DRAFT

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

MODIFICATIONS TO THE SURFSIDE-SUNSET BEACH NOURISHMENT PROJECT STAGE 13

Orange County, California

Department of the Army
Los Angeles District Corps of Engineers

February 2022

FINDING OF NO SIGNIFICANT IMPACT

MODIFICATIONS TO THE SURFSIDE-SUNSET BEACH NOURISHMENT PROJECT STAGE 13 Orange County, California

The U.S. Army Corps of Engineers, Los Angeles District (USACE) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The Final Supplemental Environmental Assessment (SEA) dated **DATE OF SEA**, for the Surfside-Sunset Beach Nourishment Project, Stage 13 evaluates modification to the proposed project that had previously been addressed in a February 2019 Final Environmental Assessment (EA).

The Final SEA, incorporated herein by reference, evaluated various alternatives that would stabilize and nourish locally starved beaches between the Anaheim Bay East Jetty and Newport Pier to remediate beach erosion damage largely incident to existing Federal flood control, navigation, and defense projects. The modified proposed project is the recommended plan and includes:

- Surfside-Sunset Beach Nourishment: Dredging approximately 1.75 million cubic yards (mcy) of sand from an offshore borrow site with placement on Surfside-Sunset Beach to nourish the beach and act as a feeder for downcoast beaches. This represents an increase from 1.2 mcy in the 2019 Final EA. The placement area would cover approximately 65 acres. The proposed beach would be about 4,500 feet in length and between 350 and 900 feet in width. The proposed beach would be placed between 13 feet above and 13 feet below mean lower low water (MLLW). The contractor would be required to place sand using a method such as a diked, single-point discharge to minimize turbidity in the runoff water. The proposed borrow site for this project element is located approximately 7,000 feet offshore of Sunset Beach in approximately -45 to -55 feet MLLW of water and covers approximately 200 acres; 112 acres of which would be dredged. Approximately 10 feet of material would be dredged off the ocean floor. The dredging depth limit would be -65.0 feet MLLW.

- Newport Groin Field Nourishment: Approximately 100,000 cubic yards (cy) of sand would be backpassed from one area of the city of Newport Beach to the Newport Groin Field. This element remains the same as that described in the 2019 Final EA. The proposed borrow site for this project element is located adjacent to the Santa Ana River and extends approximately 3,800 feet alongshore towards the east, from 71st Street to 56th Street. The proposed borrow site would be a 10-foot-thick cut from the existing top of slope (+12 feet MLLW) to approximately +2 feet MLLW. The beach area cut would cover approximately 16 acres. The proposed fill site would be about 2,500 feet in length in four cells in the Newport Groin Field. The four cells are: 50th Street Cell = 800 feet (L) x 35 feet (W); 46th Street Cell = 600 feet (L) x 35 feet (W); 34th Street Cell = 950 feet (L) x 40 feet (W); and 30th Street Cell = 950 feet (L) x 45 feet (W). The fill would be spread out over 35-45 feet wide and match the existing top of slope (+12 feet MLLW)

and extend to approximately 0 feet MLLW. The contractor would establish a haul route along the seaward edge of the beach, maximizing the distance between the work and residences. The contractor would establish fencing to control public access to the work site. Access points through the work zone would be continuously manned by city of Newport Beach lifeguards.

In addition to a "no action" plan, three structural alternatives (Construct an Attached Breakwater; Construct Headland Parallel to Shore; Modify Seaward Side Slope near Anaheim Bay East Jetty), and beach nourishment alternatives were considered. All three structural alternatives were eliminated from consideration.

For all alternatives analyzed in detail, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the recommended plan are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Aesthetics	☒	☐	☐
Air quality	☒	☐	☐
Aquatic resources/wetlands	☒	☐	☐
Invasive species	☒	☐	☐
Fish and wildlife habitat	☒	☐	☐
Threatened/Endangered species/critical habitat	☒	☐	☐
Transportation	☒	☐	☐
Cultural resources	☐	☐	☒
Floodplains	☐	☐	☒
Hazardous, toxic & radioactive waste	☐	☐	☒
Hydrology	☒	☐	☐
Land use	☒	☐	☐
Navigation	☒	☐	☐
Noise levels	☒	☐	☐
Public infrastructure	☒	☐	☐
Socioeconomics	☒	☐	☐
Environmental justice	☒	☐	☐
Soils	☐	☐	☒
Tribal trust resources	☐	☐	☒
Water quality	☒	☐	☐
Climate change	☒	☐	☐
Recreation Uses	☒	☐	☐

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. Environmental commitments as detailed in the Final SEA will be implemented, as appropriate, to minimize impacts. The contractor shall implement a Water Quality Monitoring Plan at the dredge and beach placement sites. The contractor shall prepare a Western Snowy Plover Monitoring and Avoidance Plan that will be implemented following coordination with the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife (CDFW), and California Coastal Commission (CCC) prior to the start of construction. Beach placement will be limited to a diked, single-point placement site or similar methodology to minimize nearshore turbidity. Construction activity on the beach shall be restricted to the hours of 7:00 a.m. to 7:00 p.m., Monday thru Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. No beach grooming will be conducted on Sunday. This restriction does not apply to dredging activities or pumping of sand onto the beach.

Public review of the Draft SEA and FONSI was completed on **DATE DRAFT EA AND FONSI REVIEW PERIOD ENDED**. All comments submitted during the public review period were responded to in the Final SEA.

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the USACE determined that the recommended plan may affect but is not likely to adversely affect the following federally listed species: western snowy plover. The U.S. Fish and Wildlife Service (FWS) concurred with the USACE's determination on 11 October 2018.

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, the USACE determined that the recommended plan has no effect on historic properties.

Pursuant to the Clean Water Act of 1972, as amended, the discharge of dredged or fill material associated with the recommended plan has been found to be compliant with the section 404(b)(1) Guidelines (40 CFR 230). The Clean Water Act Section 404(b)(1) Guidelines evaluation is found in Appendix B of the Final SEA.

A water quality certification pursuant to section 401 of the Clean Water Act was obtained from the Santa Ana Regional Water Quality Control Board. All conditions of the water quality certification will be implemented to minimize adverse impacts to water quality.

A negative determination with the California Coastal Zone Management program pursuant to the Coastal Zone Management Act of 1972 was obtained from the California Coastal Commission. All conditions of the negative determination shall be implemented in order to minimize adverse impacts to the coastal zone.

The USACE has determined that recommended plan would not result in a substantial, adverse impact to Essential Fish Habitat (EFH). The USACE consulted with the National Marine Fisheries Service in accordance with supplemental consultation requirements.

All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives and coordination with appropriate agencies and officials has been completed. Based on this Final SEA, the reviews by other Federal, State, and local

agencies, Tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

_____
Date

_____
Julie A. Balten
Colonel, Corps of Engineers
Commanding

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1.0 INTRODUCTION

This document supplements the U.S. Army Corps of Engineers' (USACE) 2019 Final Environmental Assessment (EA) for Stage 13 of the Surfside-Sunset Beach Nourishment Project. Delays in obtaining construction funding has resulted in additional erosion of area beaches requiring supplemental dredged sands to restore beach widths. The 2019 Final EA analyzed the no action alternative and four action alternatives: Construct an Attached Breakwater; Construct Headland Parallel to Shore; Modify Seaward Side Slope near Anaheim Bay East Jetty; and beach nourishment (the Proposed Action). The selected plan was the Proposed Action. On February 8, 2019, the USACE's Los Angeles District Engineer signed a Finding of No Significant Impact (FONSI). Since that time, several modifications to the Proposed Action activities have occurred. Revisions include an increase in the volume of sand to be dredged from the borrow site and placed on to Surfside-Sunset Beach and revisions to the project schedule. The locations of the borrow site and beach fill remain the same. Dredging at the borrow site would cover a larger portion of the borrow site surface area to supply the increased volume and the nourished beach may be slightly wider in comparison to the current shoreline but to the same approximate depth and location originally proposed. All other Proposed Action elements remain the same and are not addressed in this Supplemental Environmental Assessment (SEA).

The purpose and scope of this SEA are limited to potential impacts that may occur as a result of those changes.

1.1 Proposed Project

1.1.1 Location. The overall project area is approximately 35 miles south of Los Angeles along the northern coastline of Orange County between the Anaheim Bay East Jetty and the Newport Pier (Figure 1). This coastal region is primarily sandy beaches, broken by low coastal cliffs in the Huntington Beach area.

1.1.2 Proposed Action. The Proposed Action as modified includes the following:

a. Surfside-Sunset Beach Nourishment: Dredging approximately 1.75 million cubic yards (mcy) of sand from an offshore borrow site and placed on Surfside-Sunset Beach to nourish the beach and act as a feeder for downcoast beaches (Figures 2 & 3). This represents an increase from 1.2 mcy in the 2019 Final EA. The placement area would cover approximately 65 acres. The proposed beach would be about 4,500 feet in length and between 350 and 900 feet in width (Figure 2). The proposed beach would be placed between 13 feet above and 13 feet below mean lower low water (MLLW, Figure 4). The contractor would be required to place sand using a method such as a diked, single-point discharge to minimize turbidity in the runoff water. The proposed borrow site for this project element is located approximately 7,000 feet offshore of Sunset Beach (Figure 3) in approximately -45 to -55 feet MLLW of water and covers approximately 200 acres. Approximately 10 feet of material would be dredged off the ocean floor. The dredging depth limit would be -65.0 feet MLLW. Approximately 108 acres would have been dredged under the 2019 Final EA. Increased volume raises this to a total of approximately 112 acres. The capacity of this site is approximately 2 mcy.

b. Newport Groin Field Nourishment: This element remains the same as that described in the 2019 Final EA.

1.1.3 Updated Timing of Project. Construction of the Surfside-Sunset Beach element is expected to start in fall/winter 2022. The equipment typically operates on a 24-hour basis; approximately 12,000 cy per day can be piped to the beach. Dredging for the Surfside-Sunset Beach nourishment portion is expected to take approximately five-six months. Construction of the sand backpass is expected to start in fall/winter 2022 and is estimated to take approximately 30 days. The equipment typically operates on a 12-hour basis between 7am – 7pm. Approximately 5,000 cy per day can be moved. Construction would be concurrent.

1.1.4 Staging Area. Staging areas remain unchanged from the 2019 Final EA.

1.1.5 Construction Equipment. Suitable material would be recovered just offshore Surfside-Sunset Beach. It is anticipated that a cutterhead suction dredge would be used to excavate the sand as described in the 2019 Final EA. Use of a hopper dredge to perform the work is also be assessed, although this is considered unlikely. It is possible that a hopper dredge with pump out capacity brought out from the east coast may be available to do this work as part of a USACE west coast dredging contract. Hopper dredges on the west coast do not have the pump out capacity needed to place sands directly onto beaches.

The sand backpass operation equipment will consist of conventional earthmoving equipment including bulldozers and scrapers.

1.2 Supplemental Environmental Assessment Process

This document has been prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321-4347); the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1500-1508)[1]; and the USACE's NEPA Regulations (33 CFR Part 230).

The SEA process follows a series of prescribed steps. The first, scoping, was completed in February 2021 to solicit comments from federal, state, and local agencies. The Draft SEA, the second step, is circulated for a 30-day review to concerned agencies, organizations and the interested public, during which interested parties may express their views concerning changes to the Proposed Action. The next step requires preparation of a Final SEA that incorporates and responds to comments received. The Final SEA will be furnished to all who commented on the Draft and be made available to others upon request. The final step is preparing a FONSI; if it is determined the federal action will not have a significant effect on the quality of the human environment. If it is determined the federal action will have a significant effect on the quality of the human environment, an environmental impact statement must be prepared.

[1] The new NEPA regulations issued by CEQ apply to NEPA processes begun after 14 Sep 2020, but federal agencies have discretion to apply the new NEPA regulations to on-going NEPA processes or proceed to apply the prior CEQ regulations. The NEPA process in this instance started before 14 Sep 2020, and the USACE has decided to proceed to apply the prior CEQ regulations.

1.3 Relationship to Environmental Protection Statutes, Plans, and Other Requirements

The USACE is required to comply with all pertinent federal laws and regulations; compliance is summarized in Table 1.

Table 1. Summary of Environmental Compliance

Statute	Status of Compliance
National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321 et seq., as amended; Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the NEPA (40 CFR 1500-1508) and USACE NEPA Implementing Regulations at 33 CFR Part 230 and guidance	The SEA will be completed and circulated for public review. Upon review of the Final SEA, the District Engineer will either issue a FONSI or require preparation of an EIS.
Clean Air Act, 42 U.S.C. 7401 et seq	Some of the contractor equipment (ancillary equipment/diesel engines for tug boats and/or crew boats; dredging equipment) may be subject to the requirement of obtaining an Air Pollution Control District Permit to Operate. The total direct and indirect emissions from the federal action are below applicability rates. Therefore, a conformity determination is not required.
Section 404 of the Clean Water Act, 33 U.S.C. 1344, USACE regulations at 33 CFR Part 336, and USEPA 404(b)(1) Guidelines at 40 CFR Part 230	A section 404(b)(1) analysis (Appendix B) has been prepared for the proposed discharges of dredged or fill material within waters of the U.S.
Section 401 of the Clean Water Act, 33 U.S.C. 1341	A Section 401 Water Quality Certification has been requested from the California Regional Water Quality Control Board, Santa Ana Region. Compliance is pending.
Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. 403	Not applicable.
Coastal Zone Management Act of 1972, 16 U.S.C. 1451 et seq; National Oceanic and Atmospheric Administration Federal Consistency Regulation With Approved Coastal Management Program Regulations at 15 CFR Part 930	A Negative Determination was prepared by the USACE and concurrence requested from the California Coastal Commission.
Section 7 of the Endangered Species Act of 1973, 16 U.S.C. 1536 and implementing regulations at 50 CFR Part 402	The USACE determined that the recommended plan may affect but is not likely to adversely affect western snowy plover. Informal consultation with the USFWS has been completed is in progress.
Migratory Bird Treaty Act, 16 U.S.C. 703-711	The USACE has determined that no species protected by the Migratory Bird Treaty Act will be impacted.
Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 33 U.S.C. 1413	Not applicable.
Marine Mammal Protection Act, 16 U.S.C. 1361 et seq	The USACE has determined that no species of marine mammal would be impacted.
Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1855(b) and implementing regulations at 50 CFR 600.905-930.	The USACE has determined that this project, as modified, would not result in a substantial, adverse impact to Essential Fish Habitat (EFH). The USACE will use the NEPA review process to fulfill the Supplemental EFH supplemental consultation requirements.
Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C. 3000100 et seq.) and implementing regulations at 36 CFR 800)	Per 36 CFR 800.3(a)(1), the proposed project, as modified, has no potential to cause effects, and therefore the agency official has no further obligations under Section 106 of the Act. An MFR is included in Appendix C. The USACE determined no historic properties would be affected. Consultation with the SHPO was accomplished during Stage 11 and completed 30 Jan 2001.
Executive Order 11593: Protection and Enhancement of the Cultural Environment, May 13, 1971	Not applicable.
Executive Order 12898, Environmental Justice in Minority and Low-Income Populations	There would be no impacts resulting from the Proposed Action, as modified, that would result in disproportionately high and adverse impacts to minority and low-income communities.

2 – HISTORY AND PURPOSE

2.1 Description of Project Area

The overall project area remains unchanged from the 2019 Final EA. It is approximately 35 miles south of Los Angeles along the northern coastline of Orange County between Anaheim Bay jetties and Newport Pier. This coastal region is primarily sandy beaches, broken by low coastal cliffs in the Huntington Beach area.

For purposes of this SEA, the specific project area for the Surfside-Sunset Beach Nourishment project element starts at the beach area immediately downcoast of the Anaheim Bay East Jetty and extends for approximately 1 mile (4,500 feet). Figure 2 depicts the overall project area and specific project boundaries. The proposed borrow site for this project element is located approximately 7,000 feet offshore of Sunset Beach (Figures 2 and 3) in approximately 45 to 55 feet of water and covers approximately 200 acres.

2.2 Project Background Information

2.2.1 Project History

The Project History remains the same as that described in the 2019 Final EA.

2.2.2 Project Authority

The Project Authority remains the same as that described in the 2019 Final EA.

2.2.3 Project Purpose and Need

The Project Purpose and Need remains the same as that described in the 2019 Final EA. Expanding on that statement is the following: This is also considered a mitigation project, designed as remediation for beach erosion damage largely incident to Federal flood control, navigation and defense projects, with the mitigation meant to last as long as necessary (outlined in House Document 602) and requires justification prior to each new cycle/Stage. Delays in obtaining construction funding has resulted in additional erosion of area beaches requiring supplemental dredged sands to restore beach widths.

2.2.4 Future-Planned Projects

Future project may include Stage 14 (approximately 2027) which would renourish Surfside-Sunset Beach (1.75 mcy of sand).

3.0 PROJECT ALTERNATIVES

3.1 Project Criteria

The project goal remains the same and is two-fold: to immediately stabilize and nourish locally starved beaches between the Anaheim Bay East Jetty and Newport Pier to provide additional storm damage protection and increase current recreation opportunities. To accomplish these goals, USACE engineers and planners have established evaluation criteria. The criteria are federal economic justification, technical feasibility and effectiveness for increasing shoreline stability/recreation opportunities, local and public acceptability, and minimization of potential environmental impacts.

3.2 Measures/Alternatives Considered

The USACE has considered the following measures and alternatives to meet primary goals of this project:

3.2.1 Structural (Modification) Alternatives

Construct an Attached Breakwater
Construct Headland Parallel to Shore
Modify Seaward Side Slope near Anaheim Bay East Jetty

Structural alternatives were determined to be unacceptable. Although this approach may provide long-term shoreline stabilization, it will not alleviate immediate concerns. Therefore, the three structural alternatives remain eliminated from further consideration as part of this project.

3.2.2 Beach Nourishment Alternatives

Beach nourishment alternatives would provide both adequate short-term, but not long-term, shoreline stabilization and nourishment to locally starved beaches and additional recreation opportunities from the construction of wider beaches. This alternative was determined the only feasible solution for meeting both project needs and criteria; thus, it is further developed below.

Historic and current profiles were used to determine beach areas requiring additional material. Studies determined the beach area immediately downcoast of the Anaheim Bay East Jetty are locally starved and require beachfill. Surfside-Sunset acts as a "feeder beach" i.e., sand placed in these areas will erode and distribute throughout the entire project area. Engineering studies recommend that approximately 1.75 mcy of material be placed on the beach immediately downcoast of the Anaheim Bay East Jetty. These studies also assessed potential borrow areas as a part of this project, which includes both offshore and onshore sites. Potential borrow sites and criteria are discussed below. Placement volume is generally limited to dredge and place 1.75 mcy this cycle, providing shoreline protection equivalent to past stages.

For a large beachfill, offshore sites are optimal so that beaches are not starved of their local sand source. The physical and chemical characteristics of the offshore source material must be compatible with the receiver beach. To minimize other impacts and costs, the preferred borrow site must be close to the receiver beach. The preferred borrow site for the Surfside-Sunset nourishment is identified on Figure 2; this is the closest site that will provide suitable quantities of compatible material based on geotechnical investigations for beachfill requirements.

The above analyses are consistent with earlier environmental documents: 1972 EIS for Surfside-Sunset and Newport Beach; 1978 EA for Surfside-Sunset; 1982 EA for Surfside-Sunset; 1989 EA for Surfside-Sunset; 1995 EA for Surfside-Sunset/Newport Beach, 2001 EA for Surfside-Sunset Beach Nourishment Project, Stage 11, a 2008 EA for Surfside-Sunset Beach Nourishment Project, Stage 12.

3.2.3 No Action Alternative

The No Action alternative is no increase in sediment volume to be placed on the beach. Under this alternative, the USACE would implement the Proposed Action as described in the 2019 Final EA. This alternative will be carried forward in the analysis for comparative purposes, pursuant with NEPA.

4.0 ENVIRONMENTAL INVENTORY AND CONSEQUENCES

The Affected Environment at the project site is generally as described in the 2019 Final EA (USACE, 2019). Significance criteria specified in the 2019 Final EA (USACE, 2019) remain the same. Consequences have been updated to reflect the longer construction period required for the increased volume of beach placement and the slightly larger area of the borrow site that would be affected.

4.1 Oceanography and Water Quality

4.1.1 Affected Environment

Water and sediment quality in the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019). A Sampling and Analysis Program was conducted in 2018, the material in the borrow area has been determined to be clean, beach-compatible sand. This determination was presented to the Southern California Dredged Material Management Team (SC-DMMT) on May 23, 2018, who concurred with the suitability determination. The USACE requested that the period of use for the Surfside-Sunset Beach Nourishment Project, Stage 13 borrow area sampling and analysis program be extended to a period of five years at a meeting of the SC-DMMT on February 24, 2021, who concurred with the proposed extension.

4.1.2 Environmental Consequences

4.1.2.1 Proposed Action (as modified)

Impacts to oceanography and water quality are as described in the 2019 Final EA (USACE, 2019) with the exception that impacts would extend for an additional month and include a slightly larger area at the borrow site.

4.1.2.2 No Action Alternative

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

Construction is not expected to cause short- or result in long-term significant adverse water quality impacts.

4.2 Marine Resources

4.2.1 Affected Environment

Marine resources in the dredge and placement areas are essentially as described in the 2019 Final EA (USACE, 2019).

4.2.1.1 Threatened and Endangered Species

The threatened and endangered species described in the 2019 Final EA remain the same; however, the USACE is adding discussion of green sea turtles.

Green sea turtle

The Navy, in collaboration with NMFS, has been implementing a green sea turtle satellite tagging study to help monitor and better understand impacts of the Navy actions on green sea turtles within the Anaheim Bay estuarine complex. Preliminary results from this effort indicate that habitat utilization is highest within the Seal Beach National Wildlife Refuge (SBNWR), but a limited number of forays have occurred in the adjacent nearshore area (Bredvik et al. 2019; Hanna et al. 2020). Tagging study results indicate limited use of shallow nearshore habitat in East San Pedro Bay, which harbors eelgrass habitat in various locations. In addition, preliminary tagging study results also indicate limited movements adjacent to the proposed borrow site. Only two turtles of the sixteen tagged turtles swam into the outer bay. It appears that turtles predominately stay in the estuarine complex mentioned above and only rarely swim into the outer bay. Presence of green sea turtle is unlikely at the borrow site or placement areas.

4.2.2 Environmental Consequences

4.2.2.1 Proposed Action (Modified)

Impacts to marine resources are as described in the 2019 Final EA (USACE, 2019) with the exception that impacts would extend for an additional month and include slightly larger area at the borrow site.

Essential Fish Habitat

The USACE has determined that the modified Proposed Action, including the additional construction time, slightly larger borrow site area, and beach placement volume, will not result in any substantial, adverse impacts to any species managed under the Coastal Pelagic Species Management Plan, Pacific Coast Groundfish Fishery Management Plan, or their habitat. Impacts, such as turbidity associated with dredging and placement of dredged materials would be temporary and insignificant.

Threatened and Endangered Species

Impacts to threatened and endangered species are as described in the 2019 Final EA (USACE, 2019) with the exception that the construction period would extend for an additional month and include a slightly larger area at the borrow site. The proposed monitoring and avoidance plan for western snowy plover would be prepared and implemented as described in the 2019 Final EA.

Additional environmental commitments have been included as part of the Proposed Action, as modified, to ensure project activities do not affect green sea turtle. See 4.2.3 below.

4.2.2.2 No Action alternative.

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

4.2.3 Environmental Commitments

Environmental commitments are as described in the 2019 Final EA (USACE, 2019) with the addition of the following measures to ensure project activities do not affect green sea turtle. A monitoring and avoidance plan will be prepared, in coordination with the NMFS, to ensure that green sea turtles are not affected including the following measures.

• During dredging, a 100-foot (visually estimated) monitoring zone around the dredge shall be implemented. Green sea turtle monitoring is not required for the transportation of material between dredging and disposal sites.

• Visual monitoring of the monitoring zone (visually estimated) shall commence at least 15 minutes prior to the beginning of in-water construction activities and after each break of more than 30 minutes. If a green sea turtle is observed within the monitoring zone, all in-water project activities shall cease as soon as possible, in consideration of worker safety. Project activities shall not commence or continue until the green sea turtle has either been observed having left the monitoring zone, or at least 15 minutes have passed since the last sighting whereby it is assumed the green sea turtle has voluntarily left the monitoring zone.

• The visual monitor shall maintain a written log containing all observations of green sea turtles including:

1) Observer name and title;
2) Type of activity (dredging, etc.);
3) Date and time animal first observed (for each observation);
4) Date and time observation ended (for each observation), including if the green sea turtle was observed exiting the monitoring zone or was assumed to have exited following a 15-minute period of no observation;
5)Location of observer (latitude/longitude), direction, and estimated distance to green sea turtle;
6) Nature and duration of equipment shutdown.

• The green sea turtle observation log shall be provided by the visual monitor to the USACE and NMFS within a reasonable time after completion of construction. Any observations involving potential take of green sea turtle shall be reported to the USACE and NMFS within 24 hours.

• Adequate lighting will be provided during nighttime operations to allow the monitor to observe the surrounding area effectively.

• The visual monitor will be trained in how to conduct visual monitoring and in the identification of green sea turtles by the Biological Monitor proposed for monitoring hopper dredge operations.

• The Contractor will implement an Environmental Protection Plan that will include a green sea turtle Monitoring and Avoidance Plan and an employee training program on green sea turtle observation protocols, avoidance, and minimization measures. The training program will be conducted by the Biological Monitor and a record kept of dates of training, names, and positions of attending employees, and an outline of the training presentation.

Construction is not expected to cause short- or result in long-term significant adverse marine resource impacts.

4.3 Air Quality

4.3.1 Affected Environment

Air quality in the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019).

4.3.2 Environmental Consequences

4.3.2.2 Proposed Action (Modified)

Impacts to air quality are as described in the 2019 Final EA (USACE, 2019) with the exception that impacts would extend for an additional month. While emissions may extend into calendar year 2023, this evaluation treats them as occurring during the same calendar year as a conservative measure. If emissions were split over two calendar years total emissions per year would be reduced.

Air emissions calculations for this project are provided in Appendix D. Results are provided in Tables 2and 3.

Table 2. Construction Air Emissions for Hydraulic Dredging

	VOC	CO	NO2	SOx	PM10	PM2.5	NOx
Peak Daily Emissions pounds)	12.6	56.6	27.5	25.1	7.0	7.1	27.5
Total Project Emissions (tons)	1.0	2.8	2.2	1.5	0.5	0.5	2.2
Applicability Rates (tons/year)	10	100	100	NA	100	70	10

SOx is in attainment in the SCAB, thus there are no applicability rates for this pollutant.

Table 3. Construction Air Emissions for Hopper Dredging

	VOC	CO	NO2	SOx	PM10	PM2.5	NOx
Peak Daily Emissions pounds)	57.6	623.8	216.8	17.2	33.7	33,3	216.8
Total Project Emissions (tons)	5.1	53.8	19.2	0.8	3.0	3.0	19.2
Applicability Rates (tons/year)	10	100	100	NA	100	70	10

SOx is in attainment in the SCAB, thus there are no applicability rates for this pollutant.

GHG Emissions. GHG emissions were estimated for the project. GHG emissions are provided in Table 4. Calculations are shown in Appendix D.

Table 4. Total GHG Emissions	
	Total Equivalent CO2
Daily Emissions (lbs/day)	24.3
Total Project Emissions (tons)	1.2

Further review of GHG emissions from the Proposed Action, as modified, is not warranted.

4.3.2.2 No Action alternative.

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

The Proposed Action will not: 1. Cause or contribute to any new violation of a standard in any area; 2. Increase the frequency or severity of any existing violation of any standard in any area; or 3. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. In the unlikely event that a hopper dredge is used, this would trigger the requirement for a General Conformity Determination.

Significant adverse air impacts are not expected.

4.3.2.3 Environmental Commitments to Reduce Air Emissions

- Construction equipment will be properly maintained to reduce emissions. These reduction measures are the same as described in the 2019 Final EA for the Proposed Action.

The inclusion of these measures will reduce emissions to the maximum extent feasible.

4.4 Noise

4.4.1 Affected Environment

Noise in the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019).

4.4.2 Environmental Consequences

4.4.2.1 Proposed Action (Modified)

Impacts to noise are as described in the 2019 Final EA (USACE, 2019) with the exception that impacts would extend for an additional month. The Proposed Action, as modified, includes environmental commitments intended to reduce noise impacts. See 4.4.3 below.

Although short-term adverse noise impacts may occur, these impacts will not be significant. Long-term impacts will not occur.

4.4.2.2 No Action Alternative

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

4.4.3 Environmental Commitments

The following environmental commitments would be implemented to reduce noise as much as possible: all construction equipment shall be properly maintained and tuned to minimize noise emissions; and all equipment shall be fitted with properly operating mufflers, air intake silencers, and engine shrouds. These noise reduction measures are the same as described in the 2019 Final EA for the Proposed Action.

4.5 Cultural Resources

4.5.1 Affected Environment

Cultural resources in the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019).

4.5.2 Environmental Consequences

4.5.2.1 Proposed Action (Modified)

Impacts to cultural resources are as described in the 2019 Final EA (USACE, 2019).

4.5.2.2 No Action alternative.

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

Significant adverse impacts to cultural resources are not expected.

4.6 Recreation Uses

4.6.1 Affected Environment

Recreation uses in the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019).

4.6.2 Environmental Consequences

4.6.2.1 Proposed Action (Modified)

Impacts to recreation uses are as described in the 2019 Final EA (USACE, 2019) with the exception that construction impacts would extend for an additional month and include a slightly larger area at the borrow site. The Proposed Action, as modified, includes environmental commitments intended to reduce impacts to recreation. See 4.6.3 below.

4.6.2.2 No Action Alternative

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

No significant adverse recreation use impacts are expected. Short-term impacts will be adverse; long term, beneficial.

4.6.3 Environmental Commitments

These environmental commitments are the same as described in the 2019 Final EA for the Proposed Action.

4.7 Ground Transportation

4.7.1 Affected Environment

Ground transportation in the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019).

4.7.2 Environmental Consequences

4.7.2.1 Proposed Action (Modified)

Impacts to ground transportation are as described in the 2019 Final EA (USACE, 2019) with the exception that impacts would extend for an additional month.

4.7.2.2 No Action Alternative

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

Significant adverse ground transportation impacts are not expected.

4.8 Vessel Transportation and Safety

4.8.1 Affected Environment

Vessel transportation and safety in the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019).

4.8.2 Environmental Consequences

4.8.2.1 Proposed Action (Modified)

Impacts to vessel transportation and safety are as described in the 2019 Final EA (USACE, 2019) with the exception that impacts would extend for an additional month and include a slightly larger area at the borrow site.

4.8.2.2 No Action Alternative

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

No significant adverse vessel safety impacts are expected.

4.9 Aesthetics

4.9.1 Affected Environment

Aesthetics of the dredge and placement areas are as described in the 2019 Final EA (USACE, 2019).

4.9.2 Environmental Consequences

4.9.2.1 Proposed Action(Modified)

Impacts to aesthetics are as described in the 2019 Final EA (USACE, 2019) with the exception that impacts would extend for an additional month and include a slightly larger area at the borrow site.

4.9.2.2 No Action Alternative

Impacts are the same as described in the 2019 Final EA for the Proposed Action.

Aesthetic impacts will be temporary and adverse, but not significant.

5.0 ENVIRONMENTAL COMPLIANCE AND COMMITMENTS

5.1 Compliance

5.1.1 National Environmental Compliance Act of 1969 (Public Law (PL) 91-190); National Environmental Policy Act (NEPA) of 1969 (42 USC 4321 et seq.); Council on Environmental Quality Regulations for Implementing NEPA, 40 CFR Parts 1500 to 1508; USACE Regulations for Implementing NEPA, 33 CFR Part 230.

The National Environmental Compliance Act includes the improvement and coordination of Federal plans to attain the widest range of beneficial uses of the environment and to achieve a balance between population and resource use permitting high standards of living and a wide sharing of life's amenities.

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. The proposed action and several alternatives are evaluated in relation to their environmental impacts, and a tentative selection of the most appropriate alternative is made.

This SEA has been prepared to address impacts and develop mitigation (if warranted) associated with modifications to the Proposed Action. Similar to the EIS process, the Draft SEA is circulated for public review and appropriate resource agencies, environmental groups, and other interested parties provide comment on document adequacy. Comment responses are incorporated into the Final SEA and the USACE District Engineer signs a FONSI, if it is determined the Federal action will not have a significant impact on the quality of the human environment. Subsequently, the Final SEA and FONSI are made available to the public. If it is determined the Federal action will have a significant impact upon the quality of the human environment, an EIS must be prepared.

5.1.2 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. The major sections of the CWA that apply to the proposed project is Section 401, which requires certification that the discharges comply with the State Water Quality Standards for actions within state waters, and Section 404(b)(1), which establishes guidelines for discharge of dredged or fill materials into an aquatic ecosystem. Although Sections 401 and 404(b)(1) of the CWA apply, by their own terms, only to applications for Federal permits, the USACE has, by regulation, made them applicable to their own projects. This policy is set out in USACE regulations at 33 CFR Part 336. Section 336.1(a) of that regulation states, "Although the USACE does not process and issue permits for its own activities, the USACE authorizes its own discharges of dredge or fill material by applying all applicable substantive legal requirements, including public notice, opportunity for public

hearing, and application of the Section 404(b)(1) guidelines." The USACE has applied for a Section 401 Water Quality Certification and prepared a Section 404(b)(1) Analysis for the proposed project, as modified. A copy of the 404(b)(1) Evaluation is included in Appendix B in this Draft SEA. Compliance is pending.

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

Under ESA Section 7(a)(2), each federal agency must ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of the species' designated critical habitat (16 U.S.C. § 1536(a)(2)). If an agency determines that its actions "may affect" a listed species or its critical habitat, the agency must conduct informal or formal consultation, as appropriate, with either the USFWS or the NMFS, depending on the species at issue (50 C.F.R. §§402.01, 402.14(a)– (b)). If, however, the action agency independently determines that the action would have "no effect" on listed species or critical habitat, the agency has no further obligations under the ESA.

Western snowy plover may occur on the placement site beach. The USACE determined the Proposed Action, as modified, may affect but is unlikely to adversely affect western snowy plover. A monitoring and avoidance plan will be prepared, in coordination with the USFWS, CDFW, and CCC to ensure that western snowy plovers are not harassed or injured. Informal consultation with the USFWS is in progress.

The USACE has determined the modified Proposed Action, which includes environmental commitments described in 4.2.3 above, would have no effect on green sea turtles. These measures were discussed with NMFS by telephone on August 27, 2021. Consultation is not required.

5.1.4 Coastal Zone Management Act of 1976 (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 USACE has prepared and received concurrence from the California Coastal Commission for the necessary negative determination (ND-0033-18, September 28, 2018) for the original project. A similar request will be made for the modified project. Compliance with this Act is pending.

5.1.5 Clean Air Act of 1969, as amended (42 USC 7401 et seq

Air quality regulations were first promulgated with the Clean Air Act (CAA). 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.

The CAA established the NAAQS and delegated enforcement of air pollution control to the states. In California, the Air Resources Board (ARB) has been designated as the state agency responsible for regulating air pollution sources at the state level. The ARB, in turn, has delegated the responsibility of regulating stationary emission sources to local air pollution control or management districts that, for the proposed project, is the South Coast Air Quality Management District (SCAQMD).

The CAA states that all applicable federal and state ambient air quality standards must be maintained during the operation of any emission source. The CAA also delegates to each state the authority to establish their own air quality rules and regulations. State adopted rules and regulations must be at least as stringent as the mandated federal requirements. In states where the NAAQS are exceeded, the CAA requires preparation of a State Implementation Plan (SIP) that identifies how the state will meet standards within timeframes mandated by the CAA.

The 1990 CAA established new nonattainment classifications, new emission control requirements, and new compliance dates for areas presently in nonattainment of the NAAQS, based on the design day value. The design day value is the fourth highest pollutant concentration recorded in a 3-year period. The requirements and compliance dates for reaching attainment are based on the nonattainment classification.

One of the requirements established by the 1990 CAA was an emission reduction amount, which is used to judge how progress toward attainment of the ozone standards is measured. The 1990 CAA requires areas in nonattainment of the NAAQS for ozone to reduce basin wide VOC emissions by 15 percent for the first 6 years and by an average 3 percent per year thereafter until attainment is reached. Control measures must be identified in the SIP, which facilitates reduction in emissions and show progress toward attainment of ozone standards.

The 1990 CAA states that a federal agency cannot support an activity in any way unless it determines the activity will conform to the most recent EPA-approved SIP. This means that Federally supported or funded activities will not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any standard; or (3) delay the timely attainment of any standard or any required interim emission reductions or other milestones in any area. In accordance with Section 176 of the 1990 CAA, the EPA promulgated the final conformity rule for general Federal actions in the November 30, 1993 and revised the regulations effective July 6, 2010.

Project NOx emissions are not expected to equal or exceed the general conformity applicability rates with use of a hydraulic dredge. However, NOx emissions are expected to exceed the general conformity applicability rates with use of a hopper dredge. This is unlikely. A general conformity determination is not required if a hydraulic dredge is used. A general conformity determination would be required in the unlikely event that a hopper dredge is used and would be

conducted. Therefore, the project is consistent with the SIP and meets the requirements of Section 176(c).

5.1.6 National Historic Preservation Act of 1966, as amended (54 USC 3000100 et seq.)

The purpose of the National Historic Preservation Act (NHPA) is to preserve and protect historic and prehistoric resources that may be damaged, destroyed, or made less available by a project. Under this Act, federal agencies are required to identify cultural or historical resources that may be affected by a project and to consult with the State Historic Preservation Officer (SHPO) when a federal action may affect cultural resources.

The USACE has determined that Stage 13 does not have the potential to cause effects to National Register eligible or listed properties. The current project will be in compliance with Section 106 of the National Historic Preservation Act pursuant to 36 CFR 800.

If previously unknown cultural resources are identified during project implementation, all activity will cease until requirements of 36 CFR 800.13, *Discovery of Properties During Implementation of an Undertaking*, are met.

5.1.7 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) requires the USACE to consult with the U. S. Fish and Wildlife Service whenever the waters of any stream or other body of water are proposed to be impounded, diverted, or otherwise modified. Coordination efforts will continue in order to fulfill the requirements of the FWCA; at this time, we are in full compliance with its provisions.

5.1.8 Magnuson-Stevens Fishery Conservation and Management Act, as amended

The SEA contains an EFH Assessment as required by the Magnuson-Stevens Act. Although construction will occur within Essential Fish Habitat, the USACE has determined that the proposed project would not result in a substantial, adverse impact. In compliance with the coordination and supplemental consultation requirements of the Act, the USACE has reinitiated consultation with NMFS. Compliance with the Act is pending.

5.1.9 Executive Order 12898. Environmental Justice

E.O. 12898 focuses Federal attention on the environment and human health conditions of minority and low-income communities and calls on agencies to achieve environmental justice as part of its mission. The order requires the USEPA and all other Federal agencies (as well as state agencies receiving Federal funds) to develop strategies to address this issue as part of the NEPA process. The agencies are required to identify and address, as appropriate, any disproportionately high and adverse human health or environmental impacts of their programs, policies, and activities on minority and low-income populations. The order makes clear that its provisions apply fully to programs involving Native Americans. The CEQ has oversight

responsibility for the Federal government's compliance with E.O. 12898 and NEPA. The CEQ, in consultation with the USEPA and other agencies, has developed guidance to assist Federal agencies with their NEPA procedures so that environmental justice concerns are effectively identified and addressed. According to the CEQ's Environmental Justice Guidance Under the National Environmental Policy Act, agencies should consider the composition of the affected area to determine whether minority populations or low-income populations are present in the area affected by the proposed action, and if so whether there may be disproportionately high and adverse human health or environmental impacts (CEQ 1997).

An analysis of demographic data was conducted to derive information on the approximate locations of low-income and minority populations in the affected area. This analysis was performed using the USEPA's Environmental Justice Screening and Mapping Tool (EJSCREEN; EPA 2020). Because the analysis considers disproportionate impacts, two areas must be defined to facilitate comparison between the area directly affected and a larger regional area that serves as a basis for comparison and includes the area actually affected. The larger regional area is defined as the smallest political unit that includes the affected area and is called the community of comparison. For purposes of this analysis, the affected area is an approximate one-mile radius around the project area. The community of comparison is the city of Sunset Beach. E.O. 12898 defines a minority as an individual belonging to one of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. A minority population, for the purposes of this environmental justice analysis, is identified when the minority population of the potentially affected area is greater than 50 percent or the minority population is meaningfully greater than the general population or other appropriate unit of geographic analysis. The E.O. does not provide criteria to determine if an affected area consists of a low-income population. For purposes of this SEA, the CEQ criterion for defining low-income population has been adapted to identify whether or not the population in an affected area constitutes a low-income population. An affected geographic area is considered to consist of a low-income population (i.e., below the poverty level, for purposes of this analysis) where the percentage of low-income persons: 1) is greater than 50%, or 2) is meaningfully greater than the low-income population percentage in the general population or other appropriate unit of geographic analysis.

USEPA's EJScreen tool was used to obtain the study area demographics. Table 5 provides a summary of the study area demographics, complete EJScreen Reports can be found in Appendix E.

Table 5. Study Area Demographics

Demographic Affected	Affected Area	State	City of Sunset Beach
Minority Population	28%	62%	30%
Low-income Population	11%	33%	13%

The affected area does not contain a high concentration of a minority or low-income population. The percentage in the affected area for either population does not exceed 50% and is well below state of California populations and is not meaningfully greater than the community of

comparison. The Proposed Action, as modified, is in compliance. There would be no impacts resulting from the Proposed Action, as modified, that would result in disproportionately high and adverse impacts to minority and low-income communities.

5.2 Environmental Commitments

Environmental commitments are as described in the Final EA (USACE, 2019) with the addition of the following measures to ensure project activities do not affect green sea turtle. A monitoring and avoidance plan will be prepared, in coordination with the NMFS, to ensure that green sea turtles are not affected including the following measures.

• During dredging, a 100-foot (visually estimated) monitoring zone around the dredge shall be implemented. Green sea turtle monitoring is not required for the transportation of material between dredging and disposal sites.

• Visual monitoring of the monitoring zone (visually estimated) shall commence at least 15 minutes prior to the beginning of in-water construction activities and after each break of more than 30 minutes. If a green sea turtle is observed within the monitoring zone, all in-water project activities shall cease as soon as possible, in consideration of worker safety. Project activities shall not commence or continue until the green sea turtle has either been observed having left the monitoring zone, or at least 15 minutes have passed since the last sighting whereby it is assumed the green sea turtle has voluntarily left the monitoring zone.

• The visual monitor shall maintain a written log containing all observations of green sea turtles including:

1) Observer name and title;
2) Type of activity (dredging, etc.);
3) Date and time animal first observed (for each observation);
4) Date and time observation ended (for each observation), including if the green sea turtle was observed exiting the monitoring zone or was assumed to have exited following a 15-minute period of no observation; Location of observer (latitude/longitude), direction, and estimated distance to green sea turtle;
5) Nature and duration of equipment shutdown.

• The green sea turtle observation log shall be provided by the visual monitor to the USACE and NMFS within a reasonable time after completion of construction. Any observations involving potential take of green sea turtle shall be reported to the USACE and NMFS within 24 hours.

• Adequate lighting will be provided during nighttime operations to allow the monitor to observe the surrounding area effectively.

• The visual monitor will be trained in how to conduct visual monitoring and in the identification of green sea turtles by the Biological Monitor proposed for monitoring hopper dredge operations.

• The Contractor will implement an Environmental Protection Plan that will include a green sea turtle Monitoring and Avoidance Plan and an employee training program on green sea turtle observation protocols, avoidance, and minimization measures. The training program will be conducted by the Biological Monitor and a record kept of dates of training, names, and positions of attending employees, and an outline of the training presentation.

6.0 CUMULATIVE IMPACT ANALYSIS

NEPA requires that cumulative impacts of the proposed action be analyzed and disclosed. Cumulative impacts are impacts on the environment that would result from the incremental effect of the proposed action when combined with other past, present, and reasonably foreseeable planned and proposed actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. Geographic scope of this analysis is the proposed borrow area and the beach placement area.

Cumulative impacts remain unchanged from the 2019 Final EA (USACE, 2019) with the exception that construction impacts would occur over an additional month and include a slightly larger area at the borrow site.

7.0 REFERENCES

Bredvik, Jessica J.; Graham, Suzanne E.; Saunders, Brendan P. 2019. Green Sea Turtle Satellite Tagging in Support of Naval Weapons Station Ammunition Pier and Turning Basin. Prepared for Naval Facilities Engineering Command (NAVFAC) Southwest. Submitted to National Marine Fisheries Service, California, September 2019.

Hanna, M.E., J. Bredvik, S.E. Graham, B. Saunders, J.A. Seminoff, T. Eguchi and C. Turner Tomaszewicz. 2020. Movements and habitat use of green sea turtles at the Seal Beach National Wildlife Refuge, CA. Prepared for Naval Weapons Station Seal Beach, California, September 2020.

USACE (U.S. Army Corps of Engineers, Los Angeles District), 2019. Final Environmental Assessment Surfside-Sunset Beach Nourishment Project, Stage 13.

8.0 ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
ARB	Air Resources Board
CAA	Clean Air Act
CEQ	Council on Environmental
CoE	Chief of Engineers
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
cy	cubic yard
dB	decibel
dBA	decibel (A weighted scale)
DO	dissolved oxygen
EA	Environmental Assessment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
Final EA	Final Environmental Assessment
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
USACE	U.S. Army Corps of Engineers, Los Angeles District
MLLW	mean lower low water
mcy	million cubic yards
NEPA	National Environmental Policy Agency
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
SBNWS	Seal Beach Naval Weapons Station
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
USFWS	U.S. Fish and Wildlife Service

9.0 PREPARERS/REVIEWERS

9.1 Preparers

Larry Smith	USACE, Ecologist, Environmental Policy Group
John Hale	USACE, Archeologist, Regional Planning Section

9.2 Reviewers

Chuck Mesa	USACE, Coastal Engineering
Susie Ming	USACE, Programs and Project Management
Tiffany Bostwick	USACE, Chief Environmental Resources Branch
Hayley Lovan	USACE, Chief, Ecosystem Planning Section
John Hale	USACE, Archeologist, Regional Planning Section

Figures

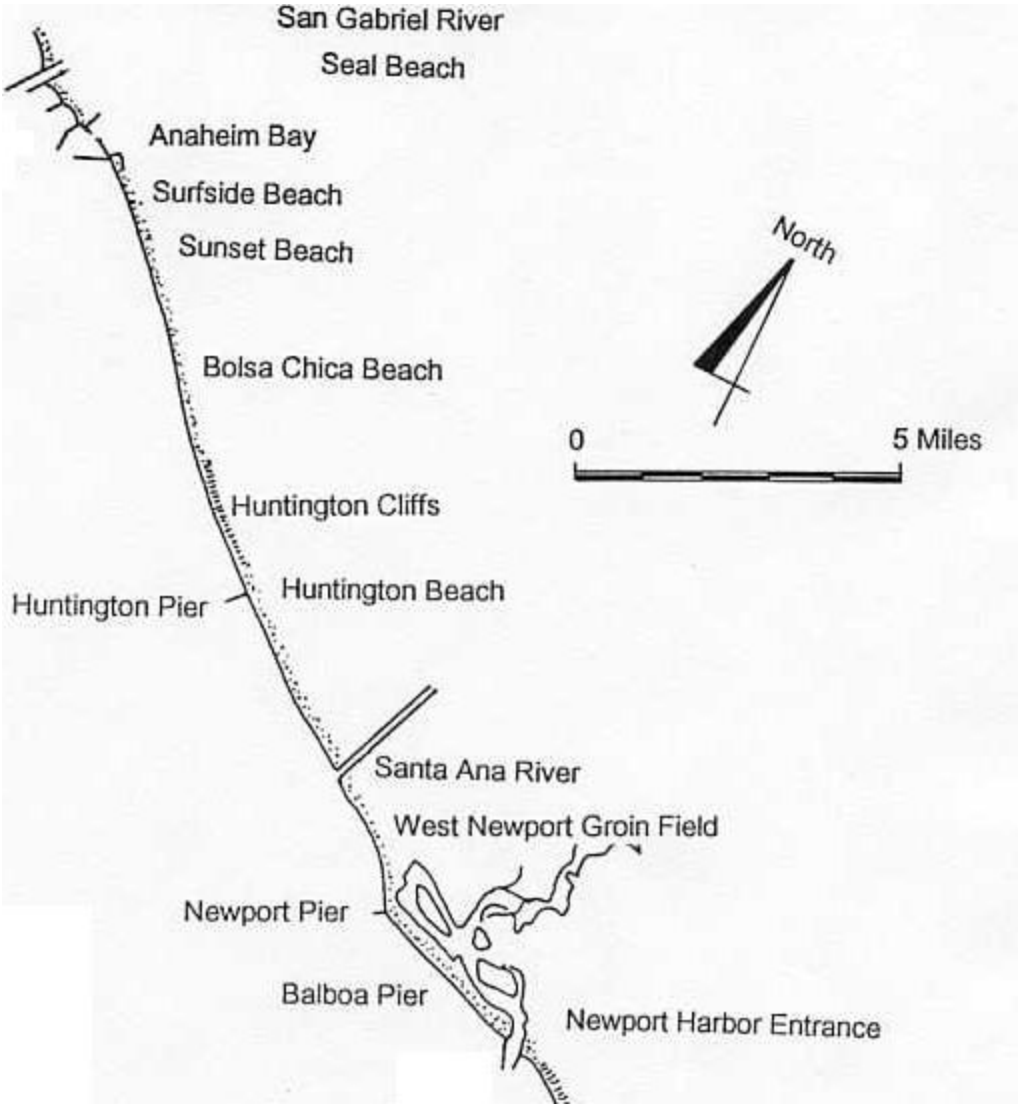


Figure 1. Vicinity Map

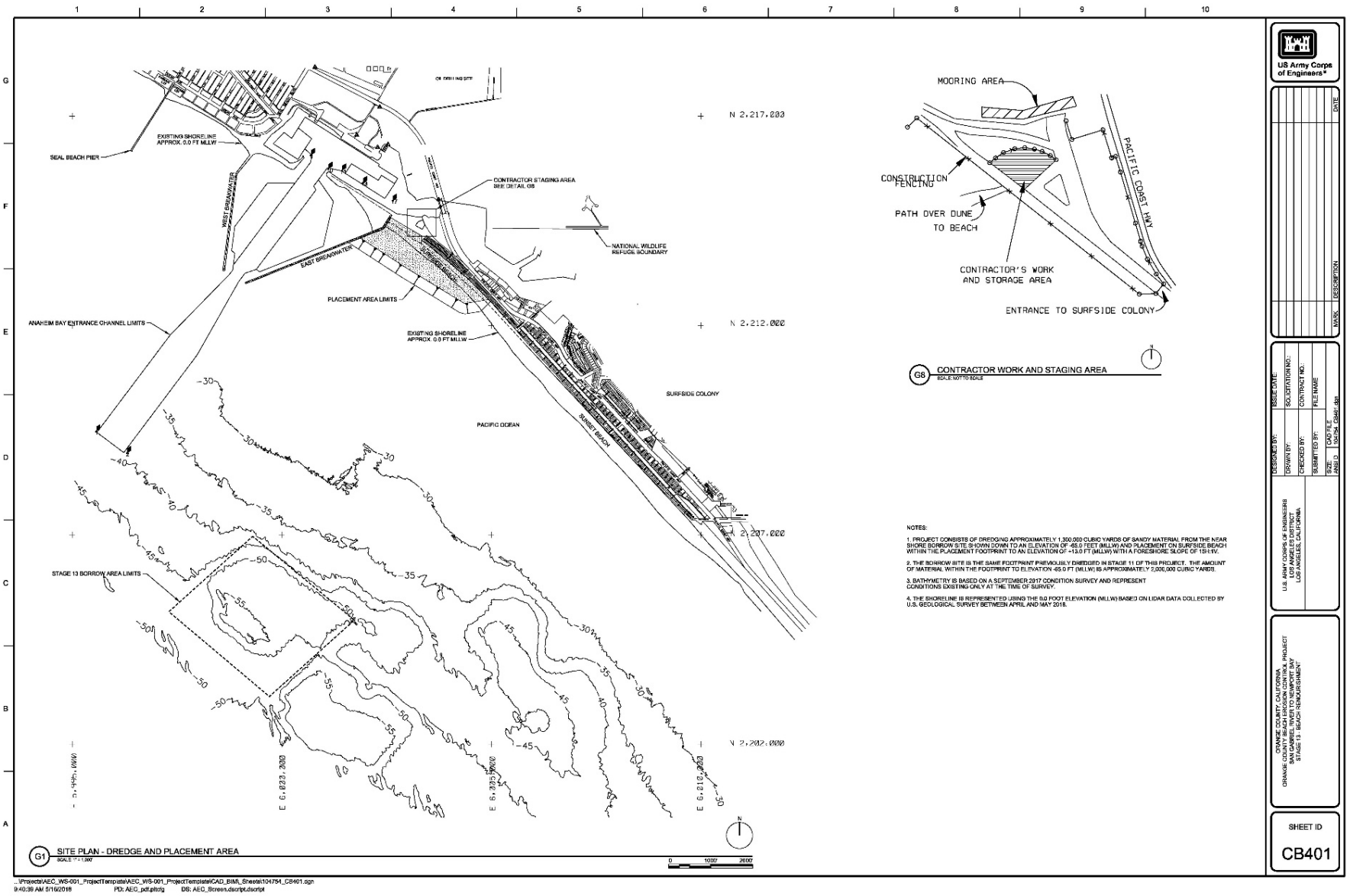
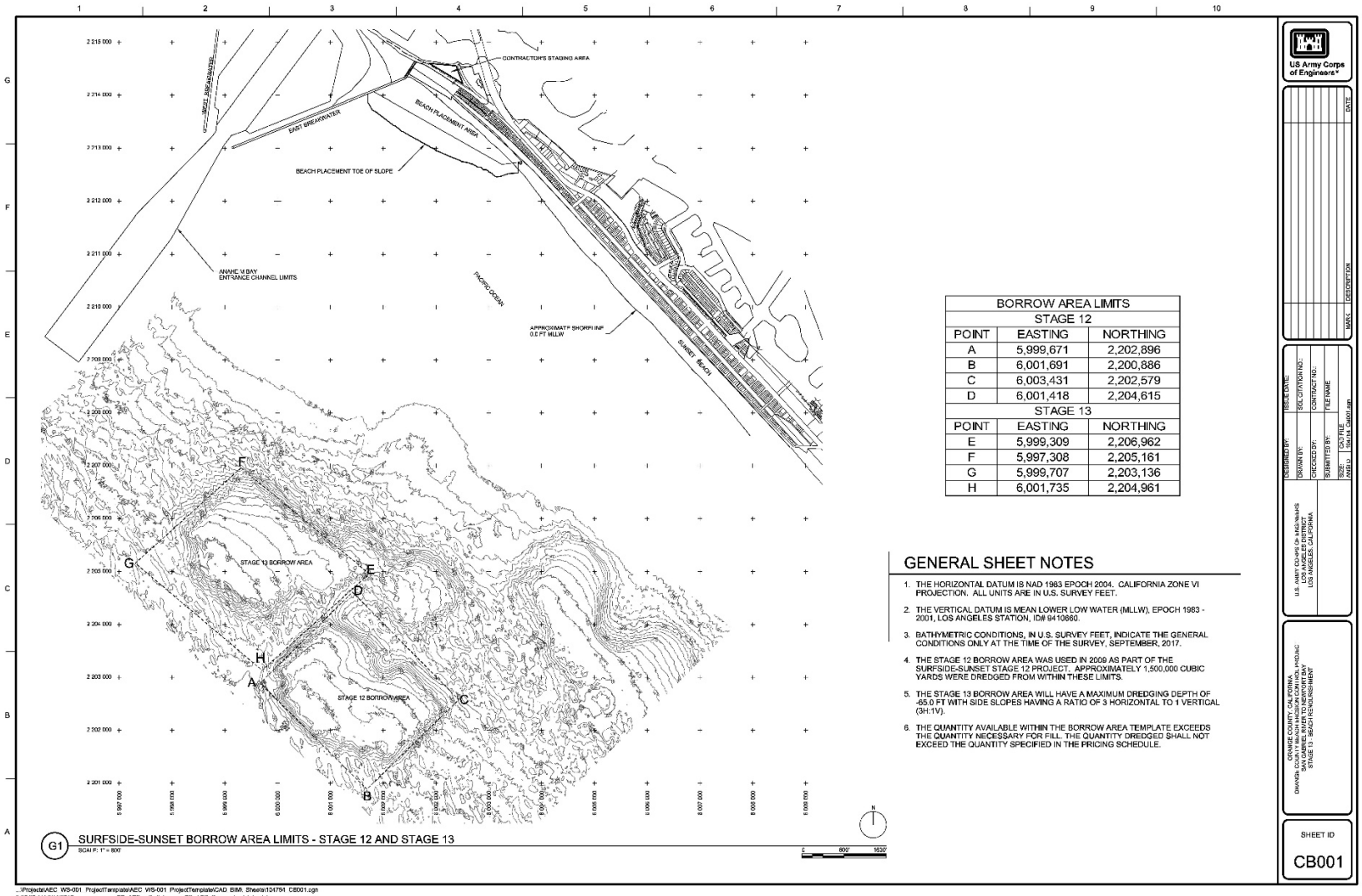


Figure 2. Project Map



BORROW AREA LIMITS		
STAGE 12		
POINT	EASTING	NORTHING
A	5,999,671	2,202,896
B	6,001,691	2,200,886
C	6,003,431	2,202,579
D	6,001,418	2,204,615
STAGE 13		
POINT	EASTING	NORTHING
E	5,999,309	2,206,962
F	5,997,308	2,205,161
G	5,999,707	2,203,136
H	6,001,735	2,204,961

GENERAL SHEET NOTES

1. THE HORIZONTAL DATUM IS NAD 1983 EPOCH 2004. CALIFORNIA ZONE VI PROJECTION. ALL UNITS ARE IN U.S. SURVEY FEET.
2. THE VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW), EPOCH 1983 - 2001, LOS ANGELES STATION, ID# 9410660.
3. BATHYMETRIC CONDITIONS, IN U.S. SURVEY FEET, INDICATE THE GENERAL CONDITIONS ONLY AT THE TIME OF THE SURVEY, SEPTEMBER, 2017.
4. THE STAGE 12 BORROW AREA WAS USED IN 2009 AS PART OF THE SURFSIDE-SUNSET STAGE 12 PROJECT. APPROXIMATELY 1,500,000 CUBIC YARDS WERE DREDGED FROM WITHIN THESE LIMITS.
5. THE STAGE 13 BORROW AREA WILL HAVE A MAXIMUM DREDGING DEPTH OF -65.0 FT WITH SIDE SLOPES HAVING A RATIO OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V).
6. THE QUANTITY AVAILABLE WITHIN THE BORROW AREA TEMPLATE EXCEEDS THE QUANTITY NECESSARY FOR FILL. THE QUANTITY DREDGED SHALL NOT EXCEED THE QUANTITY SPECIFIED IN THE PRICING SCHEDULE.

US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT LOS ANGELES, CALIFORNIA

ORANGE COUNTY, CALIFORNIA ANAHEIM BAY TO NEWPORT BAY / HARBOR AND SAN GABRIEL RIVER TO NEWPORT BAY STAGE 13 - BEACH REPLENISHMENT

SHEET ID
CB001

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Figure 3. Surfside-Sunset Beach Borrow Site

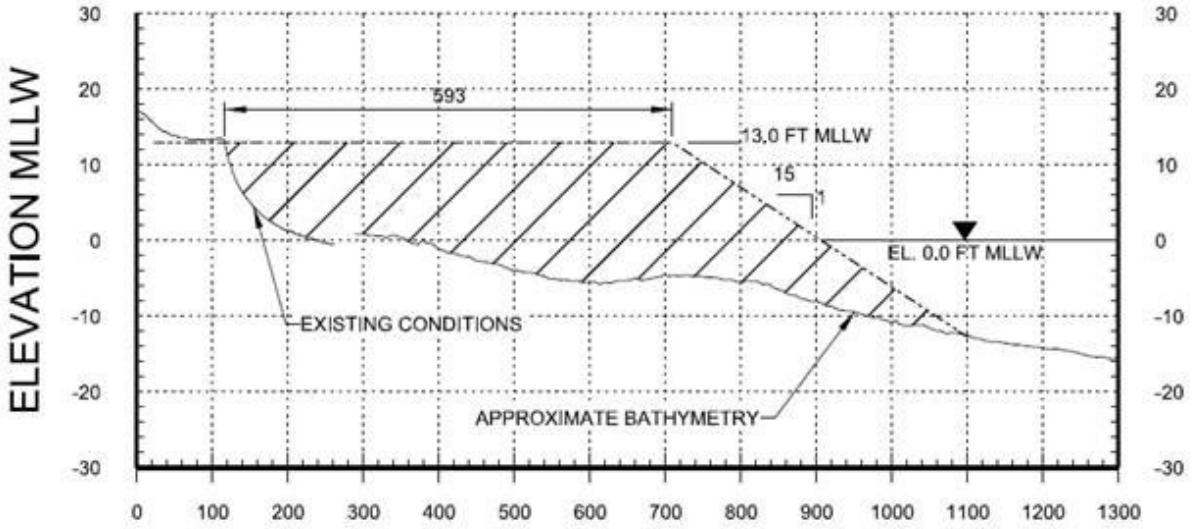

Figure 4. Surfside-Sunset Beach Fill Cross Section

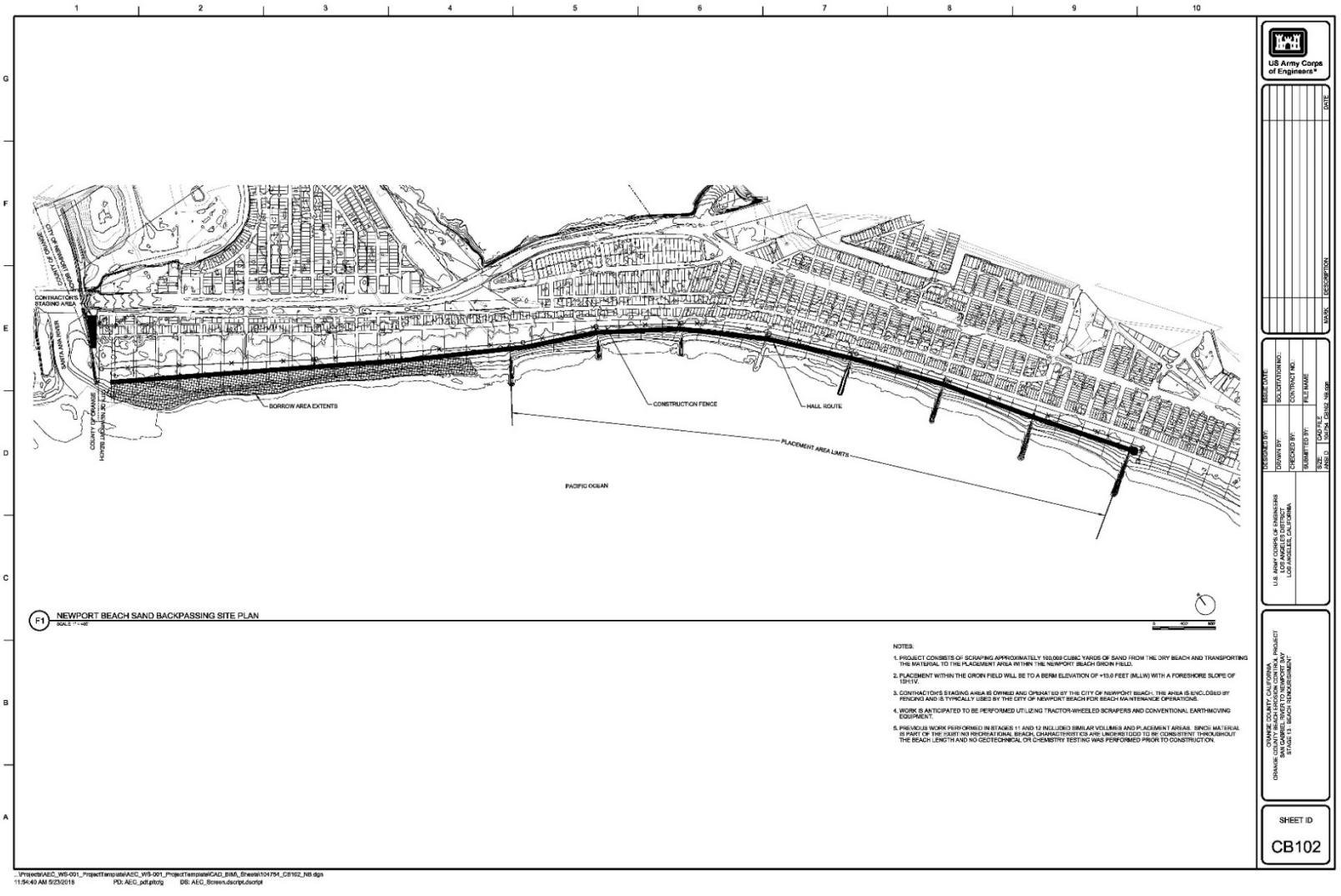

Figure 5. Newport Beach Sand Backpass Borrow Site

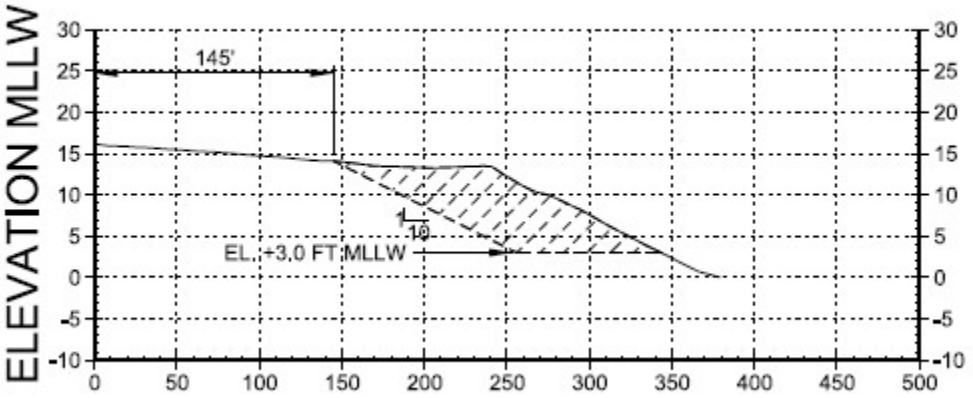

Figure 6. Newport Beach Sand Backpass Borrow Site

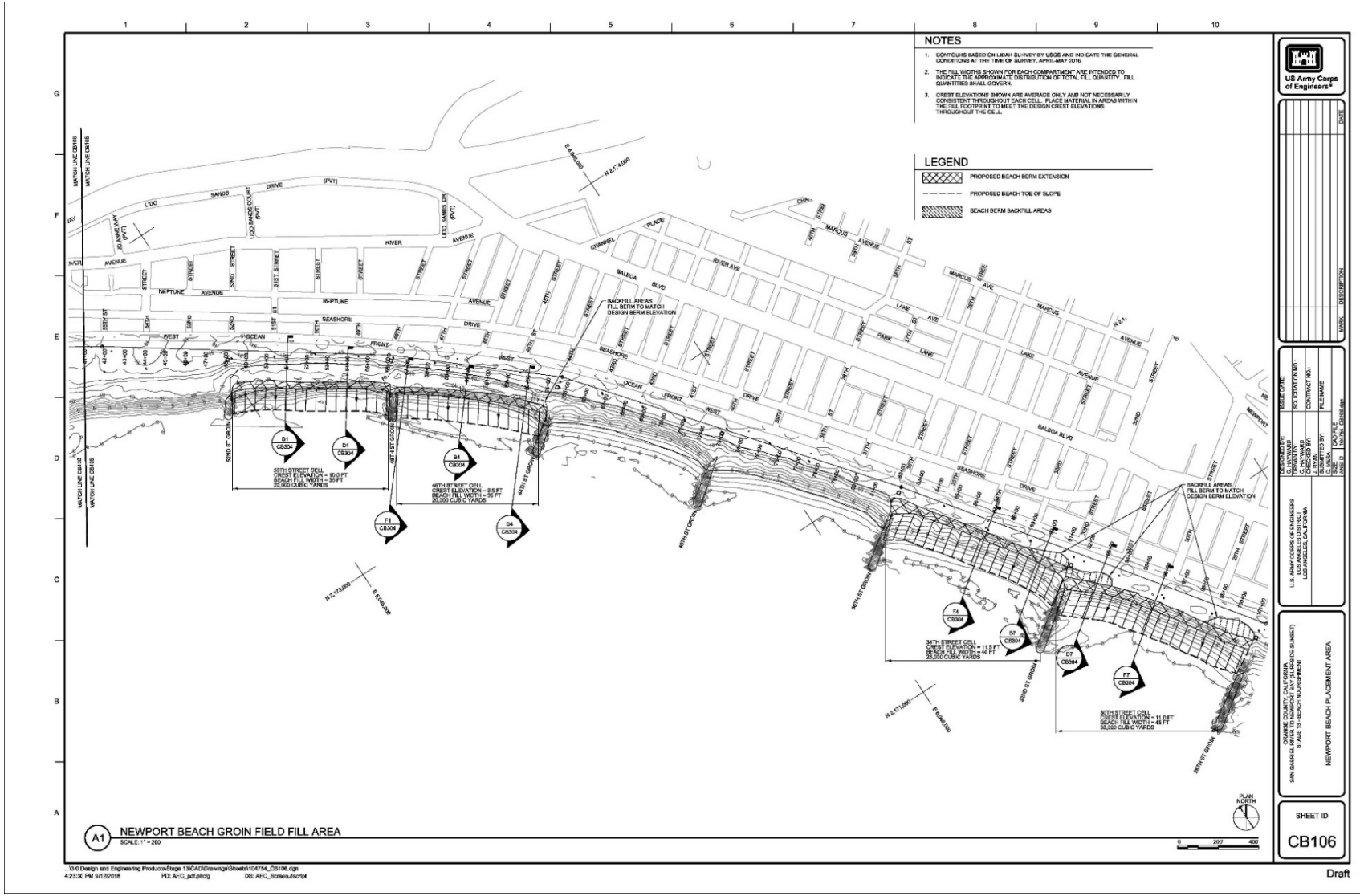

Figure 7. Newport Beach Sand Backpass Borrow Site Placement Areas

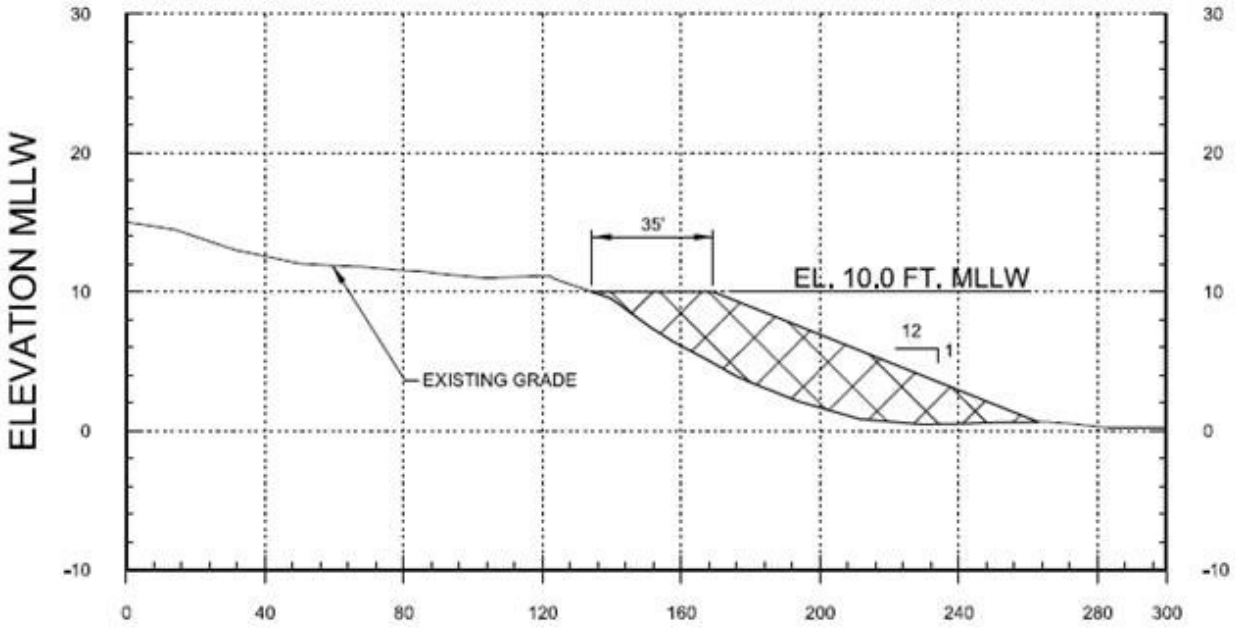

Figure 8. Newport Beach Sand Backpass Fill Cross Section

Appendix A
Mailing List

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Appendix B
404(b)(1) Evaluation

THE EVALUATION OF THE EFFECTS OF THE DISCHARGE OF DREDGED OR FILL MATERIAL INTO THE WATERS OF THE UNITED STATES IN SUPPORT OF THE SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR THE SURFSIDE-SUNSET BEACH NOURISHMENT PROJECT STAGE 13 LOCATED IN ORANGE 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 discharges of dredged or fill material into waters of the U.S. As such, it is not meant to stand-alone and relies heavily upon information provided in the environmental document to which it is attached. Citation in brackets [] refer to expanded discussion found in the Supplemental Environmental Assessment (SEA), to which the reader should refer for details. This analysis focuses on modifications to the project.

II. PROJECT DESCRIPTION. [1.1]

a. Location. [1.1.1] The overall project area is approximately 35 miles south of Los Angeles along the northern coastline of Orange County between the Anaheim Bay East Jetty and the Newport Pier. This coastal region is primarily sandy beaches, broken by low coastal cliffs in the Huntington Beach area.

b. General Description. [1.1.2] Sand will be dredged from 112 acres of the offshore borrow site and placed on Surfside-Sunset Beach to nourish the beach and act as a feeder for downcoast beaches. The proposed beach will be about 4,500 feet in length and between 350 and 900 feet in width (Figure 2). Approximately 1.75 million cubic yards (mcy) of material will be used for the beachfill. The proposed beach will be placed between 13 feet above and 13 feet below mean lower low water (MLLW) (Figure 2). The contractor will be required to place sand using a method such as a diked, single-point discharge to minimize turbidity in the runoff water.

c. Authority and Purpose. [2.2] This evaluation has been prepared pursuant to Section 404(b)(1) of the Clean Water Act of 1972, as amended, which applies to the discharge of dredged or fill materials into waters of the United States. The basic project purpose is beach nourishment. The overall project purpose is to renourish locally starved feeder beaches to provide for natural sediment transport processes to move sand downcoast.

d. General Description of Dredged or Fill Material. [4.1.1.6]

(1) General Characteristics of Material: The engineering soil classification for the sediment in the borrow site is a poorly graded sand (SP), with some poorly graded sand with silt (SP-SM). The range of grain sizes is from 0.065 to1.3 mm diameter. Physical grain size beach

compatibility calculations based on both individual and composite weighted averages for depths less than 10 feet indicate that sediment from Sub Area "BB" (the proposed borrow site for Stage 13) is still a very sandy sediment. It is therefore very compatible and recommended as an ideal borrow sub area for placement at Surfside-Sunset Beach.

(2) Quantity of Material: An unquantifiable amount of dredged material from overflow operations of the hopper dredge, if used, while dredging at the borrow site and approximately 1.75 m cy of sediments dredged from the borrow site would be placed on the Surfside-Sunset Beach.

(3) Source of Material: Offshore borrow site

e. Description of the Proposed Discharge Site [1.1.1 & 4.1.1.6]: Dredged material would be placed at Surfside-Sunset Beach in an area approximately 65 acres in size. The characteristic habitat type subject to impact by dredge material discharge is open-coast sandy beach and nearshore subtidal soft-bottom, sandy habitat. Material would be dredged from 112 acres of an existing borrow site, consisting of unconfined, open water. Bottom type is poorly graded, fine to medium sands. The borrow site is expected to harbor a degraded benthic community, as shown in other nearby borrow pits, because of reduced water circulation and lowered dissolved oxygen levels.

f. Description of Dredging and Disposal Methods: [1.1.5] Material would be dredged and transported via a hydraulic pipeline or a hopper dredge with a pump-out capability.

g. Timing and duration of Discharge [1.1.3] Dredging and beach nourishment would take approximately 5-6 months. Construction is scheduled to occur in fall/winter 2022.

III. FACTUAL DETERMINATIONS.

a. Physical Substrate Determinations:

(1) Substrate Elevation and Slope.

Current bottom elevations in the borrow site range from -55' to -65' MLLW. The area is relatively flat with stable side slopes that have existed since the borrow pit was dredged in 2009. Burial from overflow operations in the borrow site would likely be a thin layer that would result in negligible changes to elevation and slope. The proposed beach would be placed between 13 feet above and 13 feet below MLLW.

(2) Sediment type.

Geotechnical studies indicate that the sediment consists primarily of poorly graded sands. Disposal sediments are expected to be compatible with existing beach materials. Sediments were determined to be suitable for beach placement by the USACE in consultation with the SC-DMMT. This determination is still valid based on recent consultation with the SC-DMMT.

Sediment placed from overflow would be the same as already present in the borrow pit having just been dredged from there.

(3) Dredged Material Movement.

Dredged material would be placed onshore at Surfside-Sunset Beach. Sands are expected to move downcoast nourishing those beaches as well mimicking the natural process that was interrupted by Anaheim Bay port development and flood control river channelization projects.

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

Temporary, short-term impacts would occur at both the borrow site and beach placement area. Dredging would remove benthic organisms from the borrow site. This area is expected to recover in the short term by colonization from adjacent areas. Beach organisms would be buried by placement of sand. This area would also recover over the short term by colonization from adjacent areas. However, no long-term, adverse significant impacts are expected. Minor turbidity levels may exist in the immediate vicinity of the dredging area and placement operations that may result in minor, temporary reductions in dissolved oxygen.

(5) Other Effects.

None.

(6) Actions Taken to Minimize Impacts (Subpart H).

Needed: __X__ YES ___ NO

Weekly monitoring of water quality to control turbidity and to monitor dissolved oxygen levels during placement would occur. If turbidity exceeds set standards and/or dissolved oxygen fall below a set standard of 5 mg/l, placement would be evaluated, and modifications would be made to get back into compliance.

If needed, Taken: __X__ YES ____ NO

A water quality monitoring plan would be part of the construction contract and would be coordinated with the Regional Water Quality Control Board, Santa Ana Region.

b. Water Circulation, Fluctuation, and Salinity Determinations:

(1) Water (refer to 40 CFR sections 230.11(b), 230.22 Water, and 230.25 Salinity Gradients; test specified in Subpart G may be required). Consider effects on salinity, water chemistry, clarity, odor, taste, dissolved gas levels, nutrients, eutrophication, others.

The Proposed Action, as modified is not expected to adversely affect water circulation, fluctuation, and/or salinity. Only clean, compatible sands from the project would be used for the nearshore placement. These sands are not a source of contaminants. Minor turbidity levels may exist in the immediate vicinity of the dredging and placement operations that may result in minor, temporary reductions in dissolved oxygen. Sands will not be a source of nutrients; thus eutrophication is not expected to result. Water used to entrain sands will be sea water as is water adjacent to nearshore placement, thus there will be no effect on salinity levels.

(2) Current Patterns and Circulation (consider items in sections 230.11(b), and 230.23), Current Flow, and Water Circulation.

The Proposed Action, as modified, is not expected to adversely affect current patterns or circulation. Circulation and current patterns in the project area are determined by a combination of tide, wind, thermal structure, and local bathymetry. Dredging of sand from the borrow site and placement of material at the beach placement site would result in negligible, localized changes to circulation patterns within the area.

(3) Normal Water Level Fluctuations (tides, river stage, etc.) (consider items in sections 230.11(b) and 230.24).

The Proposed Action, as modified, is not expected to have an adverse impact on normal tides. There would no change to tidal elevations, which is determined by access to the open ocean, which would not be changed.

(4) Salinity Gradients (consider items in sections 230.11(b) and 230.25)

The Proposed Action, as modified, is not expected to have any impact on normal water salinity nor is it expected to create salinity gradients. Water used to entrain sands would be sea water as is water adjacent to nearshore placement, thus there will be no effect on salinity levels, including the creation of any salinity gradients.

(5) Actions That Will Be Taken to Minimize Impacts (refer to Subpart H)

Needed: X YES __ NO
If needed, Taken: X YES _ NO

All dredging and placement operations would be monitored for effects on water quality, including turbidity, temperature, salinity, dissolved oxygen, and pH; monthly water samples will be taken and analyzed for total dissolved solids and TRPH. Best management practices would be implemented if turbidity and/or dissolved oxygen exceeds water quality criteria.

c. Suspended Particulate/Turbidity Determinations:

(1) Expected Changes in Suspended Particulates and Turbidity Levels in Vicinity of Disposal Site (consider items in sections 230.11(c) and 230.21).

Placement of sediments generally results in minor impacts to water quality from turbidity. Impacts would be temporary and adverse, but not significant. This is expected to be highly localized and visually indistinguishable from normal turbidity levels. The area is expected to return to background after placement ceases. Water quality monitoring during placement will allow USACE to modify operations (such as by slowing rate of discharge) until any water quality problems abate.

(2) Effects (degree and duration) on Chemical and Physical Properties of the Water Column (consider environmental values in section 230.21, as appropriate).

Placement of clean sandy sediments generally results in minor impacts to water quality due to resuspension of chemical contaminants in the sediments. Sediments are free of contaminants and impacts are expected to be negligible and be temporary. Minor turbidity levels may exist in the immediate vicinity of the dredging area and placement operations that may result in minor, temporary reductions in dissolved oxygen.

(3) Effects on Biota (consider environmental values in sections 230.21, as appropriate).

Biota buried during placement are expected to recover over the short term. Impacts will be temporary and adverse.

(4) Actions Taken to Minimize Impacts.

Needed: __X__ YES ___ NO
If needed, Taken: __X__ YES ____ NO

Monitoring of water quality to control turbidity and to monitor for possible resuspension of contaminants during placement would occur. If turbidity exceeds set standards and/or dissolved oxygen exceeds water quality criteria, disposal would be evaluated and modifications made to get back into compliance.

A water quality monitoring plan will be part of the construction contract and would be coordinated with the Regional Water Quality Control Board, Santa Ana Region.

d. Contaminant Determination. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (Check only those appropriate).

(1) Physical characteristics ..... _X_

(2) Hydrography in relation to known or anticipated sources of contaminants ..... _X_

(3) Results from previous testing of the material or similar material in the vicinity of the proposed project ..... _X_

(4) Known, significant sources of contaminants (e.g. pesticides) from land runoff or percolation.....___

(5) Spill records for petroleum products or designated (Section 311 of the CWA) hazardous substances....._X_

(6) Other public records of significant introduction of contaminants from industries, municipalities, or other sources .....___

(7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities.....___

(8) Other sources (specify) .....X_

An evaluation of the Geotechnical Report indicates that the proposed dredge material is not a carrier of contaminants and that levels of contaminants are substantively similar in the extraction and disposal sites and is not likely to be constraints. The borrow site is an open coastal area free of known contaminant sources. A records search indicated no known spills in the area that could contaminate sands in the borrow site. The SC-DMMT concurred with the USACE that test results would be good for five years (in lieu of accepted practice of three years) due to existing site conditions.

YES __X_ NO ____

If the material does not meet the testing exclusion criteria above, describe what testing was performed and results: Seventy-two cores were taken from the borrow site and sixteen cores were taken from the disposal site. All cores were analyzed for geophysical parameters to determine suitability of the borrow site material for beach nourishment at the proposed sites. Two representative cores taken from the borrow site were analyzed for chemistry. The borrow sediments were determined to be suitable for beach nourishment meeting geophysical and chemistry guidelines.

e. Aquatic Ecosystem and Organism Determinations (use evaluation and testing procedures in Subpart G, as appropriate).

(1) Plankton, Benthos and Nekton

Dredging and placement operations would result in short-term turbidity impacts that could affect plankton in the area. Organisms could stifle in the immediate vicinity as these small organisms are impacted by turbidity. However, these effects would be small in both area and time and the plankton would be expected to recover quickly once dredging and beach placement is completed. Benthic organisms would be buried by placement, but the areas would be minor in area and would quickly recolonize. Larger organisms in the nekton would be expected to avoid disposal operations and would not be impacted.

(2) Food Web

Impacts to the bottom of the food chain (plankton and nekton) would be short term and occur in a small area. Recovery would be quick once operations are concluded.

(3) Special Aquatic Sites

There are no special aquatic sites within the project area.

(4) Threatened & Endangered Species

The USACE has determined that the proposed project may affect but is unlikely to adversely affect western snowy plover and would not affect any other federally listed endangered or threatened species, or their critical habitat, and that formal consultation under Section 7 of the ESA is not required.

Western snowy plover may occur on the placement site beach. The USACE determined the proposed project may affect but is unlikely to adversely affect western snowy plover. A monitoring and avoidance plan will be prepared, in coordination with the USFWS, CDFW, and CCC to ensure that western snowy plovers are not harassed or injured.

The USACE has added environmental commitments to ensure no effect to green sea turtle during the Proposed Action, as modified. These measures were discussed with NMFS by telephone on August 27, 2021.

(5) Other fish and wildlife

Marine mammals would not be affected by dredging or placement activities. Birds would generally avoid the dredging and placement sites, although placement could attract birds to the to the benthic organisms coming out of the pipeline or hopper dredge as an alternate food source.

(6) Actions Taken to Minimize Impacts.

Needed:- -X- YES _ _ NO

Grunion. Restoration of the eroded beach would have beneficial effect on the California grunion by ensuring the presence of a beach on which to spawn. All beach construction activities are expected to be completed prior to the start of the grunion spawning season, so there should be no impact to spawning activities. Eroded beaches, with little or no sand are not adequate sites for California grunion spawning. However, should construction activities extend into the grunion spawning season the diked, single-point disposal site included as part of the Proposed Action, as modified, would reduce impacts to grunion. In addition, impacts would be minimized by observing the beach during the spawning time (night-time, high, spring tides) prior to proposed spreading operations to determine if grunion have spawned in the proposed disposal

area. If grunion have spawned, no disposal activities will occur until the eggs are hatched at the following two spring-tide series to the maximum extent practicable.

Western snowy plover. A monitoring and avoidance plan will be prepared, in coordination with the USFWS, CDFW, and CCC, to ensure that western snowy plovers are not harassed or injured.

Green sea turtle. A monitoring and avoidance plan will be prepared, in coordination with the NMFS, to ensure that green sea turtles are not affected.

Monitor and control turbidity by during dredging, overflow, and placement operations to minimize impacts to plankton and nekton.

f. Proposed Disposal Site Determinations.
(1) Mixing Zone Determination (consider factors in section 230.11(f)(2))

Is the mixing zone for each disposal site confined to the smallest practicable zone?
X_ YES ___NO

The sediments do not require a mixing zone in order to remain in compliance with water quality standards. As such, the mixing zone is considered to be the smallest practicable.

(2) Determination of Compliance with Applicable Water Quality Standards (present the standards and rationale for compliance or non-compliance with each standard)

The Santa Ana River Basin Plan (Basin Plan) adopted by the Santa Ana Regional Water Quality Control Board has established water quality standards, consisting of a combination of beneficial uses and their corresponding water quality objectives for inland surface waters and enclosed bays and estuaries, including the dredging and placement site. The State Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), Water Quality Control Plan for Enclosed Bays and Estuaries of California, and the Thermal Plan, formerly known as the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" and any revision thereto, shall also apply to all ocean waters of the Region, with the Basin Plan applying in cases of differing objectives. The applicable objective and the rationale for compliance is discussed below.

The Proposed Action, as modified, will be in compliance with state water quality standards. Placement of material at the receiver site would result in short-term elevated turbidity levels and suspended sediment concentrations, but no appreciable long-term changes in other water quality parameters, including dissolved oxygen, pH, nutrients, or chemical contaminants. Factors considered in this assessment include the relatively localized nature of the expected turbidity plumes for the majority of the disposal/placement period and rapid diluting capacity of the receiving environment and the clean nature of re sediments to be dredged and placed. Water quality monitoring would be required as part of the overall project. If monitoring indicated that suspended particulate concentrations outside the zone of initial dilution exceeded permissible

limits, disposal/placement operations would be modified to reduce turbidity to permissible levels. Therefore, impacts to water quality from disposal/placement of material at the receiver site would not violate water quality objectives or compromise beneficial uses listed in the Basin Plan. USACE will continue to coordinate with the Santa Ana Regional Water Quality Control Board during construction to minimize impacts to water quality.

(3) Potential Effects on Human Use Characteristic

(a) Municipal and Private Water Supply (refer to section 230.50)

There are no municipal or private water supply resources (i.e., aquifers, pipelines) in the project area. The Proposed Action, as modified, would have no effect on municipal or private water supplies or water conservation.

(b) Recreational and Commercial Fisheries (refer to section 230.51)

The proposed project area is not subject to commercial fishing. Recreational fishing would move to avoid dredging and placement activities and to follow fish out of these areas.

(c) Water Related Recreation (refer to section 230.52)

Construction equipment would be required to maintain ocean access for all uses. During dredging and placement activities, proper advanced notice to mariners would occur and navigational traffic would not be allowed within the dredge area and nearshore placement discharge area. The displacement of recreational boating would be temporary and short-term. However, the proposed project would not significantly impact surfing conditions or other water sports once completed. The currents are not expected to change in magnitude or direction. Therefore, the Proposed Action, as modified, is not expected to measurably change currents or change surfing in any discernible way. To minimize navigation impacts and threats to vessel safety, all floating equipment would be equipped with markings and lightings in accordance with the U.S. Coast Guard regulations. The location and schedule of the work would be published in the U.S. Coast Guard Local Notice to Mariners.

(d) Aesthetics (refer to section 230.53)

Minor, short term effects during dredging and placement are anticipated. During dredging and nearshore placement activities, the visual character of the proposed project area would be affected by the dredge; however, dredging activities and nearshore placement are temporary, and as such, would not result in permanent effects to the visual character of the proposed project area. Dredging, including overflow operations, would not result in any visible change to the borrow site. Placement of dredged material at Surfside-Sunset Beach would not result in any visible changes to the nearshore area..

(e) Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves (refer to section 230.54).

The Proposed Action, as modified, would not have any effect on national and historic monuments, national seashores, wild and scenic rivers, wilderness areas or research sites.

(f) Determination of Cumulative Effects on the Aquatic Ecosystem (consider requirements in section 230.11 (g))

Cumulative effects were determined to be insignificant, refer to section 5 of the SEA.

(g) Determination of Secondary Effects on the Aquatic Ecosystem (consider requirements in section 230.11(h))

Secondary effects of the discharge of dredged or fill would be negligible. Areas outside the direct impact would have only negligible turbidity effects from dredging and onshore placement. Turbidity levels would be low and in the immediate vicinity of the dredging and onshore placement operations. Impacts of the Proposed Action, as modified, are all temporary construction impacts. Movement of sand downcoast would be indistinguishable from natural sand movement resulting in lowered erosion rates due to the increased volume of sand.

III. Findings of Compliance or Non-Compliance with the Restrictions on Discharge

a. Adaptation of the Section 404(b)(l) Guidelines to this Evaluation

No significant adaptations of the guidelines were made relative to this evaluation.

b. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse Impact on the Aquatic Ecosystem:

All practicable alternatives for placement were evaluated. Alternative placement sites were not considered practicable due to their unavailability at this time. Alternative site placement sites would have similar impacts to the aquatic ecosystem and would not provide the same beneficial effects as those to be realized by placement on Surfside-Sunset Beach. Use of this placement area will nourish the beach and protect it from erosion. It will protect recreational uses of the beach as well as wildlife use by foraging shorebirds, spawning California grunion, and invertebrates commonly found only on sandy beaches. The Proposed Action, as modified, is the least environmentally damaging practicable alternative.

c. Compliance with Applicable State Water Quality Standards.

The Proposed Action, as modified, meets State of California water quality standards.

d. Compliance with Applicable Toxic Effluent Standard or Prohibition Under Section 307 of the Clean Water Act.

No toxic materials/wastes are expected to be produced or introduced into the environment by this project.

e. Compliance with Endangered Species Act of 1973.

Western snowy plover may occur on the placement site beach. The USACE determined the proposed project may affect but is unlikely to adversely affect western snowy plover. A monitoring and avoidance plan will be prepared, in coordination with the USFWS, CDFW, and CCC to ensure that western snowy plovers are not harassed or injured. Informal consultation is pending.

The USACE has added environmental commitments that would avoid effects to green sea turtle during construction. Therefore, consultation is not required.

f. Compliance with Specified Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act of 1972.

No sanctuaries as designated by the Marine Protection, Research and Sanctuaries Act of 1972 will be affected by the Proposed Action, as modified.

g. Evaluation of Extent of Degradation of the Waters of the United States

(1) Significant Adverse Effects on Human Health and Welfare

(a) Municipal and Private Water Supplies

The Proposed Action, as modified, will have no significant adverse effects on municipal and private water supplies.

(b) Recreation and Commercial Fisheries

The Proposed Action will have minor, short-term impacts, but no significant adverse effects on recreational fisheries. The borrow site and beach placement areas are not subject to commercial fishing. Recreational fishing would move to avoid the dredging and placement activities and to follow fish out of these areas. To minimize navigation impacts and threats to vessel safety, all floating equipment would be equipped with markings and lightings in accordance with the U.S. Coast Guard regulations. The location and schedule of the work would be published in the U.S. Coast Guard Local Notice to Mariners.

(c) Plankton

Dredging and placement operations would result in short-term turbidity impacts that would affect plankton in the area. Organisms could stifle in the immediate vicinity as these small organisms are impacted by turbidity. However, these effects would be small in both area and time and the plankton would be expected to recover quickly once dredging and placement is completed.

(d) Fish

Larger organisms in the nekton would be expected to avoid dredging and placement operations and would not be impacted.

(e) Shellfish

Benthic organisms, including shellfish, would be buried by onshore placement, but the areas would be minor in area and would quickly recolonize.

(f) Wildlife

Marine mammals would not be affected by dredging and onshore placement. Birds would generally avoid the dredging and placement, although nearshore placement could attract birds to the benthic organisms coming out of the dredge pipe as an alternate food source.

(g) Special Aquatic Sites

There are no special aquatic sites in the proposed project area.

(2) Significant Adverse Effects on Life Stages of Aquatic Life and Other Wildlife Dependent on Aquatic Ecosystems: Any adverse effects would be short-term and insignificant. Refer to section 4 of this SEA.

(3) Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity and Stability: Any adverse effects would be short-term and insignificant. Refer to section 4 of this SEA.

(4) Significant Adverse Effects on Recreational, Aesthetic, and Economic Values: Any adverse effects would be short-term and insignificant. Refer to section 4 of this SEA.

h. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

Specific environmental commitments are outlined in the analysis above and in the SEA and 2019 Final EA. All appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.

i. On the Basis of the Guidelines, the Proposed Disposal Site(s) for the Discharge of Dredged or Fill Material (specify which) is:

_____(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.

The final 404(b)(1) evaluation and Findings of Compliance will be included with the Final SEA.

Prepared by: Larry Smith_____ Date: _____

Appendix C
Cultural Resources Documentation

CESPL-PDR-L 18 November 2021

MEMORANDUM FOR RECORD

SUBJECT: Supplemental Environmental Assessment for the Surfside-Sunset Beach Nourishment Project, Stage 13, Orange County, California

1. This memorandum documents the U.S. Army Corps of Engineers (Corps) determinations for Section 106 of the National Historic Preservation Act (NHPA) as required at 36 CFR 800.11(a). Pursuant to 36 CFR 800.3(a)(1), the Corps has satisfied its responsibility to take into account the effects of this undertaking on historic properties and has no further obligations under Section 106 of the NHPA.

2. The proposed project consists of two elements, including the beach nourishment of the Surfside-Sunset Beach and nourishment of the Newport Beach Groin Field. The proposed project, Stage 13, is the thirteenth iteration of the project and the third iteration conducted since 2001 (Stage 11) the date of the last consultation, and in 2008 (Stage 12). An Environmental Assessment (EA) was conducted for each stage, including the current Stage 13.

3. For the Surfside-Sunset Beach nourishment element, sand will be dredged from an offshore borrow site and placed on Surfside-Sunset Beach to replenish the beach and act as a feeder for downcoast beaches. The proposed beach nourishment area will be about 4,500 feet in length and between 350 and 900 feet in width and cover approximately 65 acres. Approximately 10 feet of material would be dredged from the ocean floor, totaling 1.75 million cubic yards (mcy) of material, to be used for the beachfill. The 1.75 mcy represents an increase from the 1.2 mcy originally specified in the 2018 Stage 13 EA, and triggered this Supplemental Environmental Assessment (SEA). The proposed beachfill will be placed between 13 feet above and 13 feet below MLLW.

4. The Newport Beach groin replenishment element will remain unchanged from the original Stage 13 EA from 2018. The proposed action will consist of the backpass of accreted sand adjacent to the mouth of the Santa Ana River, between 71st Street and 56th Street to the interstitial cells between the groin jetties. The proposed borrow site extends approximately 3,800 feet east from the Santa Ana River. Approximately 10 feet of material would be removed from the borrow sites to replenish the groin field fill site. The proposed cells to be replenished include the 50th Street Cell (measuring 800 feet long x 35 feet wide; the 46th Street Cell (measuring 600 feet long x 35 feet wide; the 34th Street Cell (measuring 950 feet long x 40 feet wide; and the 30th Street Cell (measuring 950 feet long x 45 feet wide. The fill would be spread out over 35-45 feet wide and match the existing top of slope.

5. The Corps consulted with the California State Historic Preservation Officer (CA SHPO) and local tribes in 2001 in accordance with Section 106 of the NHPA (attached). At that time no objections were communicated to the Corps, and the CA SHPO concurred on the finding of No Effect to historic properties. The Corps subsequently conducted the Surfside-Sunset Beach nourishment and the Newport Beach groin replenishment projects under the existing concurrence for Stages 11 in 2001 and 12 and 2008.

6. The project specifications and details have remained consistent since the first iteration, and the project remains within the original scope and magnitude as originally defined. As the proposed actions remain materially identical to those specified under the original EA and consultation, the current proposed project does not represent a change in scope or magnitude, and falls within the parameters defined in the original consultation with the CA SHPO and the subsequent concurrence from the same.

7. If previously unknown cultural resources are identified during project implementation, all activity will cease until requirements of 36 CFR 800.13, *Discovery of Properties During Implementation of an Undertaking*, are met. Work will be suspended in that area until resources are evaluated for eligibility for listing in the National Register of Historic Places (NRHP) after consultation with the SHPO. If resources are deemed eligible for the NRHP, the effects of the project will be taken into consideration in consultation with the SHPO. The Advisory Council on Historic Preservation (ACHP) will be provided an opportunity to comment in accordance with 36 CFR 800.13.

John P. Hale, Ph.D.
Archaeologist
Regional Planning Section

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

January 30, 2001

REPLY TO
ATTENTION OF
Office of the Chief
Environmental Resources Branch

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

Dear Dr. Mellon:

This letter is in regard to the proposed Surfside-Sunset Beach Nourishment Project, Stage 11. The proposed project consists of beach nourishment down coast from the Anaheim Jetty, Orange County. This will be accomplished by transporting materials from a borrow site offshore and placing the sand on the beach at Surfside-Sunset. A more detailed project description is provided in the enclosed Environmental Assessment (enclosure 1). Although previous projects at Surfside-Sunset have been coordinated with your office, this coordination is necessary since the proposed borrow site has never been evaluated by either the Corps or your office.

The area of the beach that will receive the sand already consists primarily of imported material from previous beach nourishment projects. There are no natural ground surfaces exposed. The borrow site to be used has not been surveyed.

A records and literature search was conducted for the proposed borrow site by Heather Macfarlane of Macfarlane Archaeological Consulting. Her memorandum is enclosed for your review (enclosure 2). The records indicate that there are no recorded shipwrecks in this particular borrow area. Her analysis further indicated that the potential for cultural resources in this area is fairly remote, and that no remote sensing survey is required.

Based on information contained in the enclosed memorandum we have determined that the Surfside-Sunset Stage 11 Project will not affect National Register properties.

Correspondence may be sent to:

Mr. Stephen Dibble
Senior Archeologist-CESPL-PD-RN
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

Please review the enclosed information and our determinations. We would appreciate a response at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He can also be reached by e-mail at ddibble@spl.usace.army.mil.

Sincerely,

Ruth B. Villalobos
Chief, Planning Division

Enclosures

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

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P.O. BOX 942896
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(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov

February 21, 2001

REPLY TO: COE010204A

Ruth B. Villalobos, Chief, Planning Division
Attn: Stephen Dibble, Sr. Archeologist-CESPL-PD-RN
US Army Corps of Engineers
PO Box 532711
Los Angeles, CA 90053-2325

Subject: **Surfside-Sunset Beach Nourishment Project, Stage 11, Orange County, California**

Dear Ms. Villalobos:

Thank you for consulting me concerning the undertaking cited above pursuant to Section 106 of the National Historic Preservation Act, as amended, and all applicable regulations. I understand that the proposed project consists of beach nourishment down coast from the Anaheim Jetty in Orange County and that this will be accomplished by transporting materials from a borrow site offshore and placing the sand on the beach at Surfside-Sunset. Your letter of January 30, 2001 requested my concurrence that the identification efforts for this undertaking are complete and satisfactory and that implementation of the proposed undertaking will not affect historic properties.

Review of the documentation provided (i.e., your recent letter and the Environmental Assessment) indicates that reasonable measures were taken to identify historic properties within the area of potential effects (APE) of the undertaking. I agree that your efforts to identify historic properties conform to applicable standards and the documentation provided is appropriate for a finding of "no historic properties affected."

Your consideration of historic properties in the project planning process is appreciated. If you have any questions regarding this review, please contact staff archaeologist Charles Whatford at (916) 653-2716 or cwhat@ohp.parks.ca.gov

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

Appendix D

Air Emissions Calculations

Surfside Sunset Stage 13

Emission Source Data for Dredging

Construction Activity/Equipment Type	Power Rating	Load Factor	# Active	Hourly Hp-Hrs	Fuel Use GPH	Hrs per Day [1]	Total Work Days [2]	DailyTotal Hp-Hrs (1)
Tug boat-hydraulic dredge	800	0.20	1	160	8.0	22		176
Hydraulic dredge	2,600	N/A	N/A	N/A	N/A	22		N/A
Hopper Dredge-Propulsion while dredging	9,000	0.10	2			18		32,400
Hopper Dredge-Propulsion during transit and placement	9,000	0.85	2			4		61,200
Hopper Dredge-Auxiliary while dredging	600	0.25	2			18		5,400
Hopper Dredge-Auxiliary during transit and placement	600	0.32	2			4		1,536
Bulldozer-D8 [3]	335	0.50	2	335	18.8	8		2,680

Emission Factors for Construction Equipment

Equipment Type	**VOC**	**CO**	**NOx**	**SOx**	**PM10**	**PM2.5**
Hopper Dredge-Propulsion (grms/HP-HR)	0.25	2.60	0.95	0.005	0.15	0.15
Hopper Dredge-Auxiliary (grms/HP-HR)	0.16	2.60	0.95	0.005	0.15	0.15
Tugboat (lbs/1,000 Gal)	18.20	57.00	419.00	75.00	9.00	9.00
Hydraulic dredge (lb/hr)	0.20	0.10	0.50	0.30	0.20	0.20
Bulldozer (grms/HP-HR)	0.14	2.60	0.30	0.90	0.02	0.02

Daily Emissions from Construction Activities Hydraulic Dredge

	Pounds per day					
Construction Activity/Equipment Type	**VOC**	**CO**	**NOx**	**SOx**	**PM10**	**PM2.5**
Hydraulic dredge	4.4	2.2	11.0	6.6	4.4	4.4
Tug boat-hydraulic dredge	5.2	6.8	9.5	2.4	2.2	2.2
Crew boat [4]	0.4	0.3	0.8	0.1	0.1	0.1
Hopper Dredge	54.6	576.3	210.6	1.1	33.2	32.8
Worker Vehicles [4]	0.1	1.2	0.9	0.1	0.1	0.1
Bulldozer-D8[3]	0.8	15.4	1.8	5.3	0.1	0.1
Peak Daily Dredging/Beach Placement Emissions						
Hydraulic dredge	**11.0**	**25.8**	**24.0**	**14.5**	**6.8**	**6.9**
Hopper Dredge	**55.9**	**593.1**	**213.3**	**6.6**	**33.5**	**33.1**
Backpass Operations	**1.7**	**30.7**	**3.5**	**10.6**	**0.2**	**0.2**
Peak Daily Emissions-Hydraulic	**12.6**	**56.6**	**27.5**	**25.1**	**7.0**	**7.1**
Peak Daily Emissions-Hopper	**57.6**	**623.8**	**216.8**	**17.2**	**33.7**	**33.3**

(1) Assumes 2-hour down time per day for shift change, maintenance, fueling. Three shifts per day.
(2) Assumes average duration of 6 months for hydraulic dredging with beach placement/5 months for hopper dredge. A worst-case assumption was made that all emissions occur during a single calendar year.
(2) Assumes average duration of 30 days for sand backpass operation; equipment equivalent of two D-8 Bulldozers.
(3) Bulldozer would operate 10 hours per day for beach placement and 12 hours per day for backpass operations to comply with noise regulations. Tier 4 engine.
(4) See following pages for source date, emissions factors, and emissions calculations.

Assume dredge volume of 1.75 mcy
Emissions factors for dredging for tugboat and bulldozer taken from the Port of Los Angeles Channel Deepening Project Final Supplemental
Environmental Impact Statement/Environmental Impact Report, September 2000.
Emissions factors for Dredging andbeach placement for the Hopper Dredge from POLB Deep Draft Navigation Study.
Tug emissions are not included in total projects emissions estimates as those emissions are already included in the SIP and do not apply to applicability rate calculations for conformity.
For the purposes of these estimates, we followed conservative and common industry practice to assume that most NO in NOx exhaust is rapidly converted to NO2 and that NOx emissions are essentially all NO2, so the two are approximately equal. General Conformity requirements are not applicable to NO2 emissions.

Total Project Construction Emissions

	Tons						
	VOC	**CO**	**NOx**	**SOx**	**PM10**	**PM2.5**	**NO2**
Dredge/.Sand Placement							
Hydraulic dredge	1.0	2.3	2.2	1.3	0.5	0.5	2.2
Backpass Operations	0.0	0.5	0.1	0.2	0.0	0.0	0.1
Total	1.0	2.8	2.2	1.5	0.5	0.5	2.2
Applicability Rate Levels	**10.0**	**100.0**	**10.0**	**NA**	**100.0**	**70.0**	**100.0**

Total Project Construction Emissions

	Tons						
	VOC	**CO**	**Nox**	**SOx**	**PM10**	**PM2.5**	**NO2**
Dredge/.Sand Placement							
Hopper dredge	5.0	53.4	19.2	0.6	3.0	3.0	19.2
Backpass Operations	0.0	0.5	0.1	0.2	0.0	0.0	0.1
Total	5.1	53.8	19.2	0.8	3.0	3.0	19.2
Applicability Rate Levels	**10.0**	**100.0**	**10.0**	**NA**	**100.0**	**100.0**	**100.0**

Total Project Construction Emissions are the total emissions for the project, which is less than one year and is used in place of annual emissions for conformity purposes.
SOx is in attainment in the SCAB, thus there are no applicability rates for this pollutant.

GHG Emissions

Dredging

Emission Source Data for Dredging

Construction Activity/Equipment Type	Power Rating	Load Factor	# Active	Hourly Hp-Hrs	Fuel Use GPH	Hrs per Day	Total Work Days(3	DailyTotal Hp-Hrs (1)

Hydraulic dredge	2,600	NA	1	NA	NA	22		NA
Crew boat	50	NA	1	NA	NA	4		NA
Tug boat-hydraulic dredge	1,600	NA	1	NA	NA	2		NA
Worker vehicles	NA	NA	18	NA	NA	12.5		NA
Hopper dredge-Propulsion	9,000		2			22		
Hopper dredge-Auxiliary	600		2			22		
Bulldozer-D8	335	0.50	2	335	18.8	8	2	2,680

Emission Factors for Construction Equipment

	Grams per HP-HR
Equipment Type	**CO2**
Tugboat	509
Hydraulic dredge	183
Crew boat	75
Tug boat-hydraulic dredge	93.9
Worker vehicles	1.1
Bulldozer	390
Hopper dredge	527.9

Estimated Emissions from Construction Equipment

	CO2	
	lbs/day	**tons total**
Equipment Type		
Hydraulic dredge	23,081.1	2,077.3
Crew boat	33.1	3.0
Tug boat-hydraulic dredge	662.6	59.6
Worker vehicles	0.5	0.0
Bulldozer[(3)]	2,304.7	2.3
Hopper dredge	24,584.1	24.6
Operation Type		
Hydraulic dredge	26,081.9	2,347.4
Hopper dredge	27,584.9	4,965.3
Backpass Operations	4,609.3	69.1
Total		
Hydraulic dredge	30,691.2	2,416.5
Hopper Dredge	32,194.3	5,034.4
Total Equivalent CO2		
Total Hydraulic		2,435.8
Total Hopper		5,074.7

CO2 Equivalent = CO2*1.008

Appendix E

Environmental Justice Screen Results

EJSCREEN Report (Version 2020)

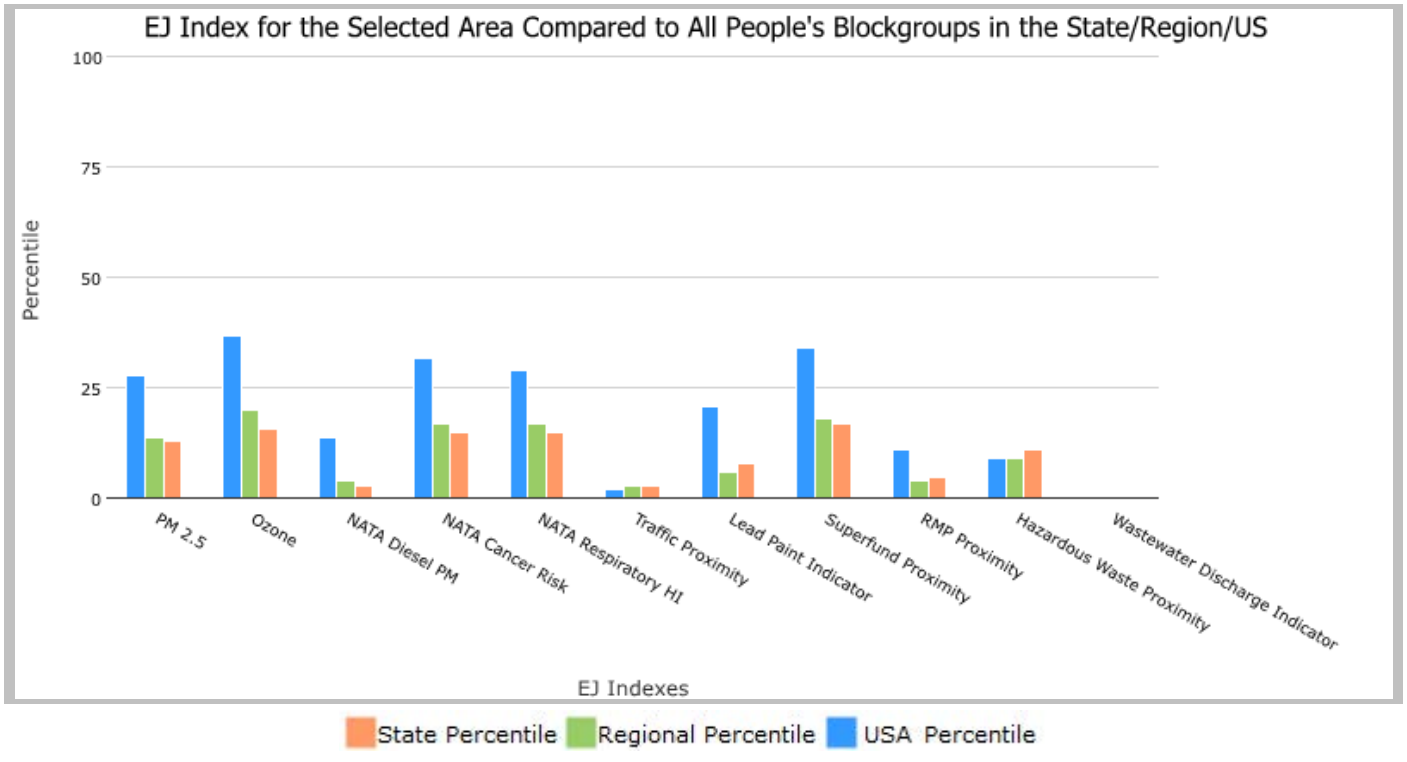
1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 7,669

Input Area (sq. miles): 5.22

Surfside-Sunset Beach (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	13	14	28
EJ Index for Ozone	16	20	37
EJ Index for NATA* Diesel PM	3	4	14
EJ Index for NATA* Air Toxics Cancer Risk	15	17	32
EJ Index for NATA* Respiratory Hazard Index	15	17	29
EJ Index for Traffic Proximity and Volume	3	3	2
EJ Index for Lead Paint Indicator	8	6	21
EJ Index for Superfund Proximity	17	18	34
EJ Index for RMP Proximity	5	4	11
EJ Index for Hazardous Waste Proximity	11	9	9
EJ Index for Wastewater Discharge Indicator	0	0	0



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2020)

1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 7,669

Input Area (sq. miles): 5.22

Surfside-Sunset Beach (The study area contains 1 blockgroup(s) with zero population.)

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2020)

1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 7,669

Input Area (sq. miles): 5.22

Surfside-Sunset Beach (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	11.4	10.6	62	9.99	70	8.55	95
Ozone (ppb)	42.2	49.2	26	50.1	20	42.9	44
NATA* Diesel PM (µg/m^3)	0.866	0.467	92	0.479	90-95th	0.478	80-90th
NATA* Cancer Risk (lifetime risk per million)	33	36	37	35	<50th	32	50-60th
NATA* Respiratory Hazard Index	0.5	0.55	39	0.53	<50th	0.44	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	2200	2000	72	1700	77	750	91
Lead Paint Indicator (% Pre-1960 Housing)	0.26	0.29	55	0.24	62	0.28	59
Superfund Proximity (site count/km distance)	0.051	0.17	30	0.15	36	0.13	43
RMP Proximity (facility count/km distance)	1.1	1.1	67	0.99	71	0.74	78
Hazardous Waste Proximity (facility count/km distance)	4	6.2	45	5.3	54	5	80
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	13	18	96	18	96	9.4	98
Demographic Indicators							
Demographic Index	19%	47%	8	46%	10	36%	29
People of Color Population	28%	62%	12	60%	15	39%	47
Low Income Population	11%	33%	15	33%	14	33%	15
Linguistically Isolated Population	1%	9%	17	8%	21	4%	46
Population With Less Than High School Education	5%	17%	24	16%	25	13%	29
Population Under 5 years of age	4%	6%	31	6%	32	6%	34
Population over 64 years of age	25%	14%	90	14%	89	15%	88

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

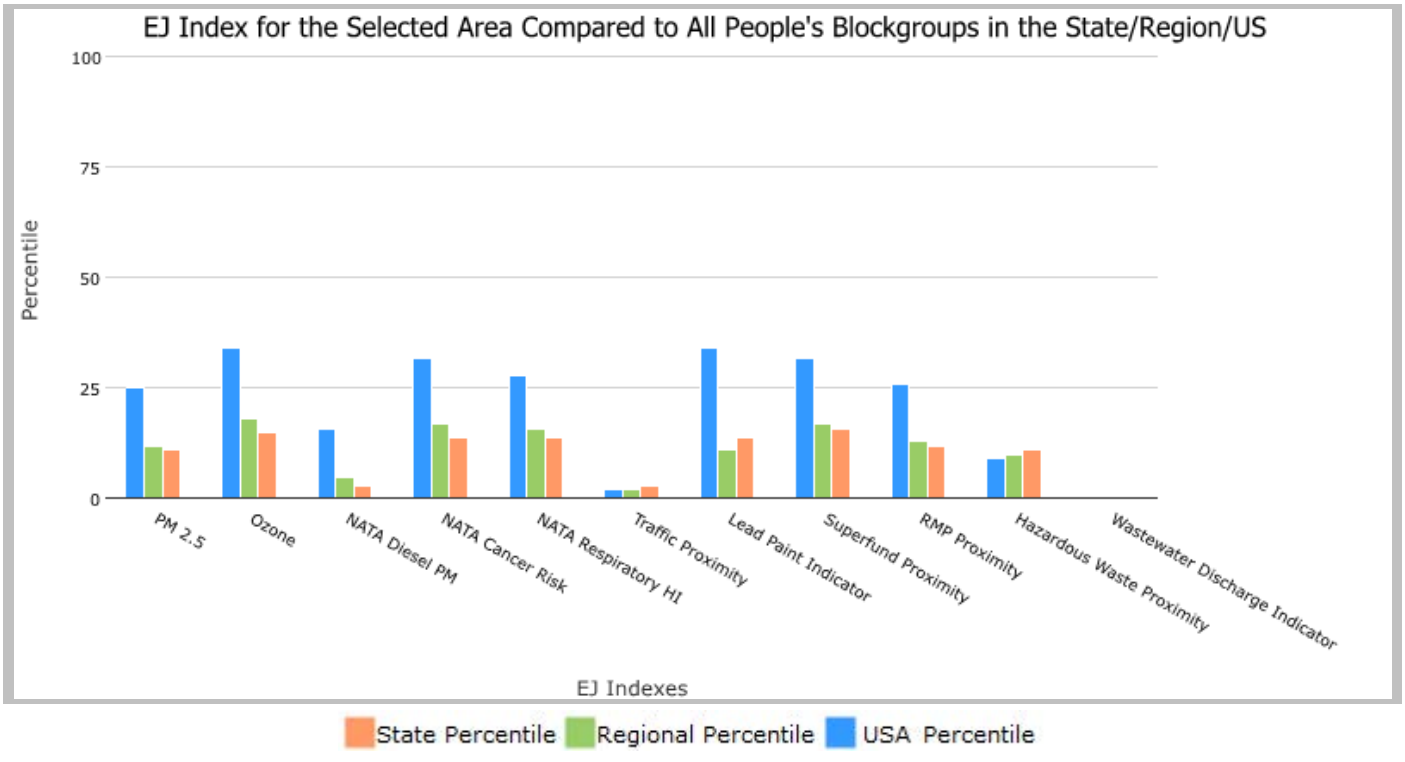
Blockgroup: 060590995131, CALIFORNIA, EPA Region 9

Approximate Population: 1,428

Input Area (sq. miles): 0.29

Sunset Beach

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	11	12	25
EJ Index for Ozone	15	18	34
EJ Index for NATA* Diesel PM	3	5	16
EJ Index for NATA* Air Toxics Cancer Risk	14	17	32
EJ Index for NATA* Respiratory Hazard Index	14	16	28
EJ Index for Traffic Proximity and Volume	3	2	2
EJ Index for Lead Paint Indicator	14	11	34
EJ Index for Superfund Proximity	16	17	32
EJ Index for RMP Proximity	12	13	26
EJ Index for Hazardous Waste Proximity	11	10	9
EJ Index for Wastewater Discharge Indicator	N/A	N/A	N/A



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

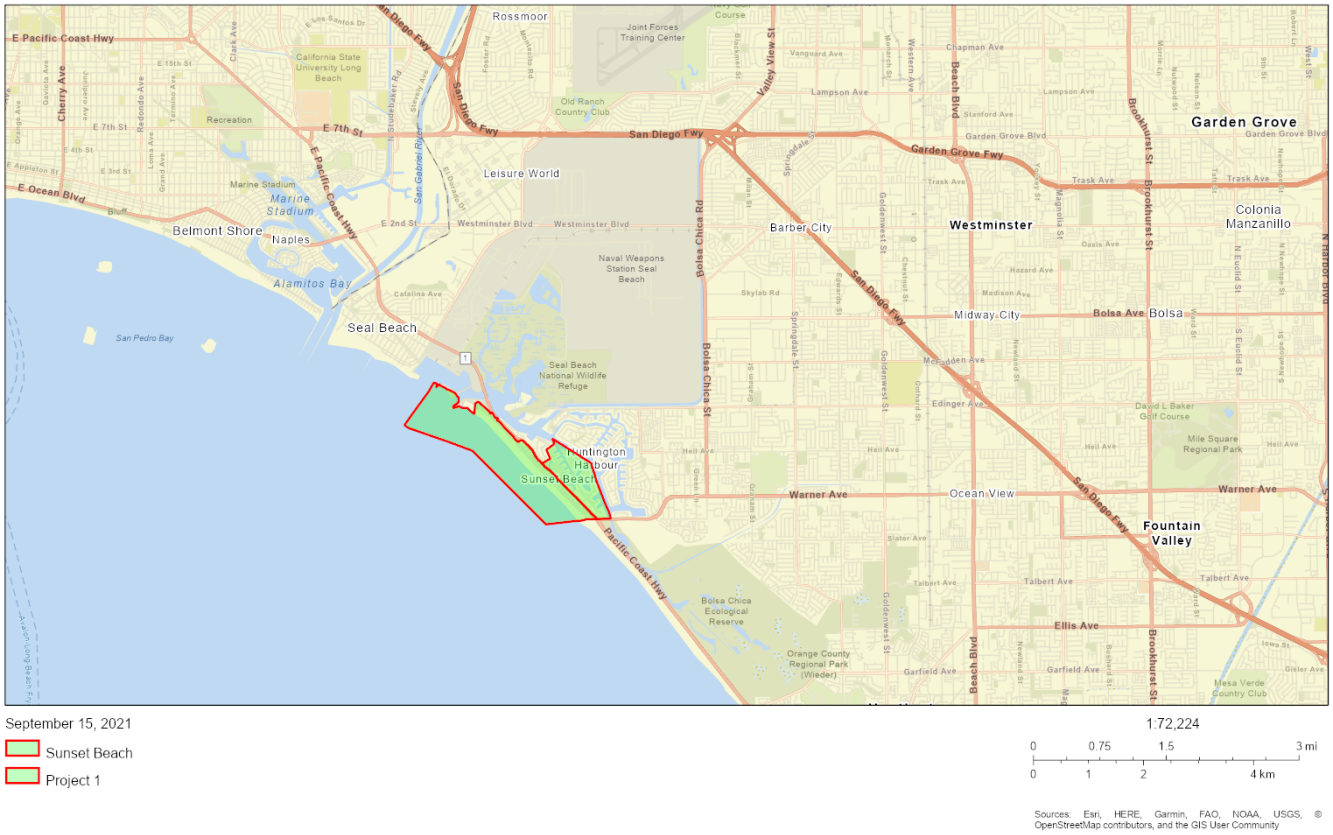
EJSCREEN Report (Version 2020)

Blockgroup: 060590995131, CALIFORNIA, EPA Region 9

Approximate Population: 1,428

Input Area (sq. miles): 0.29

Sunset Beach



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2020)

Blockgroup: 060590995131, CALIFORNIA, EPA Region 9

Approximate Population: 1,428

Input Area (sq. miles): 0.29

Sunset Beach

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	11.3	10.6	60	9.99	68	8.55	94
Ozone (ppb)	42.2	49.2	26	50.1	20	42.9	44
NATA* Diesel PM (µg/m^3)	0.725	0.467	83	0.479	80-90th	0.478	80-90th
NATA* Cancer Risk (lifetime risk per million)	31	36	28	35	<50th	32	<50th
NATA* Respiratory Hazard Index	0.46	0.55	28	0.53	<50th	0.44	50-60th
Traffic Proximity and Volume (daily traffic count/distance to road)	2700	2000	78	1700	82	750	93
Lead Paint Indicator (% Pre-1960 Housing)	0.11	0.29	39	0.24	47	0.28	40
Superfund Proximity (site count/km distance)	0.051	0.17	30	0.15	36	0.13	43
RMP Proximity (facility count/km distance)	0.34	1.1	37	0.99	42	0.74	51
Hazardous Waste Proximity (facility count/km distance)	3.5	6.2	41	5.3	50	5	78
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	N/A	18	N/A	18	N/A	9.4	N/A
Demographic Indicators							
Demographic Index	21%	47%	11	46%	13	36%	33
People of Color Population	30%	62%	14	60%	17	39%	49
Low Income Population	13%	33%	20	33%	20	33%	20
Linguistically Isolated Population	1%	9%	19	8%	23	4%	49
Population With Less Than High School Education	4%	17%	22	16%	23	13%	26
Population Under 5 years of age	6%	6%	52	6%	52	6%	56
Population over 64 years of age	23%	14%	88	14%	86	15%	84

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice