vessels using the harbor. Shoaling has occurred in the Approach/Entrance Channel, as a result of the long shore transport of sand from the ocean, and in other areas from propeller wash from passing ships. The original proposed project, as described in the DEA, included the removal of up to 336,000 cubic yards of material and a dredge footprint of approximately 1,534 acres that extended approximately 13 miles from the approach channel of the bay to Sweetwater Channel. However, during pre-consultation coordination with Corps staff, NMFS was informed that the project area had been modified and now includes only the Approach/Entrance Channel, seaward of Ballast Point, and potentially the Aircraft Carrier Turning Basin (areas 1A, 1B, 2, and 8 in Table 1 of the DEA), with a total sediment removal of up to 309,600 cubic yards.

Based on the modified project description, the material will be dredged to depths of -55, -47, and -49 feet mean lower low water (MLLW) in the Approach Channel, Entrance Channel, and Aircraft Carrier Turning Basin, respectively. The beach compatible material would be used for beach nourishment and would be disposed of in the nearshore waters at Imperial Beach, located



approximately 12 miles south of San Diego, at depths of -15 to -28 feet MLLW. The Corps estimates the dredging activities will take approximately 4 weeks to complete and will begin in early March, 2009.

Endangered Species Act Consultation

Green turtles (*Chelonia mydas*) are the only species listed under the ESA and under NMFS' jurisdiction that may be affected by this project. South San Diego Bay serves as important habitat for a resident population of approximately 50-60 juvenile and adult green turtles in this area.

In the February 25, 2009, letter initiating Section 7 consultation with NMFS on this proposed action, the Corps determined that the action may affect, but was not likely to adversely affect, green sea turtles. The Corps conclusion is based on information provided to the Corps during informal coordination and other background information that was provided by NMFS staff.

Scientists believe that San Diego Bay may be one of the northern-most foraging areas for green turtles, with the shallow inlet providing valuable food resources such as marine algae and seagrass. While some of the San Diego Bay green turtles are year-round residents, others migrate through central and north San Diego Bay in order to reach their southern breeding grounds, located in the southern state of Michoacan, Mexico, and at the Revillagigedos Islands, offshore central Mexico. Since the early 1960s, sea turtles have been sighted aggregating in the vicinity of the South Bay Power Plant, where warm water effluent is discharged throughout the year. During the warm summer months, the turtles generally move out of the effluent channel and into the Bay, especially when temperatures within the channel exceed 90°F. With incursions of warm equatorial currents (e.g., during El Niño events), more turtles have been found within the Bay.

Green turtles are also attracted to the high concentrations of eelgrass in San Diego Bay, and the presence of this important food item likely influences sea turtle activity patterns within the Bay. Evidence from telemetry studies show that they generally move back and forth between eelgrass beds and the warm effluent channel, with little time spent in between. Surveys show that the sea turtles generally foraged within 2 kilometers of the effluent channel. Because scientists have generally limited their turtle tracking studies to the south Bay, however, less is known of sea turtle movement within the central and northern areas of the Bay, including the importance of eelgrass beds to turtles in this area. Recent information produced from monitoring during construction activities and a research project designed to track green turtle movements throughout the Bay have indicated some green turtle activity in the northern reaches of the Bay during the winter months, including the Turning Basin. It is also been discovered through satellite tracking telemetry that individuals which are heading back to nesting beach sites in Mexico typically leave the Bay in late March and April (Jeff Seminoff, SWFSC, personal communication, February 24, 2009).

Potential impacts to any green turtles in the area from the project arise from the use of a hopper dredge to complete this project. Unlike other types of dredging, which are relatively loud and typically make slower progress, hopper dredges are relatively quiet and can progress fairly

quickly on the bottom. Consequently, hopper dredges may be able to overtake sea turtles that may be resting on the bottom without alerting them to its presence in time to avoid the dredge. Once a turtle become entrained inside the dredge head and intake pipe, serious injury and mortality through crushing or drowning is very likely. Numerous interactions between hopper dredges and sea turtles have been recorded along the Southeast Coast of the U.S., and Corps dredging activities in that region are managed under Regional Biological Opinions that acknowledge the likelihood that some sea turtles will be taken annually through injury and/or mortality. A number of additional measures designed to minimize sea turtle takes are included (See USACOE Hopper Dredge Regional Biological Opinions dated 1997 and 2003 for more information).

In assessing the risk of this project, NMFS considers the location of potential dredging activities in relation to the probability that green turtles may be found in the vicinity. If the focus area of the dredging remains seaward of Ballast Point, it is not likely that the hopper dredge will encounter any sea turtles, with the possible exception of a turtle in transit out of the bay. In that instance, it is reasonable to assume that transiting turtles are more apt to be swimming in the water column and not along the bottom of the Federal Channel, and therefore, are not likely to be taken up in the hopper dredge head. Operation of the dredge in a manner such that it does not begin functioning until the dredge is on the bottom should eliminate the potential of taking in a turtle that would be transiting off bottom.

In the consultation initiation letter, the Corps indicated they would have a qualified biological monitor present on the dredge to look for green sea turtle activity in the vicinity of the dredge and within the hopper. NMFS appreciates the willingness of the Corps to implement this measure and welcomes the Corps to do so. However, at this time, NMFS does not believe that full-time monitoring on-site is necessary to avoid adversely affecting green turtles. The chance of encountering a turtle in the area heading out of the Bay is sufficiently low and discountable in that location. NMFS believes regular inspection of the hopper for the presence of turtle parts by Corps personnel is appropriate. In the unlikely event that a sea turtle is injured or killed as a result of the project, NMFS recommends that the Corps immediately cease operations and contact our regional stranding coordinator, Mr. Joe Cordaro, at (562) 980-4017. This event would also trigger initiation of a formal consultation under section 7(a)(2) of the ESA.

If dredging activities were to occur in the Turning Basin area, the risk of encountering a turtle foraging or resting on the bottom is greater due to the fact that turtles have been documented in the area. However, the proposed timing of the project is still early enough in the year that San Diego Bay is relatively cool and we would expect that most all of the turtles would be favoring the warmer waters in the southern part of the Bay. In the consultation initiation letter, the Corps indicated they would notify NMFS if they made a decision to dredge in the Turning Basin. If that decision is made, NMFS will work with the Corps to determine if additional monitoring or other requirements are necessary.

Based on the all of the above, NMFS concurs with the Corps' determination that the proposed action may affect, but is not likely to adversely affect, green sea turtles.

Additional Comments

Up until this point, the Southwest Regional Office has not been aware of other hopper dredging activities in San Diego Bay or other areas where sea turtles may be found along the coast of California. We would be very interested to know if additional plans for projects involving hopper dredges in this area exist, and would welcome an opportunity to learn more about this type of dredging activity and work with the Corps to ensure that no ESA-listed species are adversely affected.

Thank you for consulting with NMFS and consideration of our comments. If you have any questions pursuant to this letter or other ESA issues, please contact Dan Lawson at (562) 980-3209 or Dan.Lawson@noaa.gov and Christina Fahy at (562) 980-4023 or Christina.Fahy@noaa.gov, respectively.

Sincerely,



Rodney R. McInnis
Regional Administrator

cc: Erin Hardison, United States Army Corps of Engineers
Dr. Jeff Seminoff, Southwest Fisheries Science Center

Correspondence from August 2010 Final SEA



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

June 1, 2010

Office of the Chief
Planning Division

Mr. Peter Douglas
Executive Director
California Coastal Commission
Attn: Mr. Larry Simon
45 Fremont, Suite 2000
San Francisco, California 94105

Dear Mr. Douglas:

The U.S. Army Corps of Engineers (Corps) is submitting a Negative Determination (ND) for the San Diego Harbor Maintenance Dredging Project to the California Coastal Commission (CCC) for your consideration. The Final Environmental Assessment (EA) for the San Diego Harbor Maintenance Dredging Project was sent to your office in March 2009, and it indicated that project activities would take place in March 2009. The Final EA outlined that Imperial Beach would be used for discharge of beach compatible dredged material, and that Coronado Beach was a viable alternative. The Corps submitted a CCD in January 2009, and as per coordination with Mr. Larry Simon, the activities met the criteria for issuance of a ND. The Corps received concurrence with a Negative Determination (ND-001-09 dated February 2, 2009; attached).

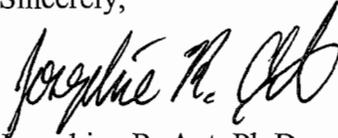
Dredging for the proposed project was postponed in 2009 because delays occurred obtaining necessary air quality permits for the dredge. Dredging is currently scheduled for Fall 2010/Spring 2011. The Corps has coordinated changes to the project description from the March 2009 Final EA with Mr. Larry Simon of your staff in April and May 2010. As per coordination with Mr. Simon, the enclosed ND documents changes to the proposed project, which include changes to the dredging duration and equipment.

The Draft Supplemental Environmental Assessment (SEA), which provides full details related to the new project description, is enclosed for your information.

Your concurrence on this Statement of Negative Determination is appreciated. If you have any questions, please contact Ms. Erin Hardison, Project Environmental Coordinator, at 213-452-3864 or erin.l.hardison@usace.army.mil.

Thank you for your consideration in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Josephine R. Axt". The signature is fluid and cursive, with the first name being the most prominent.

Josephine R. Axt, Ph.D.
U.S. Army Corps of Engineers
Chief, Planning Division

Enclosures

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885



June 24, 2010

Josephine R. Axt, Ph.D.
Chief, Planning Division
Los Angeles District
U.S. Army Corps of Engineers
ATTN: Erin Hardison
P.O. Box 532711
Los Angeles, CA 90053-2325

Subject: Negative Determination ND-030-10 (San Diego Harbor Maintenance Dredging, San Diego Co.)

Dear Dr. Axt:

The Coastal Commission staff has reviewed the above-referenced negative determination. The Corps of Engineers proposes to maintenance dredge approximately 300,000 cubic yards of beach-compatible sandy material from the federal approach and entrance channels in San Diego Harbor, with nearshore disposal in waters offshore of Imperial Beach. The disposal site is the same site the Commission authorized and the Corps used for the 2004 Federal Channel Deepening project (consistency determination CD-090-02). The project is scheduled to occur between September 15, 2010, and March 31, 2011, and will be completed before the least tern nesting season (which begins April 1). If dredging is delayed past March 31, the Corps has agreed it would only continue to dredge/dispose if no least terns are present (and only if approved by the U.S. Fish and Wildlife Service). The project includes water quality monitoring, and provisions to minimize turbidity and water quality impacts at the dredge and disposal sites. (The Executive Director previously concurred with negative determination ND-001-09 for this project, but when the Corps was unable to obtain the required air quality permits for the dredging operation, the proposed spring 2009 project was postponed.)

Under the federal consistency regulations, a negative determination can be submitted for an activity "which is the same as or similar to activities for which consistency determinations have been prepared in the past." The Commission staff **agrees** with the Corps that this project is similar to previously-authorized activities, including CD-90-02 and ND-001-09. This concurrence assumes and is contingent upon the Commission staff also being notified if dredging extends past March 31, 2011. With this understanding, we **concur** with your negative determination made pursuant to 15 CFR Section 930.35 of the NOAA implementing regulations. Please contact Larry Simon of the Commission staff at (415) 904-5288 should you have any questions regarding this matter.

Sincerely

A handwritten signature in black ink, appearing to read "Mark Douglas". The signature is fluid and cursive, with a prominent loop at the end of the last name.

(for) PETER M. DOUGLAS
Executive Director

cc: CCC – San Diego Coast District
California Department of Water Resources
Governor's Washington, D.C., Office



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

June 1, 2010

Office of the Chief
Planning Division

Mr. David Gibson
Executive Officer
California Regional Water Quality Control Board
San Diego Region
Attn: Jody Ebsen
9174 Sky Park Court, Suite 100
San Diego, California 92123

Dear Mr. Gibson:

The U.S. Army Corps of Engineers (Corps) requests a Section 401 Water Quality Certification (WQC) for the proposed San Diego Harbor Maintenance Dredging Project, San Diego County, California to accommodate changes to the proposed project since the March 2009 Final EA. A copy of the public review draft Supplemental Environmental Assessment (SEA) for San Diego Harbor Maintenance Dredging is enclosed for your information.

The Corps coordinated with Ms. Jody Ebsen of your staff during preparation of the March 2009 Final EA. At that time a request for a WQC was submitted on January 13, 2009. On March 2, 2009, Ms. Ebsen informed the Corps via e-mail that water quality sampling and analysis was required, with the results of monitoring submitted to the Regional Water Quality Control Board (San Diego Region) (RWQCB) as identified in the Section 401 WQC request letter and application. A formal Section 401 WQC was not issued. By following the environmental commitments identified in the SEA, impacts to water quality would be minimized.

Dredging for the proposed project was scheduled for March 2009, but was delayed due to delays in obtaining air quality permits. Dredging is currently scheduled for Fall 2010/Spring 2011. The Draft SEA describes changes to the project description in full detail.

The current project includes dredging of approximately 300,000 cubic yards of beach compatible material from the approach and entrance channels in San Diego Harbor. Sediment would be dredged using a hopper dredge or clamshell dredge over a maximum duration of approximately 100 days. All material would be discharged in the nearshore at Imperial Beach.

Other aspects of the project discussed in the Final EA will remain the same, including the dredging of beach compatible material only, the discharge location, and environmental commitments. Impacts to Imperial Beach were discussed in the Final EA and were found to be not significant.

The following are the specific proposed actions for maintenance dredging of San Diego Harbor: (1) dredging of beach compatible sediment in the Federal Channel to authorized project depths; (2) discharge of beach compatible dredged material in the nearshore at Imperial Beach; (3) and environmental monitoring.

A detailed project description is provided in Section 2.0 of the Draft SEA, and impacts to water quality and environmental commitments are provided in sections 4.4 and 6.0, respectively.

Project construction could result in temporary increases in turbidity, however impacts would be short-term. Environmental commitments would minimize impacts and include water quality monitoring during dredging and disposal. Dredging and disposal would be scheduled to avoid California Least Tern nesting season (April 1st to September 15th), and minimize impacts to Western Snowy Plover.

Section 404(t) of the CWA requires the Corps to comply with the State or Regional Boards' substantive and procedural requirements pertaining to the discharge of dredged or fill material including structural discharges. However, this Section does not authorize the payment of fees as a condition of compliance with these requirements. Fundamentally, as an agency of the Federal government, legal determinations preclude the Corps from paying fees, except where Congress has clearly and unambiguously waived Federal sovereignty.

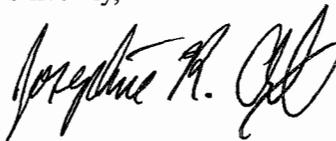
This letter, and the enclosed application, satisfies the requirements of the Clean Water Act to request Section 401 WQC, or a waiver of certification, pursuant to 33 CFR 336.1(a)(1). The Corps requests that your office expedite the processing of this application.

We would appreciate issuance of the Section 401 WQC by August 15, 2010, at the latest, to meet the critical timeframe for the proposed dredging after September 15, 2010 and avoid impacts to federally listed species. If we do not hear from your office within 60-days of our request letter, we will follow conditions identified in the Final EA and SEA and the Section 404(b)(1) analysis to minimize impacts to waters of the U.S. and comply with the Clean Water Act. At that time, the Corps will assume that your office has determined not to issue a Section 401 WQC for the proposed maintenance dredging in San Diego Harbor.

We greatly appreciate the input provided by Ms. Jody Ebsen of your staff on this project and the expedited response to our request. If you have any questions regarding the proposed project, please contact Ms. Erin Hardison, Corps' Project Environmental Coordinator, at (213) 452-3864 or at erin.l.hardison@usace.army.mil.

Thank you for your attention to this document.

Sincerely,



Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure

San Diego Harbor Maintenance Dredging 401 Certification09C-004.txt
From: Jody Ebsen [JEbsen@waterboards.ca.gov]
Sent: Monday, March 02, 2009 10:56 AM
To: Hardison, Erin L SPL
Subject: San Diego Harbor Maintenance Dredging 401 Certification09C-004

Attachments: Jody Ebsen.vcf

This is just to verify that the 401 Certification for this project is as proposed in the 401 application received by the Regional Board on January 15, 2009. All water quality sampling and reporting should be done in accordance with the application proposal.

If you have any question please let me know.
JE

Jody Ebsen, M. Sc., P. G.
Engineering Geologist
Office (858) 636-3146
CRWQCB, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123
Fax (858) 571-6972

EMAIL ADDRESS/WEB PAGE:
e-mail: JEbsen@waterboards.ca.gov
Web: www.waterboards.ca.gov/sandiego

Following the Governor's Order the Regional Board office will be closed the 1st and 3rd Fridays of each month.

Correspondence for the December 2011 Draft SEA



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

December 15, 2011

Office of the Chief
Planning Division

Dr. Charles Lester
Executive Director
California Coastal Commission
Attention: Mr. Larry Simon
45 Fremont, Suite 2000
San Francisco, California 94105

Dear Dr. Lester:

The U.S. Army Corps of Engineers is submitting a Negative Determination (ND) for the San Diego Harbor Maintenance Dredging Project to the California Coastal Commission (CCC) for your consideration. A Final Environmental Assessment (EA) for the San Diego Harbor Maintenance Dredging Project was sent to your office in March 2009. It was indicated in the Final EA that project activities would take place in March 2009. The Final EA outlined that Imperial Beach would be used for discharge of beach compatible dredged material, and that Coronado Beach was a viable alternative. The Corps submitted a CCD in January 2009, and received concurrence with Negative Determination ND-001-09 dated February 2, 2009.

Dredging for the proposed project was delayed due to delays in obtaining air quality permits, and was rescheduled for Fall 2010/Spring 2011, as documented in a Final Supplemental Environmental Assessment (SEA) (August 2010). That SEA documented changes to the proposed dredging since the March 2009 EA, including dates of dredging, the dredging of the approach and entrance channels only, and inclusion of additional dredging equipment. However, dredging was again postponed due to funding constraints.

Dredging has once again been rescheduled for 2012, and the project is documented in the enclosed Draft SEA (December 2011). Similar to previous proposals, dredging would occur in the approach and entrance channels, and disposal would occur at Imperial Beach or Coronado Beach. The project would also remove a sunken barge from the approach channel, in order to dredge that area. The Corps of Engineers has coordinated minor changes to the project description that occurred subsequent to completion of the March 2009 and August 2010 Final SEAs with Mr. Larry Simon of your staff. As requested by Mr. Simon, this letter serves as a Statement of Negative Determination documenting the currently proposed project.

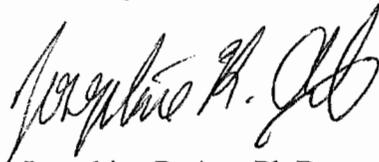
The Draft SEA, which describes the project description and minor proposed modifications in full detail, is enclosed. The March 2009 Final EA and August 2010 Final SEA are provided with the December 2011 Draft SEA on CD.

The Draft SEA, which describes the project description and minor proposed modifications in full detail, is enclosed. The March 2009 Final EA and August 2010 Final SEA are provided with the December 2011 Draft SEA on CD.

Your concurrence on this Statement of Negative Determination by January 15, 2011 is appreciated. If you have any questions, please contact Ms. Erin Jones, Project Environmental Coordinator, at 213-452-3864 or erin.l.jones@usace.army.mil.

Thank you for your consideration in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Josephine R. Axt". The signature is fluid and cursive, with the first name being the most prominent.

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
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VOICE (415) 904-5200
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TDD (415) 597-5885



April 10, 2012

Josephine R. Axt, Ph.D.
Chief, Planning Division
Los Angeles District
U.S. Army Corps of Engineers
ATTN: Erin Jones
P.O. Box 532711
Los Angeles, CA 90053-2325

Subject: Negative Determination ND-060-11 (San Diego Harbor Maintenance Dredging Project, San Diego Co.)

Dear Dr. Axt:

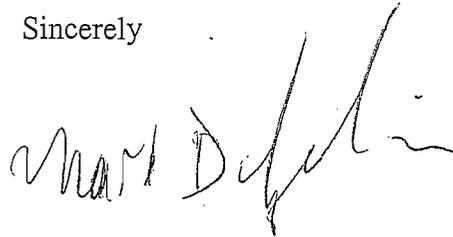
The Coastal Commission staff has reviewed the above-referenced negative determination. The Corps of Engineers proposes to maintenance dredge approximately 550,000 cubic yards of beach-compatible sandy material from the federal approach and entrance channels in San Diego Harbor, with nearshore disposal in waters -15 to -28 feet mean lower low water offshore of Imperial Beach or Coronado Beach. The Imperial Beach disposal site is the same site the Commission authorized and the Corps used for the 2004 Federal Channel Deepening project (consistency determination CD-090-02). The Coronado Beach disposal site will serve as an alternate disposal site. The project is scheduled to occur for a maximum of 100 days between August 1, 2012, and April 1, 2013.

While the project is scheduled to start prior to the September 15 end of the endangered California least tern nesting season, the U.S. Fish and Wildlife Service concluded that the proposed project is not likely to adversely affect the least tern. The Service noted that the 2012 chick-rearing period will likely have ended by early August, turbidity in the project area will be limited due to the sandy nature of the dredged sediments, and the majority of least tern foraging occurs outside of the federal channels to be dredged. The project includes water quality monitoring, and provisions to minimize turbidity and water quality impacts at the dredge and disposal sites.

The Executive Director previously concurred with negative determinations ND-030-10 and ND-001-09 for this maintenance dredging and disposal project, but when the Corps was unable to obtain the required air quality permits and/or secure the federal funding for the dredging operation, the proposed project was twice postponed. As noted above, the Commission also concurred with CD-090-02 for a similar maintenance dredging project in the San Diego Harbor federal approach and entrance channels. Under the federal consistency regulations, a negative determination can be submitted for an activity "which is the same as or similar to activities for

which consistency determinations have been prepared in the past." The Commission staff **agrees** with the Corps that this project is similar to previously-authorized activities, including CD-90-02, ND-001-09, and ND-030-10. We therefore **concur** with your negative determination made pursuant to 15 CFR Section 930.35 of the NOAA implementing regulations. Please contact Larry Simon of the Commission staff at (415) 904-5288 should you have any questions regarding this matter.

Sincerely



(for)

CHARLES LESTER
Executive Director

cc: CCC – San Diego Coast District
USFWS – Carlsbad Office

Jones, Erin L SPL

From: Jones, Erin L SPL
Sent: Monday, May 14, 2012 10:15 AM
To: 'Jon_Avery@fws.gov'
Cc: Sandy_Vissman@fws.gov; Lovan, Hayley J SPL; Fulton, Raina SPL
Subject: San Diego Harbor Maintenance Dredging

Hello Jon and Sandy,

Per our conversation on Monday, April 16, the Corps agrees to change the ESA determination for the 2012 San Diego Harbor Maintenance Dredging Project from a "no affect" (as stated in the Draft EA, December 2011) to a "may affect, not likely to adversely affect" the California Least Tern.

The no effect determination was previously made primarily due to the sandy nature of the dredge material, which is expected to dissipate quickly and produce minimal turbidity. Additionally, the Corps has committed to monitor water quality during dredging and disposal activities to ensure the turbidity plume remains minimal. In the Corps' view, this is an extremely small percentage of the available foraging area, and would not prevent any individual tern from locating prey, or force them to travel further from the nest site. Alternatively, any terns that may be "attracted" to the dredge plume would very likely have successfully foraged if the dredge was not present. Thus, Corps does not believe that the presence or absence of the dredge has any measurable influence on the ability of any individual tern, or the entire colony, to forage, nest, or successfully reproduce. In the Corps' view, a negligible affect should be equated with "no affect."

However, the Corps recognizes that your staff has a different and more stringent definition and interpretation of "no affect." Based on our conversation and e-mail correspondence, your position is that if a listed species (or particularly CA least terns) and a proposed activity occur in the same place and at the same time, that it is more prudent to assume a "may affect" and later decide through an informal consultation whether the potential impact is adverse or not.

Our agencies will be meeting in the near future to discuss our differing viewpoints in more detail. In the mean time, to facilitate completion of the Final EA for San Diego Harbor Dredging and to be able to advertize the construction project, the Corps has decided to defer to your recommendation in this instance. Therefore, the Corps will agree that this particular dredging project, scheduled to commence after August 1, 2012 "may affect, but is not likely to adversely affect" the California least tern. As your e-mail of March 26, 2012 reached the same conclusion, the Corps assumes that this concludes our informal consultation, and that formal consultation is not required.

Should dredging occur between August 1, 2012 and September 15, 2012, the Corps will continue to coordinate with FWS staff to develop a monitoring program for the CA least tern. The focus of the monitoring program would be to demonstrate whether dredging activities affect

terns in any way, and to add to our knowledge about tern foraging behavior in San Diego Harbor and nearshore waters.

The Corps will notify FWS once dredging is scheduled and coordinate further at that time.

Thank you for your continued participation on this project.

Sincerely,

Erin L. Jones
Staff Biologist, Ecosystem Planning Section US Army Corps of Engineers Los Angeles District
CESPL-PD-RN
(213) 300-9723 (cell)
erin.l.jones@usace.army.mil

P Please consider the environment before printing this email.

Jones, Erin L SPL

From: Sandy_Vissman@fws.gov
Sent: Thursday, March 29, 2012 9:59 AM
To: Jones, Erin L SPL
Cc: Jon_Avery@fws.gov
Subject: RE: San Diego Harbor Dredging

Hi Erin,

Thanks for your e-mail. To clarify our position, it is our assessment that typical dredging or disposal operations conducted in waters where (and when) California least terns are likely to forage, would likely be a "may affect" (please see definition below) to the species. In some instances, such projects are also "likely to adversely affect" (see definition below) the least tern. In this instance, the project as proposed may affect least terns, but we have concluded that the proposed activities are "not likely to adversely affect" (also defined below) the species for the reasons given in our earlier email. Consistent with the implementing regulations (50 CFR 402.13), we have concurred with your earlier determination of "not likely to adversely affect" the least tern for the action as proposed. The terms below are provided from our Section 7 handbook, with regulation citation where appropriate (see link below).

Per your last email, the Corps currently wants to determine "no effect" (see definition below) for the action as proposed. We do not agree, as this determination it does not fit the definition (see the list of definitions provided below). As noted below, the "may affect/no effect" threshold is quite low, and with least terns likely in the action area of your project as currently proposed and the potential for effects, the action would exceed the "may affect" threshold. We recommend that a "may affect -- not likely to adversely affect" is the appropriate determination for this action as proposed.

Terms used in Section 7 Consultation (http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf)

Action area - all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. [50 CFR §402.02]

Affect/effect - to affect (a verb) is to bring about a change. The effect (usually a noun) is the result.

Informal consultation - an optional process that includes all discussions and correspondence between the Services and a Federal agency or designated non-Federal representative, prior to formal consultation, to determine whether a proposed Federal action may affect listed species or critical habitat. This process allows the Federal agency to utilize the Services' expertise to evaluate the agency's assessment of potential effects or to suggest possible modifications to the proposed action which could avoid potentially adverse effects. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat). [50 CFR §402.02, 50 CFR §402.13]

Is likely to adversely affect - the appropriate finding in a biological assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not: discountable, insignificant, or beneficial (see definition of "is not likely to adversely affect"). In the event the overall effect of the proposed action

is beneficial to the listed species, but is also likely to cause some adverse effects, then the proposed action "is likely to adversely affect" the listed species. If incidental take is anticipated to occur as a result of the proposed action, an "is likely to adversely affect" determination should be made.

An "is likely to adversely affect" determination requires the initiation of formal section 7 consultation. [Clarification of usage]

Is not likely to adversely affect - the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs.

Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. [Clarification of usage]

May affect - the appropriate conclusion when a proposed action may pose any effects on listed species or designated critical habitat. When the Federal agency proposing the action determines that a "may affect" situation exists, then they must either initiate formal consultation or seek written concurrence from the Services that the action "is not likely to adversely affect" [see definition above] listed species. [Clarification of usage]

No effect - the appropriate conclusion when the action agency determines its proposed action will not affect a listed species or designated critical habitat. [Clarification of usage]

Even though the California chick-rearing period is likely to have ended by the beginning of August, it is also likely that least terns will still be foraging in the project action area, and thus may be affected by in-water work that likely produces turbidity and disturbance, as outlined in our recent correspondence to the Corps. We suggest, that a "no effect" determination could be achieved by conducting the dredging and disposal activities when least terns have migrated south and are not in the project area. This would entail a later timing for the project. - September 15 - April 1.

As I indicated in the earlier email, we recommend that if activities are to be conducted when terns are present in the Bay, that the Corps develop, in coordination with the Service, a monitoring study. The study should include an evaluation of the size, depth, and clarity, of the turbidity footprint associated with the dredging activity throughout the project, as well as avian monitoring information (presence, foraging rate, foraging success) during and outside of operation periods. In addition, we have traditionally recommended the use of silt curtains, which may already be included within your project description.

As I indicated before, I look forward to observing the dredging and disposal project. I think that it may also be worthwhile to get together and discuss "no effect", "may affect", "may affect -- not likely to adversely affect", and "likely to adversely effect" determinations , to avoid any future confusion or delays to upcoming projects that you are working on. Let me know if you will be coming to San Diego any time soon, and let's meet to discuss.

Respectfully,

Sandy Vissman
USFWS

6010 Hidden Valley Road

Carlsbad, California 92011

Inactive hide details for "Jones, Erin L SPL" <Erin.L.Jones@usace.army.mil>"Jones, Erin L SPL" <Erin.L.Jones@usace.army.mil>

"Jones, Erin L SPL" <Erin.L.Jones@usace.army.mil>

03/27/2012 02:55 PM

To

"Sandy_Vissman@fws.gov" <Sandy_Vissman@fws.gov>

cc

"Jon_Avery@fws.gov" <Jon_Avery@fws.gov>

Subject

RE: San Diego Harbor Dredging

Hi again Sandy, thanks for the e-mail. I left a message for you yesterday, I just wanted to clarify the determination after speaking with my supervisors. Our draft EA had outlined a "no effect" determination. By pushing the dredge schedule back to August we wanted to maintain the no effect. Could you provide a list of conservation measures that would help offset the impacts? I know we had discussed monitoring as one measure.

My apologies for my misunderstanding the determination we set forth yesterday. Could we discuss further if you're free in the next few days?

Thanks!

Erin L. Jones

Staff Biologist, Ecosystem Planning Section US Army Corps of Engineers Los Angeles District
CESPL-PD-RN

(213) 300-9723 (cell)

erin.l.jones@usace.army.mil

P Please consider the environment before printing this email.

-----Original Message-----

From: Sandy_Vissman@fws.gov [mailto:Sandy_Vissman@fws.gov]

Sent: Monday, March 26, 2012 5:34 PM

To: Jones, Erin L SPL

Cc: Jon_Avery@fws.gov

Subject: Re: San Diego Harbor Dredging

In reply refer to: SDG-B0156-I0408

Hi Erin,

Thank you for your coordination on the San Diego Harbor Dredging Project. The project entails dredging the mouth of entry channel of San Diego Harbor to Ballast Point. We originally issued a letter to you regarding the project in 2009, however the proposed timing of the

dredging project has changed. Dredging and disposal will now occur over a 100 day timeframe between August 2012 and April 2012. You have coordinated with us regarding the potential for the project to affect the California least tern due to the overlap with the least tern breeding season and the proximity of the dredging and disposal activities to colonies at Naval Base Coronado and Tijuana National Wildlife Refuge.

While we continue to recommend that dredging and disposal operations be conducted outside the least tern breeding season to avoid the potential for adverse effects, we concur with your determination that the San Diego Harbor Dredging Project, as coordinated, may affect, but is not likely to adversely affect the California least tern. We have reached this conclusion due to; 1) the specific location of the project within the harbor, 2) the likelihood that the project will avoid the most sensitive time period (incubation/chick rearing), and 3) the quality of the sediments that will be relocated. Please note that we would appreciate similar project-specific coordination/consideration on future dredging and disposal operations.

Based upon recent nest chronologies, we expect that most least tern nests at Naval Base Coronado and Tijuana National Wildlife Refuge will be complete and most chicks will be fledged prior to initiation of dredging and disposal activities. Within San Diego Bay, a recent foraging study, conducted by Pat Baird in 2010, detected most foraging outside the main channel, where dredging will occur.

We are interested in working with you further to better understand any response of least terns to dredging and disposal operations, and request that, if work is scheduled for August, you coordinate further with our office to develop a strategy for monitoring least tern use of the project area.

Thanks again for your coordination, and we look forward to working further with you and observing the dredging and disposal project later this year!

Sincerely

Sandy Vissman

USFWS
6010 Hidden Valley Road
Carlsbad, California 92011

Inactive hide details for "Jones, Erin L SPL" <Erin.L.Jones@usace.army.mil>"Jones, Erin L SPL" <Erin.L.Jones@usace.army.mil>

"Jones, Erin L SPL" <Erin.L.Jones@usace.army.mil>

03/26/2012 02:38 PM

To

"Sandy_Vissman@fws.gov" <Sandy_Vissman@fws.gov>

cc

Subject

San Diego Harbor Dredging

Hi Sandy,

The Corps is requesting your concurrence that the San Diego Harbor Dredging Project, as coordinated, is not likely to adversely affect the California least tern.

As discussed, dredging would occur for a maximum of 100 days between August 1 2012 and April 1 2013.

Erin L. Jones

Staff Biologist, Ecosystem Planning Section US Army Corps of Engineers Los Angeles District
CESPL-PD-RN

(213) 300-9723 (cell)

erin.l.jones@usace.army.mil

P Please consider the environment before printing this email.

**Appendix C: Record of Non-Applicability and Air
Quality Emission Calculations**

FINAL
RECORD OF NON-APPLICABILITY FOR SAN DIEGO
MAINTENANCE DREDGING PROJECT
SAN DIEGO, CALIFORNIA

The proposed dredge footprint is the Federal Channel of San Diego Harbor, San Diego County, California, which is situated approximately 100 nautical miles southeast of the City of Los Angeles and 17 miles north of the United States/Mexico International Border. The proposed dredging project entails removal of nearshore compatible sediment from the Federal Channel, which has deposited there due to longshore transport. The dredged material would be placed in the nearshore waters at Imperial Beach or Coronado Beach, in waters -15 to -28 feet Mean Lower Low Water (MLLW).

The Clean Air Act (CAA) as amended in 1990, specifies in Section 176 that no department, agency, or instrumentality of the Federal Government shall engage in, support in anyway, or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan after it has been approved or promulgated under Section 110 of this title. "Conformity" is defined in Section 176 of the CAA as conformity to the State Implementation Plan's (SIPs) purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) while achieving expeditious attainment of such standards, and that the activities will not:

1. Cause or contribute to any new violation of the NAAQS; or
2. Increase the frequency or severity of any existing violation;
3. Delay timely attainment of a standard, interim emission reductions, or milestones.

Air quality standards in the area of San Diego County are under the jurisdiction of the San Diego Air Pollution Control District (APCD). The APCD acts as lead agency, responsible agency or a concerned agency with jurisdiction by law over the air resources of the County under the California Environmental Quality Act (CEQA).

Estimation of air quality impacts was performed under the guidance of the AQMD using methods prescribed in the 1993 California Environmental Quality Act (CEQA) Air Quality Handbook published by the South Coast Air Quality Management District (SCAQMD). Although quantitative thresholds of significance are not currently in place for short term emissions, CEQA requires that short term impacts be discussed in the environmental document. These concerns are addressed in Chapter 5 of the Supplemental Environmental Assessment (EA). In the interest of public disclosure, APCD recommended that construction-related VOC, PM10 and NOx emissions from diesel and gasoline powered equipment, paving and other activities, be quantified.

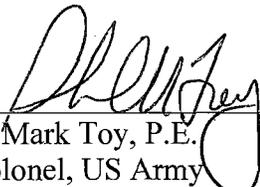
To determine the significance of air quality impacts, daily thresholds were based on construction emission from the South Coast Air Basin (SCAB). If emissions on an individual day exceed 75 pounds per day for VOC, 100 pounds per day for Nox, 550 pounds per day for CO, 150 pounds per day for PM₁₀, or 55 pounds per day for PM_{2.5}, the project should be considered significant. Also, APCD requires that the construction emissions do not exceed 25 tons per year for NOx and VOC, 70 tons per year for PM₁₀, or 100 tons per year for CO, SOx and PM_{2.5}.

Based on the air quality analysis described in Appendix C, the proposed project will not have a significant air quality effect on the environment. The total emissions of each criteria pollutant are below *de minimus* levels as prescribed in 40 CFR 93.153(b). This proposed project conforms with the Federal Clean Air Act as amended 1990. As a result, this Record of Non-Applicability is prepared instead of a conformity determination.

For further information, please contact Ms. Erin Jones, Environmental Coordinator, of the U.S. Army Corps of Engineers at (213) 300-9723.

12 JUN 2012

Date



R. Mark Toy, P.E.
Colonel, US Army
Commander and District Engineer

Hopper Dredge, Disposal at Imperial Beach

Emission Information for CAT 3512 Engine (6 Total)

Percent Load	Engine Power bhp.hr	N0x lb/hr	CO lb/hr	VOC lb/hr	S0x lb/hr	PM10 lb/hr	PM2.5 lb/hr
50	1476	6.06	1.43	0.29	0.015	0.1	0.09
10	148	1.69	0.81	0.32	0.001	0.12	0.11

	N0x	CO	VOC	S0x	PM10	PM2.5
Return Trip @ 10% Load - all material	117.3434	56.24151	22.218868	0.069434	8.332075	7.6655094
Return Trip @ 10% Load Per Day	2.3468679	1.12483	0.4443774	0.001389	0.166642	0.1533102
Total For All 6 Engines Per Day	14.081208	6.748981	2.6662642	0.008	0.999849	0.92

	N0x	CO	VOC	S0x	PM10	PM2.5
Disposal Trip @ 100% Load all material	431.62839	101.8529	20.655484	1.068387	7.122581	6.4103226
Disposal Trip @ 100% Load Per Day	8.63	2.04	0.41	0.02	0.14	0.13
Total For All 6 Engines Per Day	51.80	12.22	2.48	0.128	0.85	0.77

	N0x	CO	VOC	S0x	PM10	PM2.5
Total For All 6 Engines (lbs/day)	65.88	18.97	5.14	0.13	1.85	1.69

	N0x	CO	VOC	S0x	PM10	PM2.5
Total For All 6 Engines (tons/yr)	1.65	0.47	0.13	0.00	0.05	0.04

Clamshell Dredge, Disposal at Imperial Beach

	Power Rating (HP)	Load Factor	Number of Equipment	Hourly Hp-Hrs	Hours Per Day
Main Hoist	1200	0.5	1	600	24
Main Generator	900	0.5	1	450	24
Deck Generator	240	0.5	1	120	24
Tug Boat	800	0.2	1	160	24
Tug Boats Transporting Sediment	800	0.5	3	1200	24

	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Equipment (Year 2010)	VOC	CO	NOX	SOX	PM10	PM2.5
Excavator Composite (750 hp)	0.1569	0.7451	0.5194	0.0039	0.0178	0.0054
Pounds Per Day	VOC	CO	NOX	SOX	PM10	PM2.5
Main Hoist	3.77	17.88	12.47	0.09	0.43	0.13
Main Generator	3.77	17.88	12.47	0.09	0.43	0.13
Deck Generator	3.77	17.88	12.47	0.09	0.43	0.13
Tug Boat	3.77	17.88	12.47	0.09	0.43	0.13
Tug Boat Transporting Sediment	3.77	17.88	12.47	0.09	0.43	0.13
Total Pounds Per Day	18.83	89.42	62.33	0.47	2.14	0.64
Total Tons Per Year (100 days)	0.94	4.47	3.12	0.02	0.11	0.03

Hopper Dredge, Disposal at Coronado Beach

Emission Information for CAT 3512 Engine (6 Total)

Percent Load	Engine Power bhp.hr	N0x lb/hr	CO lb/hr	VOC lb/hr	S0x lb/hr	PM10 lb/hr	PM2.5 lb/hr
50	1476	6.06	1.43	0.29	0.015	0.1	0.09
10	148	1.69	0.81	0.32	0.001	0.12	0.11

	N0x	CO	VOC	S0x	PM10	PM2.5
Return Trip @ 10% Load - all material	29.33584906	14.06037736	5.554716981	0.017358491	2.083018868	1.916377358
Return Trip @ 10% Load Per Day	0.586716981	0.281207547	0.111109434	0.00034717	0.041660377	0.038327547
Total For All 6 Engines Per Day	3.520301887	1.687245283	0.666566038	0.002	0.249962264	0.23

	N0x	CO	VOC	S0x	PM10	PM2.5
Disposal Trip @ 100% Load all material	107.9070968	25.46322581	5.163870968	0.267096774	1.780645161	1.602580645
Disposal Trip @ 100% Load Per Day	2.16	0.51	0.10	0.01	0.04	0.03
Total For All 6 Engines Per Day	12.95	3.06	0.62	0.032	0.21	0.19

	N0x	CO	VOC	S0x	PM10	PM2.5
Total For All 6 Engines (lbs/day)	16.47	4.74	1.29	0.03	0.46	0.42

	N0x	CO	VOC	S0x	PM10	PM2.5
Total For All 6 Engines (tons/yr)	0.41	0.12	0.03	0.00	0.01	0.01

Clamshell Dredge, Disposal at Coronado Beach

	Power Rating (HP)	Load Factor	Number of Equipment	Hourly Hp-Hrs	Hours Per Day
Main Hoist	1200	0.5	1	600	24
Main Generator	900	0.5	1	450	24
Deck Generator	240	0.5	1	120	24
Tug Boat	800	0.2	1	160	24
Tug Boats Transporting Sediment	800	0.5	3	1200	24

	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Equipment (Year 2010)	VOC	CO	NOX	SOX	PM10	PM2.5
Excavator Composite (750 hp)	0.1569	0.7451	0.5194	0.0039	0.0178	0.0054
Pounds Per Day	VOC	CO	NOX	SOX	PM10	PM2.5
Main Hoist	3.77	17.88	12.47	0.09	0.43	0.13
Main Generator	3.77	17.88	12.47	0.09	0.43	0.13
Deck Generator	3.77	17.88	12.47	0.09	0.43	0.13
Tug Boat	3.77	17.88	12.47	0.09	0.43	0.13
Tug Boat Transporting Sediment	3.77	17.88	12.47	0.09	0.43	0.13
Total Pounds Per Day	18.83	89.42	62.33	0.47	2.14	0.64
Total Tons Per Year (100 days)	0.94	4.47	3.12	0.02	0.11	0.03

Appendix D: 404(b)(1) Analysis

404(b)(1) Analysis from the March 2009 Final EA

THE EVALUATION OF THE EFFECTS
OF THE DISCHARGE OF DREDGED OR FILL MATERIAL
INTO THE WATERS OF THE UNITED STATES

San Diego Harbor Maintenance Dredging
San Diego County, California

I. INTRODUCTION. The following evaluation is provided in accordance with Section 404 (b)(1) of the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500) as amended by the Clean Water Act of 1977 (Public Law 95-217). Its intent is to succinctly state and evaluate information regarding the effects of discharge of dredged or fill material into the waters of the U. S, including incidental discharge during dredging. As such, it is not meant to stand alone and relies heavily upon information provided in the Final Environmental Assessment (EA) to which it is attached.

II. PROJECT DESCRIPTION. (Referenced in the DEA and described briefly as follows:)

A. Location: The project location is described in Section 1.1 of the attached Final EA.

Brief Summary: The project site is San Diego Harbor and Imperial Beach, San Diego County, California. The original proposed dredge area is from the approach channel of the Bay to Sweetwater Channel, a distance of approximately 13 miles. Focus areas for the dredge action would be the approach and entrance channels from Ballast Point oceanward and the Aircraft Carrier Turning Basin. The proposed receiver site for beach compatible dredged material will be disposed off at Imperial Beach located along the Pacific Coast.

B. General Description: The project description is described in Section 3.0 of the attached Final EA.

Brief Summary: In order to maintain channel configurations and assure safe navigation within the harbor channels, the proposed maintenance dredging project involves the removal of no more than 336,000 cubic yards of beach compatible material from the Federal Channel of San Diego Harbor. The disposal area is located offshore of Imperial Beach, located approximately 12 miles south of San Diego along the Pacific Coast, south of the Imperial Beach Pier. Dredged material would be placed in the nearshore environment at Imperial Beach south of the pier in waters -15 to -28 feet MLLW. Any non-compatible material will not be dredged (see details in Section 3.0 of the Final EA).

C. Purpose and Need: The purpose and need is described in Section 2.0 of the attached Final EA.

Brief Summary: The proposed project would serve the following purposes: (1) restore the channel that is subject to continual shoaling to design depths; (2) assure the continued navigation for marine traffic within the harbor; (3) avoid intrusion of dredging activities into the critical

seasons of vulnerable species; and (4) provide beach nourishment material for downcast beaches severely eroded by littoral processes. The primary benefits realized from the proposed project would be restoration of design depths and unimpeded navigation within the Federal Channel. Secondary benefits include the replenishment of the beach with placement of dredged material in the nearshore to ensure that a pleasant shoreline environment is maintained for the public. The purpose and need satisfies both NEPA and Section 404(b)(1) requirements.

D. Authority and Purpose: The project authority and purpose is documented in Sections 1.0 and 2.0 of the attached Final EA.

Brief Summary: Maintenance dredging of San Diego Harbor is authorized by the 1852 Rivers and Harbors Act, amended by the MILCON (Military Construction) project performed by the Navy. The approach channel was deepened by the Navy to -55 MLLW in the 1990's for defense purposes as part of a MILCON project. Based on statute 33 U.S.C. 562.a, Corps South Pacific Division authorized Los Angeles District to maintain the approach channel at this depth as part of its regular maintenance dredging.

E. General Description of Dredged or Fill Material: Grain size analysis performed on sampled sediments indicated that six of the eleven composite areas sampled are suitable for disposal at Imperial Beach. The weighted average gradation method is a common procedure developed and used by the Los Angeles District U.S. Army Corps of Engineers to determine beach compatibility of sediments to be dredged. Sediments can be placed on the beach as long as the samples from each composite area do not exceed more than approximately 10% of the "fines limits". The "fines limits" corresponds to the U.S. standard sieve no. 200. The maximum "fines limits" for Imperial Beach is 28%. This means that the individual sediment samples may surpass this limit or fall outside of the envelope by 10%, for a total of approximately 38% maximum. The weighted average and gradation curves analyses of the eleven composite areas for San Diego harbor indicates that sediments within composite areas 1, 2, 3, 6, 8 and 10 are compatible for disposal at Imperial Beach, California. The maximum percent fines in areas 1, 2, 3, 8, and 10 is approximately 23%. The maximum percent fines in area 6 is 38%. No characteristics of the beach compatible composite areas indicated contamination. Material that was sampled and not found to be beach compatible would not be dredged. A detailed description of the dredged or fill material is in Section 3.5.1 of the attached Final EA.

F. Description of the Proposed Discharge Site: The dredged material would be discharged in the nearshore waters at Imperial Beach. The disposal area is located offshore of Imperial Beach, located approximately 12 miles south of San Diego along the Pacific Coast, south of the Imperial Beach Pier. The material would be discharged in water of depths between -15 and -28 feet MLLW, within an area defined by approximate dimensions of 1,700 feet long by 1,000 feet wide, approximately 27 acres. This area was used for disposal during the 2004 San Diego Harbor Central Navigation Channel Deepening Project. See Section 3.4 and 3.5 of the attached Final EA for details.

F. Description of Disposal Method: The disposal method is described in Section 3.5 of the attached Final EA.

Brief Summary: Dredging operations would be conducted using a diesel-powered hopper dredge. The material would be removed via dragheads on the hopper dredge that are lowered to the ocean floor. These dragheads remove sediment by suction and deposit the sediment into the hopper located in the hull of the dredge. After sediment has been deposited into the hopper, the dragheads are pulled from the water, and the ship transits to the designated disposal area. Once at the disposal site, the hopper's split-hull opens, releasing the sediment into the ocean.

III. FACTUAL DETERMINATIONS.

A. Disposal Site Physical Substrate Determinations:

1. Substrate Elevation and Slope:

Impact: N/A X INSIGNIF. SIGNIF. 5.1 EA Section

2. Sediment Type:

Impact: N/A X INSIGNIF. SIGNIF. 3.5.1 EA Section

3. Dredged/Fill Material Movement:

Impact: N/A X INSIGNIF. SIGNIF. 5.1 EA Section

Modifications to the existing bottom topography of the disposal area should be expected as a result of the proposed project. Local, but minor, changes to the bathymetry would result because of relocation of marine sediments to the nearshore. This sediment would dissipate over time via wave action, eventually washing onto and replenishing the beach. The disposal site is in the nearshore no greater than -28 feet MLLW and is the most desirable location for the purposes of beach nourishment and the avoidance of impacts to sensitive biological resources. Beach disposal would produce a positive effect through probable increases in beach recreational usage following the nearshore deposition.

4. Physical Effects on Benthos (burial, changes in sediment type, composition, etc.):

Impact: N/A X INSIGNIF. SIGNIF. 5.1, 5.2 EA Section

5. Actions taken to Minimize Impacts

Needed?: ___ YES ___ X NO

If Needed, Taken:

X N/A ___ YES ___ NO

B. Effect on Water Circulation, Fluctuation, and Salinity Determinations:

1. Effect on Water. The following potential impacts were considered:

- a. Salinity X N/A ___ INSIGNIF. ___ SIGNIF.
- b. Water Chemistry (pH, etc.) ___ N/A X INSIGNIF. ___ SIGNIF.
- c. Clarity ___ N/A X INSIGNIF. ___ SIGNIF.
- d. Color ___ N/A X INSIGNIF. ___ SIGNIF.
- e. Odor ___ N/A X INSIGNIF. ___ SIGNIF.
- f. Taste X N/A ___ INSIGNIF. ___ SIGNIF.
- g. Dissolved gas levels ___ N/A X INSIGNIF. ___ SIGNIF.
- h. Nutrients ___ N/A X INSIGNIF. ___ SIGNIF.
- i. Eutrophication X N/A ___ INSIGNIF. ___ SIGNIF.
- j. Others X N/A ___ INSIGNIF. ___ SIGNIF.

The proposed maintenance dredging will not adversely affect the salinity or quality of the receiving waters. Chemical testing conducted in October 2008 confirmed that contaminant levels in the sand do not exceed lower effects bases screening levels (ERLs), and are within the range acceptable for beach disposal. Given these results the effects of these activities on water quality are expected to be minimal. The chemical and physical analysis of the sediment sampled in October 2008 indicated the predominance of sand and the absence of significant levels of contaminants; therefore no significant impacts to water quality are expected (See Section 4.4, 5.4 for more information). Mitigation measures minimize impacts. See Section 7.0 for Environmental Commitments.

2. Effect on Current Patterns and Circulation. The potential of discharge or fill on the following conditions were evaluated:

- a. Current Pattern and Flow
 X N/A ___ INSIGNIF. ___ SIGNIF.
- b. Velocity
 X N/A ___ INSIGNIF. ___ SIGNIF.
- c. Stratification
 X N/A ___ INSIGNIF. ___ SIGNIF.
- d. Hydrology Regime
 X N/A ___ INSIGNIF. ___ SIGNIF.

3. Effect on Normal Water Level Fluctuations. The potential of discharge of fill on the following were evaluated:

- a. Tide N/A INSIGNIF. SIGNIF.
- b. River Stage N/A INSIGNIF. SIGNIF.

4. Action Taken to Minimize Effects:

Mitigation measures minimize impacts. See Section 7.0 for Environmental Commitments.

C. Suspended Particulate/Turbidity Determinations at the Disposal Site:

1. Expected Change in Suspended Particulate and Turbidity levels in Vicinity of Disposal Site:

Impact: N/A INSIGNIF. SIGNIF. 4.4, 5.4 EA Section

2. Effects (degree and duration) on Chemical and Physical Properties of the Water Column:

a. Light Penetration
 N/A INSIGNIF. SIGNIF. 4.4, 5.4 EA Section

b. Dissolved Oxygen
 N/A INSIGNIF. SIGNIF. 4.4, 5.4 EA Section

c. Toxic Metals & Organics
 N/A INSIGNIF. SIGNIF.

d. Pathogen
 N/A INSIGNIF. SIGNIF.

e. Esthetics
 N/A INSIGNIF. SIGNIF. 4.4, 5.4 EA Section

3. Effects of Turbidity on Biota: The following effects of turbidity on biota were evaluated:

a. Primary Productivity
 N/A INSIGNIF. SIGNIF. 4.2, 4.4, 5.2, 5.4 EA Section

b. Suspension/Filter Feeders
 N/A INSIGNIF. SIGNIF. 4.2, 4.4, 5.2, 5.4 EA Section

c. Sight feeders
 N/A INSIGNIF. SIGNIF. 4.2, 4.3, 4.4, 5.2, 5.3, 5.4 EA Section

Mitigation measures minimize impacts. See Section 7.0 for Environmental Commitments.

D. Contaminant Determination:

The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material.

1. Physical characteristics of the sediment.
2. Chemical Analysis of sediment samples collected in October 2008
3. Results from previous testing of the material or similar material in the vicinity of the project.

An evaluation of the appropriate information above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants. The material meets the testing exclusion criteria.

YES NO

Impact: N/A INSIGNIF. SIGNIF.

E. Effect on Aquatic Ecosystem and Organism Determinations: The Following ecosystem effects were evaluated:

1. On Plankton
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section
2. On Benthos
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section
3. On Nekton
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section
4. Food Web
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section
5. Sensitive Habitats:
 - a. Sanctuaries, refuges
 N/A INSIGNIF. SIGNIF.
 - b. Wetlands
 N/A INSIGNIF. SIGNIF.
 - c. Mudflats

N/A INSIGNIF. SIGNIF.

d. Eelgrass beds

N/A INSIGNIF. SIGNIF.

e. Riffle and Pool Complexes

N/A INSIGNIF. SIGNIF.

6. Threatened & Endangered Species

N/A INSIGNIF. SIGNIF. 4.3, 5.3 EA Section

7. Other Wildlife (grunion)

N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section

F. Proposed Disposal Site Determinations: Is the mixing zone for each disposal site confined to the smallest practicable zone?

YES NO

G. Determination of Cumulative Effects of Disposal or Fill on the Aquatic Ecosystem:

Impacts: N/A INSIGNIF. SIGNIF.

No significant cumulative adverse effects on the aquatic ecosystem are expected.

H. Determination of Indirect Effects of Disposal or Fill on the Aquatic Ecosystem:

Impacts: N/A INSIGNIF. SIGNIF.

IV. FINDING OF COMPLIANCE.

A. A review of the proposed project indicates that:

1. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose.

YES NO

2. The activity does not appear to: 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and 3) violate requirements of any Federally designated marine sanctuary.

X YES _____ NO

3. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values.

X YES _____ NO

4. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

X YES _____ NO

B. On the Basis of the Guidelines, the Proposed Disposal Sites for the Discharge of Dredged or Fill Material is (select one):

X _____

(1) Specified as complying with the requirements of these guidelines; or,

(2) Specified as complying with the requirements of these guidelines, with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem; or,

(3) Specified as failing to comply with the requirements of these guidelines.

Prepared by:

Erin Hardison

Name

Environmental Coordinator

Position

Date:

March 4, 2009

404(b)(1) Analysis from the August 2010 Final SEA

THE EVALUATION OF THE EFFECTS
OF THE DISCHARGE OF DREDGED OR FILL MATERIAL
INTO THE WATERS OF THE UNITED STATES

San Diego Harbor Maintenance Dredging
San Diego County, California

I. INTRODUCTION. The following evaluation is provided in accordance with Section 404 (b)(1) of the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500) as amended by the Clean Water Act of 1977 (Public Law 95-217). Its intent is to succinctly state and evaluate information regarding the effects of discharge of dredged or fill material into the waters of the U. S, including incidental discharge during dredging. As such, it is not meant to be a stand alone document. It relies heavily upon information provided in the Final Supplemental Environmental Assessment (SEA) to which it is attached.

II. PROJECT DESCRIPTION. (Referenced in the Final SEA and described briefly as follows:)

A. Location: The project location is described in Section 2.1 of the attached Final SEA.

Brief Summary: The project site is San Diego Harbor and Imperial Beach, San Diego County, California. The proposed dredge footprint includes the approach and entrance channels of the Federal Navigation Channel in San Diego Harbor. The proposed receiver site for beach compatible dredged material will be disposed off at Imperial Beach located along the Pacific Coast.

B. General Description: The project description is described in Section 2.3 of the attached Final SEA.

Brief Summary: In order to maintain channel configurations and assure safe navigation within the harbor channels, the proposed maintenance dredging project involves the removal of no more than 300,000 cubic yards of beach compatible material from the Federal Channel of San Diego Harbor. The disposal area is located offshore of Imperial Beach, located approximately 12 miles south of San Diego along the Pacific Coast, south of the Imperial Beach Pier. Dredged material would be placed in the nearshore environment at Imperial Beach south of the pier in waters -15 to -28 feet MLLW. Any non-compatible material will not be dredged, (see details in Section 2.0 of the Final SEA).

C. Purpose and Need: The purpose and need is described in Section 2.0 of the attached Final SEA.

Brief Summary: The proposed project would serve the following purposes: (1) restore the channel that is subject to continual shoaling to design depths; (2) assure the continued navigation for marine traffic within the harbor; (3) avoid intrusion of dredging activities into the critical

seasons of vulnerable species; and (4) provide beach nourishment material for downcast beaches severely eroded by littoral processes. The primary benefits realized from the proposed project would be restoration of design depths and unimpeded navigation within the Federal Channel. Secondary benefits include the replenishment of the beach with placement of dredged material in the nearshore to ensure that a pleasant shoreline environment is maintained for the public. The purpose and need satisfies both NEPA and Section 404(b)(1) requirements.

D. Authority and Purpose: The project authority and purpose is documented in Sections 1.0 and 2.0 of the attached March 2009 Final EA.

Brief Summary: Maintenance dredging of San Diego Harbor is authorized by the 1852 Rivers and Harbors Act, amended by the MILCON (Military Construction) project performed by the Navy. The approach channel was deepened by the Navy to -55 MLLW in the 1990's for defense purposes as part of a MILCON project. Based on statute 33 U.S.C. 562.a, Corps South Pacific Division authorized Los Angeles District to maintain the approach channel at this depth as part of its regular maintenance dredging.

E. General Description of Dredged or Fill Material: In the Final EA (March 2009), dredge areas 1, 2, 3, 6, 8, and 10 were found to be compatible for nearshore discharge (see Figure 5 of the Final EA). A Dredge Materials Management Team (DMMT) meeting was held in April 2009, after the Final EA was finalized. At that time, after further testing of Areas 6, 8, and 10, the Environmental Protection Agency (EPA) recommended that the dredge material in these areas is not suitable for nearshore disposal. Therefore, Areas 6, 8, and 10 would not be dredged during this proposed dredging event.

Although Area 3 is suitable for nearshore discharge, time and cost constraints prevent dredging of this area. During the 2010/2011 dredging event, only areas 1 and 2 (from station 120+00 to station -60+00) will be dredged and discharged in the nearshore of Imperial Beach.

No characteristics of the beach compatible composite areas indicated contamination. Material that was sampled and not found to be beach compatible would not be dredged. A detailed description of the dredged or fill material is in Section 3.5.1 of the attached Final EA and Section 2.5 of the Final SEA.

F. Description of the Proposed Discharge Site: The dredged material would be discharged in the nearshore waters at Imperial Beach. The disposal area is located offshore of Imperial Beach, located approximately 12 miles south of San Diego along the Pacific Coast, south of the Imperial Beach Pier. The material would be discharged in water of depths between -15 and -28 feet MLLW, within an area defined by approximate dimensions of 1,700 feet long by 1,000 feet wide, approximately 27 acres. This area was used for disposal during the 2004 San Diego Harbor Central Navigation Channel Deepening Project. See Section 2.1 of the attached Final SEA for details.

F. Description of Disposal Method: The disposal method is described in Section 2.4 of the attached Final SEA.

Brief Summary: Dredging operations would be conducted using a diesel-powered hopper dredge or a clamshell dredge.

Using a hopper dredge, the material would be removed via dragheads on the hopper dredge that are lowered to the ocean floor. These dragheads remove sediment by suction and deposit the sediment into the hopper located in the hull of the dredge. After sediment has been deposited into the hopper, the dragheads are pulled from the water, and the ship transits to the designated disposal area. Once at the disposal site, the hopper's split-hull opens, releasing the sediment into the ocean.

A clamshell dredge entails a floating derrick with a bucket that is lowered under water to remove material from the ocean floor and place the material in a scow. The scow is then pushed or pulled to the disposal site with a tug boat for disposal of the dredged material. Clamshelled sediments are removed in large consolidated clumps and tend to retain form when disposed. Clamshell dredges can be used to excavate most types of materials except for the most cohesive consolidated sediments and solid rock. They are effective while working near bridges, docks, wharves, pipelines, piers, or breakwater structures because they do not require as much area to maneuver, and there is little danger of damaging other structures because the dredging process can be accurately controlled.

III. FACTUAL DETERMINATIONS.

A. Disposal Site Physical Substrate Determinations:

1. Substrate Elevation and Slope:

Impact: N/A X INSIGNIF. SIGNIF. 5.1 EA Section (March 2009)

2. Sediment Type:

Impact: N/A X INSIGNIF. SIGNIF. 3.5.1 EA Section (March 2009)

3. Dredged/Fill Material Movement:

Impact: N/A X INSIGNIF. SIGNIF. 5.1 EA Section (March 2009)

Modifications to the existing bottom topography of the disposal area should be expected as a result of the proposed project. Local, but minor, changes to the bathymetry would result because of relocation of marine sediments to the nearshore. This sediment would

dissipate over time via wave action, eventually washing onto and replenishing the beach. The disposal site is in the nearshore no greater than -28 feet MLLW and is the most desirable location for the purposes of beach nourishment and the avoidance of impacts to sensitive biological resources. Beach disposal would produce a positive effect through probable increases in beach recreational usage following the nearshore deposition.

4. Physical Effects on Benthos (burial, changes in sediment type, composition, etc.):

Impact: N/A INSIGNIF. SIGNIF. 5.1, 5.2 EA Section (March 2009); SEA Section 4.2

5. Actions taken to Minimize Impacts

Needed?: YES NO

If Needed, Taken:

N/A YES NO

B. Effect on Water Circulation, Fluctuation, and Salinity Determinations:

1. Effect on Water. The following potential impacts were considered:

- a. Salinity N/A INSIGNIF. SIGNIF.
- b. Water Chemistry (pH, etc.) N/A INSIGNIF. SIGNIF.
- c. Clarity N/A INSIGNIF. SIGNIF.
- d. Color N/A INSIGNIF. SIGNIF.
- e. Odor N/A INSIGNIF. SIGNIF.
- f. Taste N/A INSIGNIF. SIGNIF.
- g. Dissolved gas levels N/A INSIGNIF. SIGNIF.
- h. Nutrients N/A INSIGNIF. SIGNIF.
- i. Eutrophication N/A INSIGNIF. SIGNIF.
- j. Others N/A INSIGNIF. SIGNIF.

The proposed maintenance dredging will not adversely affect the salinity or quality of the receiving waters. Chemical testing conducted in October 2008 confirmed that contaminant levels in the sand do not exceed lower effects bases screening levels (ERLs), and are within the range acceptable for beach disposal. Given these results the effects of these activities on water quality are expected to be minimal. The chemical and physical analysis of the sediment sampled in October 2008 indicated the predominance of sand

and the absence of significant levels of contaminants; therefore no significant impacts to water quality are expected (See Section 4.4, 5.4 of the March 2009 Final EA for more information). Mitigation measures minimize impacts. See Section 6.0 of the Final SEA for Environmental Commitments.

2. Effect on Current Patterns and Circulation. The potential of discharge or fill on the following conditions were evaluated:

- a. Current Pattern and Flow
 N/A INSIGNIF. SIGNIF.
- b. Velocity
 N/A INSIGNIF. SIGNIF.
- c. Stratification
 N/A INSIGNIF. SIGNIF.
- d. Hydrology Regime
 N/A INSIGNIF. SIGNIF.

3. Effect on Normal Water Level Fluctuations. The potential of discharge of fill on the following were evaluated:

- a. Tide N/A INSIGNIF. SIGNIF.
- b. River Stage N/A INSIGNIF. SIGNIF.

4. Action Taken to Minimize Effects:

Mitigation measures minimize impacts. See Section 6.0 of the Final SEA for Environmental Commitments.

C. Suspended Particulate/Turbidity Determinations at the Disposal Site:

1. Expected Change in Suspended Particulate and Turbidity levels in Vicinity of Disposal Site:

Impact: N/A INSIGNIF. SIGNIF. 4.4, 5.4 EA Section (March 2009)

2. Effects (degree and duration) on Chemical and Physical Properties of the Water Column:

a. Light Penetration
 N/A INSIGNIF. SIGNIF. 4.4, 5.4 EA Section (March 2009)

b. Dissolved Oxygen
 N/A INSIGNIF. SIGNIF. 4.4, 5.4 EA Section (March 2009)

c. Toxic Metals & Organics
 X N/A _____INSIGNIF. _____SIGNIF.

d. Pathogen
 X N/A _____INSIGNIF. _____SIGNIF.

e. Esthetics
_____N/A X INSIGNIF. _____SIGNIF. 4.4, 5.4 EA Section

(March 2009)

3. Effects of Turbidity on Biota: The following effects of turbidity on biota were evaluated:

a. Primary Productivity
_____N/A X INSIGNIF. _____SIGNIF. 4.2, 4.4, 5.2, 5.4 EA Section
(March 2009); SEA Section 4.2

b. Suspension/Filter Feeders
_____N/A X INSIGNIF. _____SIGNIF. 4.2, 4.4, 5.2, 5.4 EA Section
(March 2009); SEA Section 4.2

c. Sight feeders
_____N/A X INSIGNIF. _____SIGNIF. 4.2, 4.3, 4.4, 5.2, 5.3, 5.4 EA Section
(March 2009); SEA Section 4.2

Mitigation measures minimize impacts. See Section 6.0 of the Final SEA for Environmental Commitments.

D. Contaminant Determination:

The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material.

1. Physical characteristics of the sediment.
2. Chemical Analysis of sediment samples collected in October 2008
3. Results from previous testing of the material or similar material in the vicinity of the project.

An evaluation of the appropriate information above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants. The material meets the testing exclusion criteria.

YES NO

Impact: N/A INSIGNIF. SIGNIF.

E. Effect on Aquatic Ecosystem and Organism Determinations: The Following ecosystem effects were evaluated:

1. On Plankton
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section (March 2009); SEA Section 4.2

2. On Benthos
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section (March 2009); SEA Section 4.2

3. On Nekton
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section (March 2009); SEA Section 4.2

4. Food Web
 N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section (March 2009); SEA Section 4.2

5. Sensitive Habitats:

a. Sanctuaries, refuges

N/A INSIGNIF. SIGNIF.

b. Wetlands

N/A INSIGNIF. SIGNIF.

c. Mudflats

N/A INSIGNIF. SIGNIF.

d. Eelgrass beds

N/A INSIGNIF. SIGNIF.

e. Riffle and Pool Complexes

N/A INSIGNIF. SIGNIF.

6. Threatened & Endangered Species

N/A INSIGNIF. SIGNIF. 4.3, 5.3 EA Section (March 2009); SEA Section 4.3

7. Other Wildlife (grunion)

N/A INSIGNIF. SIGNIF. 4.2, 5.2 EA Section (March 2009); SEA Section 4.3

F. Proposed Disposal Site Determinations: Is the mixing zone for each disposal site confined to the smallest practicable zone?

YES NO

G. Determination of Cumulative Effects of Disposal or Fill on the Aquatic Ecosystem:

Impacts: N/A INSIGNIF. SIGNIF.

No significant cumulative adverse effects on the aquatic ecosystem are expected.

H. Determination of Indirect Effects of Disposal or Fill on the Aquatic Ecosystem:

Impacts: N/A INSIGNIF. SIGNIF.

IV. FINDING OF COMPLIANCE.

A. A review of the proposed project indicates that:

1. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose.

YES NO

2. The activity does not appear to: 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and 3) violate requirements of any Federally designated marine sanctuary.

X YES _____ NO

3. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values.

X YES _____ NO

4. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

X YES _____ NO

B. On the Basis of the Guidelines, the Proposed Disposal Sites for the Discharge of Dredged or Fill Material is (select one):

X

(1) Specified as complying with the requirements of these guidelines; or,

(2) Specified as complying with the requirements of these guidelines, with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem; or,

(3) Specified as failing to comply with the requirements of these guidelines.

Prepared by:

Erin Hardison

Name

Environmental Coordinator

Position

Date:

August 18, 2010

Appendix E: Response to Comments

The Draft Supplemental Environmental Assessment (SEA) was released for 30-days public review. Responses to formal letters from interested parties are provided in the following paragraphs.

COMMENT LETTER City of Coronado (January 12, 2012)

Comment 1: Page 8, Section 1.5.8 indicates “the Coronado designated nearshore disposal site is the least-cost environmentally acceptable disposal site for this maintenance dredging project.” Just to clarify, does this mean it is the least preferred, or does this statement mean it has the least cost and least environmental issues associated with disposal? Perhaps this statement should be re-worded for clarification.

Response 1: This means that while both the Imperial Beach and Coronado Beach nearshore disposal sites were environmentally acceptable, the Coronado Beach site was the least-cost alternative due to its closer proximity to the dredge location. Since disposal at Coronado requires less transit time, more time can be spent dredging, allowing for higher productivity and a shorter project duration overall.

The statement in the SEA will be re-worded to clarify this point.

Comment 2: Page 10, Section 3.1 and Figure 4: Given that one of the purposes of the project is to, “provide beach nourishment material for downcast beaches severely eroded by littoral processes,” (see Purpose and Need from Executive Summary) the City of Coronado requests that any disposal in the Coronado Beach Nearshore Disposal Area (Figure 4) be confined to the most southerly portion of said site. Disposal in this area of the site would likely benefit the beaches in greatest need of replenishment (south of Hotel del Coronado in front of the Coronado Shores (high rise condominiums) development). We are also sympathetic to the City of Imperial Beach’s need for sand.

Response 2: Thank you for your input. The Corps will work to place as much material as is feasible based on the logistics of dredging and disposal operations in the southernmost portion of the designated nearshore disposal area.

Comment 3: Pages 28, 29, and 44: The noise levels of the various equipment (Hopper Dredge or Clamshell and Scow) are not identified in the analysis. Rather, each agency’s noise ordinances are specified and existing noise levels described with a statement that, “Any permits required by the City of San Diego, the City of Imperial Beach, and the City of Coronado Beach to dredge and dispose during nighttime hours and meet noise ordinances would be obtained by the selected Contractor.” The City will not issue a permit that would allow for construction to occur in evening hours, which does not comply with local noise ordinances.

Page 44 notes “Dredging and disposal would occur for a maximum of 100 days, and noise levels would return to ambient conditions upon project completion; therefore, impacts would be temporary and not significant.” The Environmental Assessment should be revised to identify the expected noise levels of the proposed equipment and analyzed for their potential impact on users of the beach, residential, hotel, and commercial uses adjacent to the shoreline. The equipment which generates the least amount of noise should be used. If the equipment generates noise that exceeds local standards, the environmental

assessment should propose mitigation to offset impacts. For example, it may be necessary to limit nearshore disposal activities to 12 hours instead of 24 hours. The Environmental Assessment should clarify that the Corps will monitor noise levels to ensure compliance with local standards.

Response 3: The noise Section of the SEA will be revised to document estimated noise levels and their expected dampening over extended distances from the shore.

Any impacts from the noise generated by the dredging equipment at beaches onshore of the disposal sites are dependent upon the distance from the equipment. Noise levels from a point source decrease in inverse proportion to the square of the distance from the sound source (e.g., at distances greater than 50 feet from the source, every doubling of the distance decreases the noise by approximately 6 dB).

Dredge equipment may generate noise up to approximately 80 to 90 decibels at 50 feet. The boundaries of the proposed disposal site offshore of Coronado Beach are located between approximately 1,500 and 2,750 feet offshore. Since sound is dampened over distance, dredging equipment is expected to generate noise on the beach at approximately 50 to 60 decibels, which is noted in the “quiet” range. This noise would be intermittent, occurring only when the hopper dredge or tug and barge transit to the nearshore to dispose sediment.

The equipment chosen for the dredging must be based on the most efficient, cost effective option; however noise levels at the disposal beach in the “quiet” range will not have an adverse effect on surrounding land uses.

Comment 4: Page 55, Section 7.A notes “Prior to construction, the Corps will provide a 14-day notification of planned activities to appropriate agencies and post information bulletins of scheduled work time and areas at appropriate offices. Equipment will be appropriately marked and lighted.” The City would encourage the Corps to complete additional public outreach by placing an article in the local *Coronado Eagle & Journal* newspaper and online citizen newsletters and websites before the project begins describing the project, construction hours and expected project duration. The City would also suggest that signs with contact phone numbers be posted along the public beach in the vicinity of the nearshore disposal site so the public will be informed of activities occurring off the coast.

Response 4: The Corps will work with its Public Affairs Office to distribute information to the community prior to dredging and the dredge Contractor will place signs at the disposal beach. The Corps would also provide dredging information to the City of Coronado for further distribution to local concerned parties.

COMMENT LETTER Native American Heritage Commission (December 27, 2011)

Comments were taken from the attached letter and numbered by the Corps for response.

Comment 1: Attached is a list of Native American contacts; they may have knowledge of cultural resources in the project area. It is advisable to contact the persons listed and seek to establish a “trust” relationship with them; if they cannot supply you with specific information about the impact on cultural

resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

Response 1: Per the mailing list in Appendix A, the supplied contacts were provided with the Draft SEA during the public review period. No comments from these contacts were received.

Comment 2: Lead agencies should consider avoidance, in the case of cultural resources that are discovered.

Response 2: Known cultural resources in the dredge and disposal areas would be avoided per Sections 4.9 and 5.9 in the SEA. Environmental commitments in Section 7.0 of the SEA also include commitments related to cultural resources, including:

- Pursuant to 36 C.F.R. § 800.13, in the event of any discoveries during dredging of either human remains, archeological deposits, or any other type of historic property, the dredging supervisor shall notify the Corps of Engineers' Archeology Staff within 24 hours (Mr. Steve Dibble at 213-452-3849 or Mr. John Killeen at 213-452-3861). The dredging supervisor shall immediately suspend all work in any area(s) where potential cultural resources are discovered. The dredging shall not resume in the area surrounding, i.e., immediately adjacent to, the potential cultural resources until the Corps of Engineers re-authorizes dredging, per 36 C.F.R. § 800.13.

Comment 3: Even though a discovery may be in federal property, California Government Code §27460 should be followed in the event of an accidental discovery of human remains during any groundbreaking activity; in such cases California Government Code §27491 and California Health & Safety Code §7050.5 will apply and construction cease in the affected area.

Response 3: In the event of the discovery of human remains, construction would cease and Corps archeology staff would be notified to coordinate with the appropriate agencies.

COMMENT LETTER City of Imperial Beach (October 10, 2011)

See attached for comments in the form of e-mail correspondence, including the Corps' response to comments. Additional correspondence occurred via phone between Corps Lieutenant Colonel Steven Sigloch and City of Imperial Beach Mayor Jim Janney.

RECEIVED BY:

JAN 18 2012

PLANNING DIVISION



CITY OF CORONADO

1825 STRAND WAY
CORONADO, CA 92118

OFFICE OF CITY MANAGER
(619) 522-7335
FAX (619) 522-7846

January 12, 2012

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 5323711
Los Angeles, California 90053-2325

Re: Supplement Environmental Assessment for the San Diego Harbor Maintenance Dredging Project planned for 2012

Dear Ms. Jones:

The City of Coronado appreciates the opportunity to review and comment on the Supplemental Assessment prepared for the above mentioned project. We are pleased that cultural surveys were completed in 2009 allowing for this supplemental assessment to consider nearshore disposal off the City of Coronado. Both nearshore disposal off of Imperial Beach and Coronado would likely be a benefit to our local beaches and would be consistent with our policies and Local Coastal Plan.

During the course of our review of the Supplemental Assessment, a few questions and concerns arose and those comments are identified below.

1. Page 8, Section 1.5.8 indicates "the Coronado designated nearshore disposal site is the least-cost, environmentally acceptable disposal site for this maintenance dredging project." Just to clarify, does this mean it is the least preferred, or does this statement mean it has the least cost and least environmental issues associated with disposal? Perhaps this statement should be reworded for clarification. →

2. Page 10, Section 3.1 and Figure 4: Given that one of the purposes of the project is to, "provide beach nourishment material for downcast beaches severely eroded by littoral processes," (see Purpose and Need from Executive Summary) the City of Coronado requests that any disposal in the Coronado Beach Nearshore Disposal Area (Figure 4) be confined to the most southerly portion of said site. Disposal in this area of the site would likely benefit the beaches in greatest need of replenishment (south of the Hotel del Coronado in front the Coronado Shores (high rise condominiums) development. We are also sympathetic to the City of Imperial Beach's need for sand.



Ms. Jones
Page 2
January 12, 2012

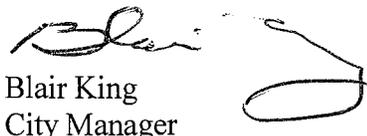
3. Pages 28, 29, and 44: The noise levels of the various equipment (Hopper Dredge or Clamshell and Scow) are not identified in the analysis. Rather, each agency's noise ordinances are specified and existing noise levels described with a statement that, "Any permits required by the City of San Diego, the City of Imperial Beach, and the City of Coronado Beach to dredge and dispose during nighttime hours and meet noise ordinances would be obtained by the selected Contractor." The City will not issue a permit that would allow for construction to occur in evening hours, which does not comply with local noise ordinances.

Page 44 notes "Dredging and disposal would occur for a maximum of 100 days, and noise levels would return to ambient conditions upon project completion; therefore, impacts would be temporary and not significant." The Environmental Assessment should be revised to identify the expected noise levels of the proposed equipment and analyzed for their potential impact on users of the beach, residential, hotel, and commercial uses adjacent to the shoreline. The equipment which generates the least amount of noise should be used. If the equipment generates noise that exceeds local standards, the environmental assessment should propose mitigation to offset impacts. For example, it may be necessary to limit nearshore disposal activities to 12 hours instead of 24 hours. The Environmental Assessment should clarify that the Corps will monitor noise levels to ensure compliance with local standards.

4. Page 55, Section 7.A notes "Prior to construction, the Corps will provide a 14-day notification of planned activities to appropriate agencies and post information bulletins of scheduled work time and areas at appropriate offices. Equipment will be appropriately marked and lighted." The City would encourage the Corps to complete additional public outreach by placing an article in the local *Coronado Eagle & Journal* newspaper and online citizen newsletters and websites before the project begins describing the project, construction hours and expected project duration. The City would also suggest that signs with contact phone numbers be posted along the public beach in the vicinity of the nearshore disposal site so the public will be informed of activities occurring off the coast.

Thank you in advance for your consideration of our comments. This project has been delayed several times and we are hopeful that the Corps is able to commence the project in 2012. Please feel to contact my office if you would like to discuss any of our comments.

Sincerely,


Blair King
City Manager

BK/mlc

cc: Mayor and Councilmembers

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net



December 27, 2011

Ms. Erin Jones, Environmental Planner

U.S. Department of the Army

P.O. Box 532711
Los Angeles, CA 90053-2325

Re: SCH#2011121080 NEPA Notice of Completion; proposed Environmental Assessment (EA) for the "San Diego Harbor Maintenance Dredging Project," located in the San Diego Harbor, Federal Channel; San Diego County, California

Dear Ms. Jones:

The Native American Heritage Commission (NAHC) is the California State 'Trustee Agency' pursuant to Public Resources Code §21070 for the protection of California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq*), 36 CFR Part 800.3, .5 and are subject to the Tribal and interested Native American consultation as required by the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470; Section 106 [f] 110 [f] [k], 304). The provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) and its implementation (43 CFR Part 10.2), and California Government Code §27491 may apply to this project if Native American human remains are inadvertently discovered.

The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts and the Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological, including Native American items at least equal to the California Environmental Quality Act (CEQA.). In most cases, federal environmental policy require that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Statement (EIS).

The NAHC conducted a Sacred Lands File (SLF) search of its Inventory and Native American Cultural Resources were not identified in the project area you specified; early and quality consultation with the Native American on the attached list may provide detailed information of sites with which they are aware. Also, the absence of archaeological resources does not preclude their existence. Even though no Native American cultural resources were identified in the NAHC search, this area is known to the California NAHC to contain substantial archaeological/Native American cultural resources.

The NAHC Sacred Lands File Inventory of the Native American Heritage Commission is established by the California Legislature pursuant to California Public Resources Code §§5097.94(a) and 5097.96. The NAHC Sacred Lands Inventory is populated by submission to the data by Native American tribes and Native American elders; In this way it differs from the California and National Register of Historic Places under the jurisdiction of the U.S. Secretary of

the Interior.

The NAHC, pursuant to Appendix B of the Guidelines to the California Environmental Quality Act (CEQA) is designated as the agency with expertise in the areas of issues of cultural significance to California Native American communities. Also, in the 1985 California Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

Culturally affiliated tribes are to be consulted to determine possible project impacts pursuant to the National Historic Preservation Act, as amended. Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. The NAHC recommends as part of 'due diligence', that you also contact the nearest Information Center of the California Historical Resources Information System (CHRIS) of the State Historic Preservation Office (SHPO) for other possible recorded sites in or near the APE (contact the Office of Historic Preservation at 916-445-7000).

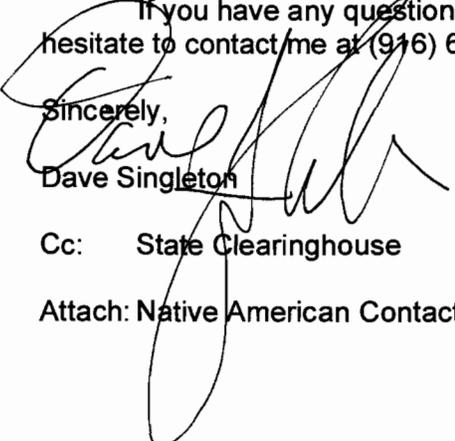
Attached is a list of Native American contacts is attached to assist you; they may have knowledge of cultural resources in the project area. It is advisable to contact the persons listed and seek to establish a 'trust' relationship with them; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

Lead agencies should consider avoidance, in the case of cultural resources that are discovered. A tribe or Native American individual may be the only source of information about a cultural resource; this is consistent with the NHPA (16 U.S.C. 470 *et seq* Sections. 106, 110, and 304) Section 106 Guidelines amended in 2009. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful

NEPA regulations provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Even though a discovery may be in federal property, California Government Code §27460 should be followed in the event of an accidental discovery of human remains during any groundbreaking activity; in such cases California Government Code §27491 and California Health & Safety Code §7050.5 will apply and construction cease in the affected area.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,


Dave Singleton

Cc: State Clearinghouse

Attach: Native American Contacts list

California Native American Contacts

San Diego County
December 27, 2011

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road Diegueno
Lakeside , CA 92040
sue@barona-nsn.gov
(619) 443-6612
619-443-0681

Viejas Band of Kumeyaay Indians
Anthony R. Pico, Chairperson
PO Box 908 Diegueno/Kumeyaay
Alpine , CA 91903
jrothau@viejas-nsn.gov
(619) 445-3810
(619) 445-5337 Fax

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
PO Box 1120 Diegueno/Kumeyaay
Boulevard , CA 91905
gparada@lapostacasino.
(619) 478-2113
619-478-2125

Kumeyaay Cultural Historic Committee
Ron Christman
56 Viejas Grade Road Diegueno/Kumeyaay
Alpine , CA 92001
(619) 445-0385

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
PO Box 365 Diegueno
Valley Center, CA 92082
allenl@sanpasqualband.com
(760) 749-3200
(760) 749-3876 Fax

Jamul Indian Village
Kenneth Meza, Chairperson
P.O. Box 612 Diegueno/Kumeyaay
Jamul , CA 91935
jamulrez@sctdv.net
(619) 669-4785
(619) 669-48178 - Fax

Sycuan Band of the Kumeyaay Nation
Danny Tucker, Chairperson
5459 Sycuan Road Diegueno/Kumeyaay
El Cajon , CA 92021
ssilva@sycuan-nsn.gov
619 445-2613
619 445-1927 Fax

Mesa Grande Band of Mission Indians
Mark Romero, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA 92070
mesagrandeband@msn.com
(760) 782-3818
(760) 782-9092 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009014006; NEPA Notic; proposed Environmental Assessment (EA) for the San Diego Harbor Maintenance Dredging Project; located in the San Diego Harbor; San Diego County, California.

California Native American Contacts

San Diego County
December 27, 2011

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775 Diegueno -
Pine Valley , CA 91962
(619) 709-4207

Ewiiapaayp Tribal Office
Will Micklin, Executive Director
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
wmicklin@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

Inaja Band of Mission Indians
Rebecca Osuna, Spokesperson
2005 S. Escondido Blvd. Diegueno
Escondido , CA 92025
(760) 737-7628
(760) 747-8568 Fax

Ewiiapaayp Tribal Office
Michael Garcia, Vice Chairperson
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
michaelg@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

Kumeyaay Cultural Repatriation Committee
Steve Banegas, Spokesperson
1095 Barona Road Diegueno/Kumeyaay
Lakeside , CA 92040
(619) 742-5587 - cell
(619) 742-5587
(619) 443-0681 FAX

Ipai Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 Diegueno/Kumeyaay
Santa Ysabel, CA 92070
cjlinton73@aol.com
(760) 803-5694
cjlinton73@aol.com

San Pasqual Band of Indians
Kristie Orosco, Environmental Coordinator
P.O. Box 365 Luiseno
Valley Center, CA 92082 Diegueno
(760) 749-3200
council@sanpasqualtribe.org
(760) 749-3876 Fax

Kumeyaay Diegueno Land Conservancy
M. Louis Guassac
P.O. Box 1992 Diegueno/Kumeyaay
Alpine , CA 91903
guassacl@onebox.com
(619) 952-8430

This list is current only as of the date of this document.

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This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009014006; NEPA Notic; proposed Environmental Assessment (EA) for the San Diego Harbor Maintenance Dredging Project; located in the San Diego Harbor; San Diego County, California.

California Native American Contacts
San Diego County
December 27, 2011

Inter-Tribal Cultural Resource Protection Council
Frank Brown, Coordinator
240 Brown Road Diegueno/Kumeyaay
Alpine, CA 91901
FIREFIGHTER69TFF@AOL.
(619) 884-8437

Kumeyaay Cultural Repatriation Committee
Bernice Paipa, Vice Spokesperson
P.O. Box 1120 Diegueno/Kumeyaay
Boulevard, CA 91905
(619) 478-2113

Campo Band of Mission Indians
Andrea Najera, Cultural Resources Manager
36190 Church Road, Suite 1 Diegueno/Kumeyaay
Campo, CA
(619) 478-9046
(619) 478-5818 - FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009014006; NEPA Notic; proposed Environmental Assessment (EA) for the San Diego Harbor Maintenance Dredging Project; located in the San Diego Harbor; San Diego County, California.

Jones, Erin L SPL

From: John, Scott M SPL
Sent: Wednesday, February 08, 2012 8:23 AM
To: Jones, Erin L SPL
Subject: FW: San Diego Harbor Maintenance Dredging (UNCLASSIFIED)

Follow Up Flag: Follow up
Flag Status: Flagged

Classification: UNCLASSIFIED
Caveats: NONE

Here's the City of IB correspondence that you requested.

Scott

-----Original Message-----

From: Greg Wade [mailto:gwade@cityofib.org]
Sent: Monday, October 10, 2011 16:34
To: John, Scott M SPL
Cc: Gary Brown; Jim Janney
Subject: RE: San Diego Harbor Maintenance Dredging (UNCLASSIFIED)

Scott ~

Both the Final Environmental Assessment (EA) and the Supplemental Environmental Assessment (SEA) for this project specifically state that the placement of the dredged sand "in the nearshore waters at Imperial Beach" is the "preferred alternative" for this project. This quite clearly summarizes the agreement between the Corps and the City of Imperial Beach that the sand for this project would be placed off Imperial Beach - an agreement that previously required NO financial participation by the City. Only after the Corps inquired about (but did not require) financial participation, did the City look to the Port for assistance. When the Port agreed to participate, it did so by explicitly requesting that the language regarding "incremental costs" be added to recital 10 in the MOA. This language, which was NOT INCLUDED IN THE ORIGINAL MOA LANGUAGE PROVIDED TO US BY THE ARMY CORPS, was expressly added by the Port (not the Corps) to ensure that its funds would only be used to benefit the City of Imperial Beach (it party because the Port and its tenants apparently already contribute to a harbor dredge maintenance fund). During the drafting of the MOA, there was never any mention of a Corps policy requiring that "incremental" costs associated with transporting the sand to Imperial Beach would have to be borne by the City. In fact, the word "incremental" is not found anywhere in the original draft MOA provided to the City by the Corps. To suggest now that this language was included in the MOA to express a Corps policy is not only inaccurate but it is also, in my opinion, somewhat disingenuous.

Beyond that, a fair argument could also be made that placing the dredged sand at the Coronado receiver site might not actually be the least-cost alternative. The Coronado receiver site is in an area known as the Zuniga Shoal which is a large area of sand that effectively piles up against the Zuniga jetty. Given its proximity to the Harbor Entrance and Approach Channel and the prevailing south-to-north longshore currents, it is highly likely that sand from the Zuniga Shoal actually spills into and contributes to the "shallowing" of the Harbor Approach and Entrance Channel, thereby contributing to the very maintenance issue the Corps is attempting to address. Placing another 500,000 cubic yards of sand in this area will very likely accelerate the rate at which the channel will fill by adding to an already massive shoal of beach sand almost directly adjacent to the Harbor Approach and Entrance Channel. Given the prevailing longshore currents, it is reasonable to expect that, relatively soon

after placement, much of this sand will spill back into the Channel, thereby accelerating the time-frame within which the channel will once again need to be dredged. In the long run, this will cost the Corps more money, not less. Given the proximity of the Coronado receiver site to the Harbor Entrance and Approach Channel, the longshore currents, the amount of sand already in this area and the amount of newly-dredged sand proposed for placement, the Corps would be unwise to assume that placing the dredged sand off Coronado would be the least-cost alternative. Placing the sand at Imperial Beach, though slightly more expensive in the near-term, would likely save money in the long-term. And, once again, placing the sand at Imperial Beach would have far greater beach replenishment benefits than would placing the sand at Coronado, where a wide, sandy beach already exists. As a partner to both the Coastal Sediment Task Force and the Coastal Sediment Management Working Group, the Corps should seek not only to meet its maintenance responsibilities with this project but it should also seek to maximize regional beach replenishment objectives. We urge the Corps, therefore, to heavily consider the short- versus long-term costs as well as the significantly greater beach replenishment benefits derived from placing the sand at Imperial Beach as opposed to Coronado.

Once again, we simply ask that the Corps uphold its previously agreed-upon commitment to the City of Imperial Beach to place the sand dredged for this project in the nearshore off Imperial Beach as contemplated in both the EA and SEA for the project.

Greg Wade
Community Development Director
City of Imperial Beach
Community Development Dept.
825 Imperial Beach Blvd.
Imperial Beach, CA 91932
Phone: (619) 628-1354 - Fax: (619) 424-4093 gwade@cityofib.org - www.cityofib.com

-----Original Message-----

From: John, Scott M SPL [mailto:Scott.M.John@usace.army.mil]
Sent: Wednesday, October 05, 2011 9:55 AM
To: Greg Wade
Subject: RE: San Diego Harbor Maintenance Dredging (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Greg -

We are not asking the City of Imperial Beach to contribute funds towards the maintenance dredging project. In the past, the city has expressed an interest in having sand that was dredged as a result of maintenance in the federal navigation channels in San Diego Harbor placed in their nearshore in order to benefit their local beaches. We are happy to accommodate this request, but cannot do so without being compensated for the extra cost of doing this work.

It states in the 10th recital of the contributed funds MOA that was executed between the City of Imperial Beach and the Los Angeles District of the U.S. Army Corps of Engineers on September 1st, 2010 that, "the Contributed funds shall be provided for the incremental costs of the Government transporting the materials from Coronado Beach to Imperial Beach".

The primary purpose of this project is to maintain the federal navigation channel in San Diego Harbor for safe navigation, not to place sand on local beaches. The federal government

would be spending roughly a half million dollars to place sand at Imperial Beach versus the least cost, environmentally acceptable disposal location, Coronado Beach. That directly impacts the amount of material that can be dredged out of the federal navigation channel. As you know, the San Diego Harbor project is dredged on an infrequent basis. The need to thoroughly dredge the entrance channel is greater than ever and a complete project will keep it maintained for many years hopefully.

I understand the city does not have funding to contribute at this time. If you still wish to have sand placed in the nearshore of Imperial Beach, perhaps alternates sources can be approached for funds as was the case in 2010.

Scott

Scott John
U.S. Army Corps of Engineers
213.452.3388 office
213.309.4807 cell

-----Original Message-----

From: Greg Wade [mailto:gwade@cityofib.org]
Sent: Tuesday, October 04, 2011 16:17
To: John, Scott M SPL
Cc: Gary Brown; Jim Janney
Subject: RE: San Diego Harbor Maintenance Dredging (UNCLASSIFIED)

Scott ~

Thanks for the information. The request that Imperial Beach "bear the cost" to have the sand for this project placed off Imperial Beach rather than Coronado, however, is very new and surprising information. After having gone through what we have with this project, including meeting with the Colonel to ensure that this sand would not be placed in an area (off Coronado) that neither wanted or needed the sand and, more importantly, would receive little if any beach replenishment benefit, it is quite surprising now, at this late date, to be advised that a financial contribution will be required in order to have the sand placed off Imperial Beach. When we were previously asked by the Corps to consider providing funding for the project, we were not advised that this was a requirement, rather, that it was simply a budget shortfall that necessitated the additional funding. When we successfully arranged to have the Port provide additional funding to help the project proceed, again we were not advised that this was a requirement or Corps policy. The City of Imperial Beach was only ever asked to consider a financial contribution in the interest of moving the project forward for the benefit of both the Corps and the City of Imperial Beach. And we did so in the interest of cooperation and mutual benefit.

At this point, all funding available to the City of Imperial Beach for beach replenishment purposes has been allocated to SANDAG's Regional Beach Sand Project II. Simply stated, the City has no money available to contribute to the Harbor Maintenance Dredge project. In light of this new information at this late date, I would ask that the Corps reconsider in the interest of moving forward with what we believed was an already mutually agreed-upon project.

Greg Wade
Community Development Director
City of Imperial Beach
Community Development Dept.
825 Imperial Beach Blvd.
Imperial Beach, CA 91932
Phone: (619) 628-1354 - Fax: (619) 424-4093 gwade@cityofib.org - www.cityofib.com

-----Original Message-----

From: John, Scott M SPL [mailto:Scott.M.John@usace.army.mil]
Sent: Tuesday, October 04, 2011 2:35 PM
To: Greg Wade
Subject: San Diego Harbor Maintenance Dredging (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Greg -

Here is the tentative timeline for the solicitation of a maintenance dredging contract for San Diego Harbor. We are planning the project so that it does not interfere with the SANDAG RBSP II project.

Advertise: 12/1/11
Bid Open: 1/15/12
Award: 1/30/12

The EA is being written to cover 550,000cy of material in the same area of the entrance channel that previous iterations of the project were proposing to dredge. The reason for the larger volume is because of the funding that we are planning to receive in FY12. The environmental window for this area is from April 1st to September 15th.

In order to place material in the nearshore of Imperial Beach versus Coronado Beach (the least cost, environmentally acceptable disposal location) we will need to setup a contributed funds MOA with the City of Imperial Beach. I will check to see if the 2010 MOA can be amended or if a new one will have to be created. There is approximately 450,000cy of material available in the entrance channel to dredge, although the amount actually dredged will depend on bid prices. Assuming a hopper dredge is used, our cost estimators calculated an incremental cost of \$1.47 per cubic yard to move the material the extra distance from Coronado Beach to Imperial Beach. The City of Imperial Beach will have to bear this cost if you wish to have material placed in your nearshore based on U.S. Army Corps of Engineers policy.

Please let me know how the city would like to proceed as we are starting to get the design together and will need to move on the MOA.

Scott

Scott John
U.S. Army Corps of Engineers
213.452.3388 office
213.309.4807 cell

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE