CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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Clean Water Act Section 401 Water Quality Certification
and Waste Discharge Requirements
for Discharge of Dredged and/or Fill Materials

PROJECT: **Encinitas-Solana Beach Coastal Storm Damage Reduction Project**
Certification Number R9-2015-0038
WDID: 9000002816

Reg. Meas. ID: 400016
Place ID: 813377
Party ID: 47607
Person ID: 525896

APPLICANT: **U.S. Army Corps of Engineers**
Los Angeles District
915 Wilshire Blvd, Suite 930
Los Angeles, CA 90017

ACTION:

☐ Order for Low Impact Certification	☐ Order for Denial of Certification
☑ Order for Technically-conditioned Certification	☐ Enrollment in Isolated Waters Order No. 2004-004-DWQ
☑ Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	

PROJECT DESCRIPTION

An application dated February 23, 2015 was submitted by U.S. Army Corps of Engineers, Los Angeles District (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (United States Code (USC) Title 33, section 1341) for the proposed Encinitas Solana Beach Coastal Storm Damage Protection Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on March 25, 2015. The Applicant proposes to discharge dredged or fill material to waters of the United States and/or State associated with construction activity at the Project site. Since the Applicant is the United States Army Corps of Engineers (Corps), a Clean Water Act section 404 permit is not required.

The Project is located within the Cities of Solana Beach and Encinitas, San Diego County, California. The Project extends from latitude 33.060556 and longitude -117.1528 to latitude 33.980278 and longitude -117.273333. The Project is a federal dredge and fill operation undertaking for the purpose of coastal storm damage reduction and the Applicant is not required to pay discharge application fees or annual fees for the Project. On September 9, 2015, the San Diego Water Board provided public notice of the Project application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to conduct beach nourishment related activities (sand dredging, placement, and dispersal) to widen area beaches and reduce risks to public safety along two shoreline segments in the Cities of Encinitas and Solana Beach over a fifty year period. These activities are also being conducted to reduce economic damages from wave-induced erosion of coastal bluffs and the beaches along the shoreline segments and to improve recreational opportunities on the widened beaches. The sand used for beach nourishment will be dredged from offshore borrow sites and placed directly on the receiver beaches. Project specifics for each City shoreline segment are described below.

City of Encinitas:
Beach sand nourishment within Segment 1 (7,800 feet (ft.) alongshore), between Daphne Street and H Street, is the method of providing shoreline protection. The sand will be dredged from offshore borrow sites SO-6 and SO-5. The sand will be placed directly onto the shoreline within Segment 1. The designed additional beach width is 50 ft. Mean Sea Level (MSL), increasing the beach profile width to 160 ft. (existing beach width plus additional proposed beach width), under the low sea level rise scenario. Initial nourishment placement of 340,000 cubic yards (cy) of sand will occur followed by renourishment placement of 220,000 to 340,000 cy of sand at five year intervals, on average, over the fifty year Project period. Renourishment events will be scheduled based on the spring and fall annual shoreline monitoring that will show the current conditions of the beach. The wide range of nourishment volumes reflects estimates based on low and high sea level rise scenarios. The estimated duration for initial nourishment sand placement is 62 days. The estimated duration for renourishment sand placement is 47 to 61 days per event. At the end of the 50-year Project period, the Applicant estimates that approximately 2.32 million cy of sand will have been placed along this segment under the low sea level rise scenario, and up to 3.15 million cy under the high sea level rise scenario. See Attachment 2 for Borrow Site and Segment 1 figures.

City of Solana Beach:
Beach sand nourishment within Segment 2 (7,200 ft. alongshore), between Ocean Street and Via Del la Valle, is the method for providing shoreline protection. Sand will be dredged from SO-5 until exhausted and then from MB-1 and placed directly onto Segment 2. The designed additional beach width is 150 ft. MSL, increasing the beach profile width to 220 ft. (existing beach width plus additional proposed beach width), under the low sea level rise scenario. Initial nourishment placement of 700,000 cy of sand will occur followed by renourishment placement of 290,000 to 500,000 cy of sand at ten-year intervals, on average, over the 50 year Project period. Renourishment events will be scheduled based on the spring and fall annual shoreline monitoring that will show the current conditions of the beach. The estimated duration for initial nourishment sand placement is 107 days. The estimated duration for renourishment sand placement is 56 to 81 days per event. At the end of the 50-year Project period, the Applicant estimates that approximately 1.87 million cy of sand will have been placed along this segment under the low sea level rise scenario, and up to 2.63 million cy under the high sea level rise scenario. See Attachment 2 for Borrow Site and Segment 2 figures.

The Project application includes a description of the design objective, operation, and degree of treatment expected to be attained from equipment, facilities, or activities (including construction and post-construction BMPs) to treat waste and reduce runoff or other effluents which may be discharged. Compliance with the Certification conditions will help ensure that

construction and post-construction discharges from the Project will not cause on-site or off-site shoreline or bluff erosion, damage to shoreline properties, or otherwise damage shoreline habitats in violation of water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan) or the *Water Quality Control Plan, Ocean Waters of California* (Ocean Plan).

Project construction will temporarily impact 33.7 acre (15,000 linear ft.) of ocean shoreline waters of the United States and/or State. Permanent impacts will not be known until the monitoring is conducted after the completion of beach nourishment activities; however modeling predicted permanent impacts to 6.8 acres of surf grass and rocky reef habitat at the end of Year 2 after initial nourishment. No additional impacts are anticipated from subsequent renourishment events over the term of Project. Impacts to nearshore resources would be restricted to the initial beach fill as all subsequent nourishment events would occur in the same footprint and would be a reduced volume relative to the initial fill. The Applicant reports that the Project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impacts to aquatic resources considering all potential practicable alternatives, such as the potential for alternate available locations, designs, reductions in size, configuration or density.

The Applicant will provide compensatory mitigation based on the results of pre- and post-construction monitoring of the nearshore habitat. Any loss of nearshore habitat relative to the reference sites will be mitigated at a 2:1 acreage for rocky reef resources. Compensatory mitigation for reef impacts will require placement of rock over sandy bottom habitat within waters of the United States and/or State. Sediment transport modeling estimates the Project impacts to be 6.8 acres. The Applicant reports that compensatory mitigation for the permanent loss of 6.8 acres of jurisdictional waters will be achieved through the establishment of rocky reef nearshore habitat. Mitigation for discharges of fill material to waters of the United States and/or State will be completed by the Applicant through the construction of rocky reef nearshore habitat at a location offshore of Solana Beach in the Carlsbad Hydrologic Unit (HU 904.00) at a minimum compensation ratio of 2:1 (area mitigated:area impacted). The final mitigation and monitoring plan will be prepared during the pre-construction engineering design phase of the Project in consultation with resource and regulatory agencies. Project mitigation construction will be initiated within five years of completion of the initial beach nourishment activities.

Additional Project details are provided in Attachments 1 through 5 of this Certification.

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Attachments:

1. **Definitions**
2. **Project Location Maps**
3. **Project Site Plans**
4. **Mitigation Figures**
5. **CEQA Mitigation Monitoring and Reporting Program**

I. STANDARD CONDITIONS

Pursuant to section 3860 of title 23 of the California Code of Regulations, the following three standard conditions apply to all water quality certification actions:

A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and chapter 28, article 6 (commencing with title 23, section 3867), of the California Code of Regulations.

B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to California Code of Regulations title 23, section 3855 subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

C. This Certification action is conditioned upon total payment of any fee required under title 23, chapter 28 (commencing with section 3830) of California Code of Regulations and owed by the applicant.

II. GENERAL CONDITIONS

A. **Term of Certification**. Water Quality Certification No. R9-2015-0038 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 USC Title 33, section 1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) fifty (50) years from the date of issuance of this Certification, whichever occurs first.

B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.

C. **General Waste Discharge Requirements**. The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf.

D. **Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality certification are incorporated by reference into this Certification as if fully stated herein. Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.

E. **Project Conformance with Water Quality Control Plans or Policies**. Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 USC section 1313). The Basin Plan is accessible at:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

F. **Project Modification**. The Applicant must submit advance notice of any planned changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for evaluation of Certification. The submittal of a request by the Applicant for modification, revocation and reissuance, or termination of this Certification, or a notification of planned changes or anticipated noncompliance, does not stay any condition of this Certification. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.

G. **Certification Distribution Posting**. During Project construction, the Applicant must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.

H. **Inspection and Entry**. To the extent allowed under State and Federal law, the Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:

1. Enter upon the Project or Compensatory Mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Certification;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Certification;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Certification; and

4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or Water Code, any substances or parameters at any location.

I. **Enforcement Notification**. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State or Federal law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.

J. **Certification Actions**. This Certification may be modified, revoked and reissued, or terminated for cause including but not limited to the following:

1. Violation of any term or condition of this Certification;

2. Monitoring results indicate that continued Project activities could violate water quality objectives or impair the beneficial uses of the Pacific Ocean and Pacific Ocean shoreline;

3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;

4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.

K. **Duty to Provide Information**. To the extent allowed under State and Federal law, the Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.

L. **Property Rights**. This Certification does not convey any property rights of any sort, or any exclusive privilege.

M. **Petitions**. Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

III. CONSTRUCTION BEST MANAGEMENT PRACTICES

A. **Approvals to Commence Construction**. The Applicant shall not commence Project construction until all necessary federal, State, and local approvals are obtained.

B. **Personnel Education.** Prior to the start of the Project, and any subsequent renourishment event, the Applicant must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response measures, and BMP implementation and maintenance measures.

C. **Spill Containment Materials.** The Applicant must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.

D. **General Construction Storm Water Permit.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the uncontrolled discharge of sediment and other pollutants during construction activities.

E. **Waste Management.** The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state and local laws and regulations.

F. **Waste Management**. Except for a discharge permitted under this Certification, the dumping, deposition, or discharge of trash, rubbish, unset cement or asphalt, concrete, grout, damaged concrete or asphalt, concrete or asphalt spoils, wash water, organic or earthen material, steel, sawdust or other construction debris waste from Project activities directly into waters of the United States and or State, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited.

G. **Construction Equipment**. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.

H. **Process Water.** Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or State or placed in locations that may be subjected to storm water runoff flows.

I. **Hazardous Materials.** Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each Project activity involving hazardous materials.

J. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State within the beach and staging areas using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.

K. **On-site Qualified Biologist.** The Applicant shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the United States and/or State to ensure compliance with the Certification requirements. The biologist shall notify the official with the authority to stop all work on-site if a violation of this Certification occurs or has the potential to occur. Records and field notes of the biologist's activities shall be kept on-site and made available for review upon request by the San Diego Water Board.

L. **Beneficial Use Protection**. The Applicant must take all necessary measures to protect the beneficial uses of waters of the Pacific Ocean and the shoreline. This Certification requires compliance with all applicable requirements of the Basin Plan and Ocean Plan. If at any time, an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project is violating, or threatens to violate, water quality objectives, the associated Project activities shall cease immediately and the San Diego Water Board shall be notified in accordance with Notification Requirement VII.A

of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

M. **Sand Composition**. The dredged material used for beach replenishment or near shore disposal must have at least 80% sand and no more than 10% difference in sand composition from the receiving beach, and must not have significant chemical contamination. The Project must not impact the aesthetic characteristics of the receiving beaches and/or adjacent ocean waters.

N. **Trash.** The dredged material deposited on the beach must be free of trash and debris.

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

A. **Post-Construction Discharges.** The Applicant shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties or shoreline habitats.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION

A. **Project Impact Avoidance and Minimization**. The Project must avoid and minimize adverse impacts to waters of the United States and/or State to the maximum extent practicable.

B. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to Pacific Ocean and Pacific Ocean Shoreline within the Carlsbad Hydrologic Unit are estimated in the table below. After confirmation of impacts to rocky reef and surf grass, if any, based on the results of the second annual post-construction monitoring, the Applicant will provide compensatory mitigation. Any loss of nearshore habitat relative to the reference sites will be mitigated at a ratio of 2:1 acreage for rocky reef resources. Compensatory mitigation for reef impacts is expected to require placement of rock over approximately 13.6 acres of sandy bottom habitat within waters of the United States and/or State.

	Impacts (acres)	Impacts (linear ft.)	Estimated Impacts for Mitigation (acres)	Mitigation Ratio (area mitigated :area impacted)	Mitigation for Estimated Impacts (acres)	Mitigation Ratio (linear feet mitigated :linear feet impacted)
Permanent Impacts						
Mid Water Rocky Reef[1]	6.8[1]	NA[2]	6.8	2:1	13.6 Establishment[1,3]	NA[2]

1. Predicted maximum Project impacts based on sediment transport modeling. Actual Project impacts will be determined based on the results of pre- and post- construction monitoring of the initial nourishment event.
2. Functional assessments of reef habitat not measured in linear feet.
3. Construction of mid water rocky reef habitat proposed offshore of Solana Beach, CA

C. **Compensatory Mitigation Plan.** The Applicant has submitted a preliminary Mitigation Plan that outlines potential mitigation sites, construction methodology, success criteria, and timing. Prior to the start of mitigation construction, the Applicant must submit a

refined Mitigation Plan, detailing timing, specific locations, and methodology to the San Diego Water Board that adequately mitigates for the long-term losses caused by the Project (as determined by the results of post- construction monitoring after initial nourishment). The Mitigation Plan shall include detailed written specifications and work descriptions for the compensatory mitigation construction including, but not limited to, the geographic boundaries of the mitigation construction, timing, sequence, monitoring, maintenance, ecological success performance standards, and provisions for long-term management and protection of the mitigation areas. The Applicant shall not commence mitigation construction until the Mitigation Plan is reviewed and accepted by the San Diego Water Board. The Applicant must fully and completely implement the Mitigation Plan in accordance with the schedule contained in the Plan; any modifications thereto, would require the Applicant to submit the requested modifications to the San Diego Water Board in writing for evaluation of Certification amendment. The submittal of a request by the Applicant for modification of the Mitigation Plan does not stay any condition of this Certification.

D. **Performance Standards.** Compensatory mitigation required under this Certification shall be considered achieved once it has met the ecological success performance standards contained in the Mitigation Plan to the satisfaction of the San Diego Water Board.

E. **Compensatory Mitigation Site Design.** The compensatory mitigation site(s) shall be designed to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features and appropriate siting to ensure that natural hydrology and landscape context support long-term sustainability.

F. **Long Term Management and Maintenance.** The compensatory mitigation site(s), must be managed, protected, and maintained-in conformance with the long term management plan and the final ecological success performance standards identified in the Mitigation Plan. The aquatic habitats that comprise the mitigation site(s) must be protected from activities that may threaten water quality or beneficial uses within the mitigation area(s). Any maintenance activities on the mitigation site(s) by the Applicant or non-Federal sponsor that do not contribute to the success of the mitigation site(s) and enhancement of beneficial uses and ecological functions and services are prohibited. The San Diego Water Board may require additional monitoring of the mitigation site by the Applicant to assess how the compensatory mitigation project is responding to a catastrophic natural event that causes damage to the mitigation site(s) or other deficiencies in the compensatory mitigation project.

G. **Temporary Project Impact Areas.** The Applicant must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge of pollutants to waters of the United States and/or State.

H. **Western Snowy Plover**. The Western snowy plover (*Charadrius alexandrinus nivosus*) is a federally threatened species and a State species of concern. The western snowy plover nests at Batiquitos Lagoon, and consistently winters at South Carlsbad Beach south of the Batiquitos Lagoon mouth for wintering and foraging; this area is north of the

Encinitas receiver site activity area. Wintering snowy plovers have consistently used Cardiff State Beach south of San Elijo Lagoon. This area is adjacent to the Seaside Parking Lot that may be used as a Project staging area. If this lot is used as a staging area, construction activities including utilization of the associated proposed beach access route between the staging area and the Solana Beach receiver site, have the potential to affect this species. Monitoring shall be conducted prior to mobilization at the site and specific avoidance measures proposed based on the exact location of the snowy plovers and the actual construction activities planned for the area. This applies to the initial fill and subsequent renourishment events.

The Applicant shall implement the following monitoring and avoidance measures:

1. The Project impact limits, including the access route and paved staging area, shall be temporarily marked with flagging or orange fencing. The final construction plans, including photographs of the marked Project impact limits, shall be provided to the prior to mobilization. Temporary markers will be removed upon Project completion.
2. A biologist that is appropriately qualified to monitor snowy plovers shall be responsible for overseeing compliance with protective measures for the plover. The biologist's name, address, telephone number, and work schedule on the Project shall be submitted to the US Fish and Wildlife Service (USFW) prior to initiating Project construction.
3. If the Seaside Parking Lot is used as a staging area, the biologist shall survey all beach portions of the Project footprint adjacent to the Seaside Parking Lot extending south to Ocean Street for snowy plovers within 72 hours prior to the initiation of Project activities. If snowy plovers are not present, no further measures are required for 72 hours following completion of any survey. During construction activities, surveys shall be conducted every 72 hours. If construction activities in and adjacent to the Seaside Parking Lot temporarily halt, then surveys shall not be conducted until immediately prior to construction activities resuming, at which time a survey shall be conducted in and adjacent to the Seaside Parking Lot extending south to Ocean Street. Should timely beach surveys prove to be impractical for emergency or operational reasons, or should surveys show a presence of snowy plover, a qualified snowy plover monitor shall walk ahead of the vehicle(s) and equipment to assure that all snowy plovers are out of harm's way before the vehicle(s) or equipment can proceed within and adjacent to the Seaside Parking Lot on Cardiff State Beach and on beach areas within 700 ft. south of the Seaside parking lot (e.g., the proposed access route from the Seaside Parking lot staging area south to approximately Ocean Street).
4. The number of vehicle trips on Cardiff State Beach and areas within 700 ft. of the Seaside parking lot shall be minimized to the extent practicable during equipment and dredge pipeline mobilization, inspection and maintenance, and demobilization.
5. Vehicle use on approved beach areas shall be authorized only for activities associated with the various discharge operations.

I. **California Least Tern.** The receiver and borrow sites shall be located away from nesting site locations that may be seasonally used by California least tern (*Sterna antillarum browni)* during their April 15 – September 15 breeding season. No activities

authorized under this Certification shall be conducted within 1,000 yards of a least tern breeding colony from April 15 through September 15.

J. **California Grunion**. California grunion is a State managed species, and the intertidal zone at the Project site is potential spawning habitat. To the greatest extent possible, the Applicant must avoid shoreline fill activities during the grunion spawning season (March 15 – September 1). A fact sheet describing the unique reproductive behavior of grunion is available at: https://www.wildlife.ca.gov/Fishing/Ocean/Grunion#28352307-california-grunion-facts

1. If beach nourishment related activities must occur during grunion spawning season, the Applicant must conduct a preconstruction survey of potential grunion spawning habitat at each proposed beach disposal site. The survey shall include areas of the sand placement, beach access routes, construction staging areas, pipelines, pumps, and other Project related equipment areas.

2. The preconstruction survey must be conducted by a biological monitor prior to the expected start date of each shoreline nourishment event and must include photo documentation.

3. The biological monitor shall determine whether the shoreline nourishment areas are unsuitable for use as spawning habitat for grunion. Unsuitable habitat includes cobble beaches, beaches that are inundated during high tides to the extent that no beach above the high tide water mark is available for grunion spawning, beaches that do not have enough sand substrate for the grunion to bury eggs, and beaches with no historic grunion runs.

4. If work during grunion spawning season is essential for Project effectiveness and suitable grunion habitat is located at the beach disposal areas, the following conditions shall apply from March 15 through September 1:

    a. A qualified biologist or appropriately trained personnel shall monitor for the presence of adult grunion during the predicted grunion runs. Monitoring must be done on all four nights of the predicted run series prior to the work activity, except if grunion are observed spawning within the work area or a 10-yard buffer on a given night, the presence of egg nests can be assumed and surveys on subsequent nights are not required. For example, if grunion are observed in the work area or the 10-yard buffer on night 1, then monitoring on nights 2, 3, and 4 would not be required. If grunion are not observed within the work area or the 10-yard buffer on night 1, then night 2 must be surveyed and so forth.
    b. Monitoring must start at the time of the high tide and continue for two hours or until the grunion stop running, whichever is later. For each night of monitoring, recorded information must include the time period monitored, grunion run time and duration, approximate grunion density within the work area and 10-yard buffer, and approximate grunion density in a broader area (i.e., within approximately 50 yards up-coast or 50 yards down-coast of the work area).

c. If grunion spawning is observed within the work area or 10-yard buffer on any night of a four-day run series, then Project activities that entails sand disturbance seaward of the semilunar high tide line shall minimize impacts to this area until after the egg incubation period (i.e., until the day before the first date of the next predicted run
d. If grunion spawning is *not* observed within the work area or 10-yard buffer on all four nights of a predicted run series, then the absence of egg nests and incubation activity near the work area can be assumed and, if needed, Project activity that entails sand disturbance can be conducted seaward of the semilunar high tide line up to and including the day before the date of the next predicted run.

K. **Timing of Mitigation Site Construction.** The construction of proposed mitigation must be started within four years from the completion of the Project initial nourishment event and completed within 12 months. Delays in implementing mitigation must be compensated at an increased ratio of mitigation to loss of 2.1:1 if started within five years and 2.2:1 if started within six years from the completion of the Project initial nourishment event.

L. **Additional Mitigation.** If, after five (5) years of mitigation site monitoring, the mitigation site has not met or exceeded all the ecological success performance standards in the Mitigation Plan, the Applicant shall propose and implement additional mitigation that mitigates for the remaining Project impacts not compensated for by the original mitigation.

VI. MONITORING AND REPORTING REQUIREMENTS

A. **Representative Monitoring**. Samples and measurements taken for the purpose of monitoring under this Certification shall be representative of the monitored activity.

B. **At least 10 days prior to the commencement of each dredge and disposal event**, the Applicant must notify the San Diego Water Board, in writing, of the scheduled start and stop dates for dredge and dredged material disposal activities.

C. **USEPA Test Procedures.** Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act* as amended, unless other test procedures have been specified in this Certification.

D. **Monitoring Instruments.** All monitoring instruments and devices which are used by the discharger to fulfill the prescribed monitoring program must be properly maintained and calibrated as necessary to ensure their continued accuracy.

E. **Certified Laboratory.** All laboratory analyses must be performed in a laboratory certified to perform such analyses under the State Water Resources Control Board's Environmental Laboratory Accreditation Program or a laboratory approved by the San Diego Water Board.

F. **Monitoring and Reporting Revisions**. The San Diego Water Board may amend this Certification to modify the monitoring program at any time during the term of this Certification and may reduce or increase the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected to the extent permitted by State law.

G. **Retain Records.** The Applicant must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Certification, and records of all data used to complete the application for this Certification. Records must be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this Project or when requested by the San Diego Water Board.

H. **Records of Monitoring Information.** Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed;

4. The individual(s) who performed the analyses;

5. The analytical techniques or methods used; and

6. The results of such analyses.

I. **Dredged Material Evaluation**. Dredged material must be sampled and tested according to the document entitled *"Evaluation of Dredged Material Proposed For Discharge in Waters of the U.S. Testing Manual Inland Testing Manual; February 1998"* under the direction and approval of the U.S. Army Corps of Engineers in consultation with the U.S. EPA.

J. **Turbidity Monitoring**. Turbidity must be monitored in nephelometric turbidity units (NTU) and percent transmittance. If the difference in percent light transmittance between the Control site & 300 ft. down current from the dredging operations averaged value is 40% or greater; the Contractor shall modify operations as necessary to reduce the turbidity. The Applicant must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

K. **Water Quality Sampling**. The Applicant must perform water quality sampling and analysis at the active borrow pit dredge site and at the active shoreline beach disposal areas in Solana Beach and Encinitas, CA.

1. Sampling must occur at four sampling stations at the dredge site as specified below.
   a. Station A is within 100 ft. upcurrent of the dredging operations, safety permitting.
   b. Station B is 100 ft. down current of the dredging operations, safety permitting.
   c. Station C is 300 ft. down current of the dredging operations.
   d. Station D is the Control site in a nearby area not affected by the dredge and disposal operations.

2. Sampling must occur at four sampling stations at each active beach disposal site.
   a. Station E is 100 ft. north of the disposal site.
   b. Station F is 100 ft. south of the disposal site.
   c. Station G is 300 ft. south of the disposal site.
   d. Station H is the Control site 300 ft. north of the disposal site.

3. During dredging, weekly sampling shall occur at the four locations outlined in VI.K.1 above. Sampling and analyses will, at a minimum, include: temperature, salinity, pH, turbidity, light transmittance, and dissolved oxygen. Data must be collected at one-meter intervals from the water's surface to the seafloor. Turbidity must be reported in percent transmittance and NTUs. Samples collected for total suspended solids (TSS) and total recoverable petroleum hydrocarbons (TRPH) must be collected from mid depth grab samples and analyzed, at a minimum, of once per month. The results of the water quality assessment must be submitted with the Annual Monitoring Report.

4. During disposal, weekly sampling must occur at the four locations outlined in section VI.K.2 above for each site. Sampling and analyses must, at a minimum, include: temperature, salinity, pH, turbidity, light transmittance, Total Coliform, Fecal Coliform, Enterococcus (TFE), and dissolved oxygen. Data must be collected at one-meter intervals from the water's surface to the seafloor. Turbidity must be reported in percent transmittance and NTUs. Samples collected for total suspended solids (TSS) and total recoverable petroleum hydrocarbons (TRPH) must be collected from mid depth grab samples and analyzed, at a minimum, of once per month. Samples collected for TFE, at a minimum, must be collected at Stations E and F. The results of the water quality assessment must be submitted with each Annual Monitoring Report.

5. Bacteria sampling must occur at the active beach disposal sites for TFE as described in section VI.K.2 above. Bacterial Water-Contact Standards are contained in the Ocean Plan and are hereby incorporated in this Certification as if fully set forth herein. If the mean weekly water samples are found to contain bacteria in levels that exceed Bacterial Water-Contact Standards, the Applicant must report the exceedance pursuant to Notification Requirement VII.A. If persistent exceedances occur, the San Diego Water Board may direct the Applicant to modify or halt discharging sand onto the beach until water quality improves. When no materials

are being deposited directly on the beach, no disposal bacteria monitoring is required.

If the Applicant determines there is no evidence that disposal of dredged material at the beach nourishment suites has caused or contributed to exceedances of Bacterial Water-Contact Standards, the Applicant must provide site specific data, assumptions, and documentation to support such assertions.

L. **Visual Observations**. During sample collection conducted pursuant to this monitoring and reporting program, the following visual and other observations must also be made and recorded and submitted as part of the required reports.

1. Speed and direction of the currents:
2. Tidal stage;
3. Appearance of rubbish or refuse (including cans, bottles, paper, plastic, etc.), garbage, trash or any other solid waste;
4. Appearance of oil or other materials of petroleum origin;
5. Discoloration and extent of any visible turbidity plume;
6. Presence of nuisance odors attributable to the dredge activity or dredged material discharge to the beach disposal area; and
7. Photo documentation must be conducted in accordance with the State Water Resources Control Board Standard Operating Procedure 4.2.1.4[1]. The Applicant must conduct photo documentation of the Project site, and shoreline disposal areas prior to, during, and after Project construction. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced. The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar).

M. **Borrow Site Monitoring Plan**. The purpose of the Borrow Site Monitoring Plan is to monitor the physical and biological impacts to, and recovery of, the borrow sites resulting from dredging. The Applicant must submit a Borrow Site Monitoring Plan to the San Diego Water Board no later than 60 days prior to the start of construction. The plan shall include measures to document the actual areas dredged during each nourishment Project, the biological community affected, and the physical and biological temporal changes, including physical (multibeam sonar) and biological (benthic and infaunal sampling) monitoring of the borrow sites and nearby reference sites. The Plan shall also include provisions for pre- and post- dredging surveys of all borrow areas used during nourishment projects. The Applicant must fully and completely implement the Borrow Site Monitoring Plan in accordance with the schedule contained in the Plan; any modifications thereto, would require the Applicant to submit the requested modifications to the San Diego Water Board in writing for evaluation of Certification amendment. The submittal of a request by the Applicant for modification of the Borrow Site Monitoring Plan does not stay any condition of this Certification.

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[1] Available at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf

N. **Grunion Monitoring and Avoidance Plan**. The purpose of the Grunion Monitoring and Avoidance Plan is to monitor and avoid potential impacts to grunion spawning habitat in the Project construction footprint. The Grunion Monitoring and Avoidance Plan shall follow the conditions outline in Section V.K of this Certification. The Applicant must submit a Grunion Monitoring Plan to the San Diego Water Board no later than 60 days prior to the start of construction. The Applicant must fully and completely implement the Grunion Monitoring and Avoidance Plan in accordance with the schedule contained in the Plan; any modifications thereto, would require the Applicant to submit the requested modifications to the San Diego Water Board in writing for evaluation of Certification amendment. The submittal of a request by the Applicant for modification of the Grunion Monitoring and Avoidance Plan does not stay any condition of this Certification.

O. **Storm Water Pollution Prevention Plan (SWPPP)**. The Applicant must submit a SWPPP to the San Diego Water Board no later than 90 days prior to the start of construction. The SWPPP must assure that: (a) the Applicant will not store any construction materials or waste where it will be subject to wave erosion and dispersion, (b) no machinery will be placed, stored, or otherwise located in the intertidal zone at any time except for the minimum necessary to implement the Project, (c) construction equipment will not be washed or repaired on the beach, (d) maintenance for land based vehicles will occur in the staging area away from the beach and sensitive habitat, and (e) any equipment left on the beach overnight will be protected so that any materials that could leak will be protected from entering the ocean. The Applicant must fully and completely implement the SWPPP in accordance with the schedule contained in the SWPPP; any modifications thereto, would require the Applicant to submit the requested modifications to the San Diego Water Board in writing for evaluation of Certification amendment. The submittal of a request by the Applicant for modification of the SWPPP does not stay any condition of this Certification.

P. **Habitat Monitoring Plan.** Pre and post construction monitoring of the shoreline and reef habitat will be conducted to allow for identification of Project-related impacts and delineating mitigation requirements. The Applicant must submit a Habitat Monitoring Plan to the San Diego Water Board no later than 1 year prior to the start of construction. The extent of reef habitat and vegetation throughout and adjacent to the entire projected project footprint shall be mapped using remote sensing techniques. Data collected must include bathymetry, bottom substrate type, and vegetation type. All data must be geo-rectified and habitat type digitized as a theme over an aerial image to calculate the coverage of various habitat types and show its distribution. Remote cameras and/or diver surveys may be used to verify the remote sensing data. The Applicant must fully and completely implement the Habitat Monitoring Plan in accordance with the schedule contained in the Plan; any modifications thereto, would require the Applicant to submit the requested modifications to the San Diego Water Board in writing for evaluation of Certification amendment. The submittal of a request by the Applicant for modification of the Habitat Monitoring Plan does not stay any condition of this Certification.

Q. **Beach Profile Monitoring Plan.** The Beach Profile Monitoring Plan will include semi-annual beach profile surveys along 19 shoreline perpendicular transects and oblique

photographs at each of the receiver sites. The beach profile data shall be obtained in the Spring and Fall, corresponding to the transitions between the winter and summer wave seasons, commencing prior to construction and continuing until two years after initial construction. The Applicant must submit the Beach Profile Monitoring Plan to the San Diego Water Board no later than 1 year prior to the start of construction. The Applicant must fully and completely implement the Beach Profile Monitoring Plan in accordance with the schedule contained in the Plan; any modifications thereto, would require the Applicant to submit the requested modifications to the San Diego Water Board in writing for evaluation of Certification amendment. The submittal of a request by the Applicant for modification of the Habitat Monitoring Plan does not stay any condition of this Certification.

R. **Beach Nourishment and Renourishment Event Report.** Six months following the initial beach nourishment event and each subsequent renourishment event, the Applicant must submit a report describing the status of BMP implementation, compensatory mitigation, and compliance with all requirements of this Certification to the San Diego Water Board prior, until the Project has reached completion. The Beach Nourishment Event Report must include, at a minimum, the following information:

1. The names, qualifications, and affiliations of the persons contributing to the report;

2. The status, progress, and anticipated schedule for completion of Project construction activities including the installation and operational status of best management practices project features for erosion and storm water quality treatment;

3. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion;

4. A description of each incident of noncompliance during the beach nourishment event and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance;

5. Calculations of the daily volume and total volume (in cubic yards) of sand material dredged for each beach nourishment event and the location from which the sand material was dredged;

6. Calculations of the daily volume and total volume (in cubic yards) of sand material applied for each beach nourishment event and the location of each beach nourishment area;

7. The results of the borrow site monitoring required under section VI of this Certification;

8. The results of the turbidity monitoring required under section VI.K of this Certification;

9. The results of the water quality sampling required under section VI.K of this Certification;

10. The results of the visual observations monitoring required under section VI.L of this Certification;

11. The results of the chemical, physical, and/or biological monitoring required under this Certification; and

12. An evaluation, interpretation, and tabulation of the parameters being monitored, and all quantitative and qualitative data collected in the field.

S. **Compensatory Mitigation Monitoring Reporting.** Mitigation monitoring information must be submitted annually for a minimum of five years or until the Project has accomplished its objectives and met ecological success performance standards contained in the Mitigation Plan. The Annual Project Progress Report must include the following compensatory mitigation monitoring information:

1. Names, qualifications, and affiliations of the persons contributing to the report;

2. An evaluation, interpretation, and tabulation of the parameters being monitored, including the results of the Mitigation Plan monitoring program, and all quantitative and qualitative data collected in the field;

3. Monitoring data interpretations and conclusions as to how the compensatory mitigation project(s) is progressing towards meeting performance standards and whether the performance standards have been met;

4. A description of the progress toward implementing a plan to manage the compensatory mitigation project after performance standards have been achieved to ensure the long term sustainability of the resource including a discussion of long term financing mechanisms, the party responsible for long term management, and a timetable for future steps;

5. Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results;

6. Photo documentation, including all areas of permanent and temporary impact, prior to and after mitigation site construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced;

7. As-built drawings of the compensatory mitigation project site(s), no bigger than 11"X17"; and

8. A survey report documenting boundaries of the compensatory mitigation site(s).

If additional mitigation is required to be built for the Project's mitigation, monitoring of all mitigation sites will continue until all performance standards have been met or exceeded.

T. **Report Prior to Renourishment Events.** The Applicant must submit a Renourishment Event Report to the San Diego Water Board **at least 6 months prior to each renourishment event** throughout the 50 year Project period. The report must describe the status of the mitigation site and compliance with all requirements of this Certification to the San Diego Water Board. The report must include the following information:

1. Dates of all construction initiated;

2. Volume of sand applied for each previous renourishment event by location;

3. Results of all physical and biological monitoring required since the completion of the previous renourishment event;

4. Status of the completed and/or ongoing mitigation efforts associated with the original nourishment event;

5. Proposed sand volumes, beach width, and borrow site location(s) for the upcoming nourishment event;

6. As-built drawings of the Project, no bigger than 11"X17";

7. Photo documentation of all areas of permanent and temporary impacts, prior to and after Project construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/StreamPhotoDocSOP.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced;

8. The names, qualifications, and affiliations of the persons contributing to the report;

9. The status, progress, and anticipated schedule for completion of Project construction activities including the installation and operational status of best management practices project features for erosion and storm water quality treatment;

10. The compliance status of previous renourishment events and the proposed nourishment event with the requirements of the Certification. For each outstanding incident of noncompliance that has not been previously reported or corrected, the

Report shall include a description of each incident of noncompliance and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

11. The Applicant's conclusions as to whether the Project remains consistent with the requirements of this Certification. If the San Diego Water Board determines that the Project has substantially changed or that the proposed renourishment event will adversely affect beneficial uses in violation of this Certification, the San Diego Water Board may require the Applicant to take appropriate remedial actions, including but not limited to compliance with the requirements of section II.F and III.L of this Certification prior to any subsequent renourishment events.

U. **Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.

V. **Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. R9-2015-0038:813377:amonji
2375 Northside Drive, Suite 100
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF) format, and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. R9-2015-0038:813377:amonji.

W. **Document Signatory Requirements**. All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:

1. For a corporation, by a responsible corporate officer of at least the level of vice president.

2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.

3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.

4. A duly authorized representative may sign applications, reports, or information if:

   a. The authorization is made in writing by a person described above.

   b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.

   c. The written authorization is submitted to the San Diego Water Board Executive Officer.

If such authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

X. **Document Certification Requirements**. All applications, reports, or information submitted to the San Diego Water Board must be certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

VII. NOTIFICATION REQUIREMENTS

A. **Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

B. **Hazardous Substance Discharge**. Except as provided in Water Code section 13271(b), any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other

emergency measures, immediately notify the County of San Diego, in accordance with California Health and Safety Code section 5411.5 and the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.17), and immediately notify the State Water Board or the San Diego Water Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Applicant is in violation of a Basin Plan prohibition.

C. **Oil or Petroleum Product Discharge.** Except as provided in Water Code section 13272(b), any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.1). This requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Clean Water Act section 311, or the discharge is in violation of a Basin Plan prohibition.

D. **Anticipated Noncompliance**. The Applicant shall give advance notice to the San Diego Water Board of any planned changes in the Project or the Compensatory Mitigation project which may result in noncompliance with Certification conditions or requirements.

E. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:

1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board **within 10 days of the transfer of ownership.**

2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to

comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**

3. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications. The Applicant must provide such notification to the San Diego Water Board within **10 days** of the transfer of BMP maintenance responsibility.

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of this Certification in the event that a transferee fails to comply.

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

A. The City of Solana Beach and the City of Encinitas is the Lead Agency under the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) section 21067, and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) section 15367, and has filed a Notice of Determination dated October 15, 2015 for the Final Environmental Impact Report (FEIR) titled U.S. Army Corps of Engineers, Encinitas and Solana Beach Shoreline Protection Project (State Clearing House Number 2012041051). The Lead Agency has determined the Project will have a significant effect on the environment and mitigation measures were made a condition of the Project.

B. The San Diego Water Board is a Responsible Agency under CEQA (Public Resources Code section 21069; CEQA Guidelines section 15381). The San Diego Water Board has considered the Lead Agency's FEIR and finds that the Project as proposed will have a significant effect on resources within the San Diego Water Board's purview.

C. The San Diego Water Board has required mitigation measures as a condition of this Certification to avoid or reduce the environmental effects of the Project to resources within the Board's purview to a less than significant level.

D. The Lead Agency has adopted a mitigation monitoring and reporting program pursuant to Public Resources Code section 21081.6 and CEQA Guidelines section 15097 to ensure that mitigation measures and revisions to the Project identified in the FEIR are implemented. The Mitigation Monitoring and Reporting Program (MMRP) is included and incorporated by reference in Attachment 5 to this Certification. The Applicant shall

implement the Lead Agency's MMRP described in the FEIR, as it pertains to resources within the San Diego Water Board's purview. The San Diego Water Board has imposed additional MMRP requirements as specified in sections V and VI of this Certification.

E. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Determination in accordance with CEQA Guidelines section 15096 subdivision (i).

IX. SAN DIEGO WATER BOARD CONTACT PERSON

Alan Monji, Environmental Scientist
Telephone: 619-521-3968
Email: Alan.Monji@waterboards.ca.gov

X. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Encinitas Solana Beach Coastal Storm Damage Protection Project** (Certification No. R9-2015-0038) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "*Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)*," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited to, and all proposed mitigation being completed in strict compliance with, the applicants' Project description and/or the description in this Certification, and (b) compliance with all applicable requirements of the Basin Plan.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. R9-2015-0038 issued on February 16, 2016.

David W. Gibson

DAVID W. GIBSON
Executive Officer
San Diego Water Board

16 Feb. 2016
Date

ATTACHMENT 1

DEFINITIONS

Activity - when used in reference to a permit means any action, undertaking, or project including, but not limited to, construction, operation, maintenance, repair, modification, and restoration which may result in any discharge to waters of the state.

Buffer - means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

California Rapid Assessment Method (CRAM) - is a wetland assessment method intended to provide a rapid, scientifically-defensible and repeatable assessment methodology to monitor status and trends in the conditions of wetlands for applications throughout the state. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. CRAM provides an assessment of overall ecological condition in terms of four attributes: landscape context and buffer, hydrology, physical structure and biotic structure. CRAM also includes an assessment of key stressors that may be affecting wetland condition and a "field to PC" data management tool (eCRAM) to ensure consistency and quality of data produced with the method.

Compensatory Mitigation Project - means compensatory mitigation implemented by the Applicant as a requirement of this Certification (i.e., applicant -responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Discharge of dredged material – means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States and/or State.

Discharge *of fill* material – means the addition of fill material into waters of the United States and/*or* State.

Dredged material – means material that is excavated or dredged from waters of the United States and/or State.

Ecological Success Performance Standards – means observable or measurable physical (including hydrological), chemical, and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

Enhancement – means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment – means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist. Creation results in a gain in aquatic resource area.

Fill material – means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body.

Isolated wetland – means a wetland with no surface water connection to other aquatic resources.

Mitigation Bank – means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing mitigation for impacts authorized by this Certification.

Preservation - means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/ historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source within waters of the United States and/or State.

Uplands - means non-wetland areas that lack any field-based indicators of wetlands or other aquatic conditions. Uplands are generally well-drained and occur above (i.e., up-slope) from nearby aquatic areas. Wetlands can, however, be entirely surrounded by uplands. For example, some natural seeps and constructed stock ponds lack aboveground hydrological connection to other aquatic areas. In the watershed context, uplands comprise the landscape matrix in which aquatic areas form. They are the primary sources of sediment, surface runoff, and associated chemicals that are deposited in aquatic areas or transported through them.

Water quality objectives and other appropriate requirements of state law – means the water quality objectives and beneficial uses as specified in the appropriate water quality control plan(s); the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act; and any other appropriate requirement of state law.

ATTACHMENT 2

LOCATION MAPS AND FIGURES

1. Encinitas and Solana Beach Shoreline Study Final Report, Project Location, Figure 1.8-2
2. Encinitas and Solana Beach Shoreline Study Final Report, Nearshore Resources in the Vicinity of SO-5 and SO-6 Borrow Sites, Figure 5.5-1
3. Encinitas and Solana Beach Shoreline Study Final Report, Nearshore Resources in the Vicinity of MB-1 Borrow Site, Figure 5.5-2

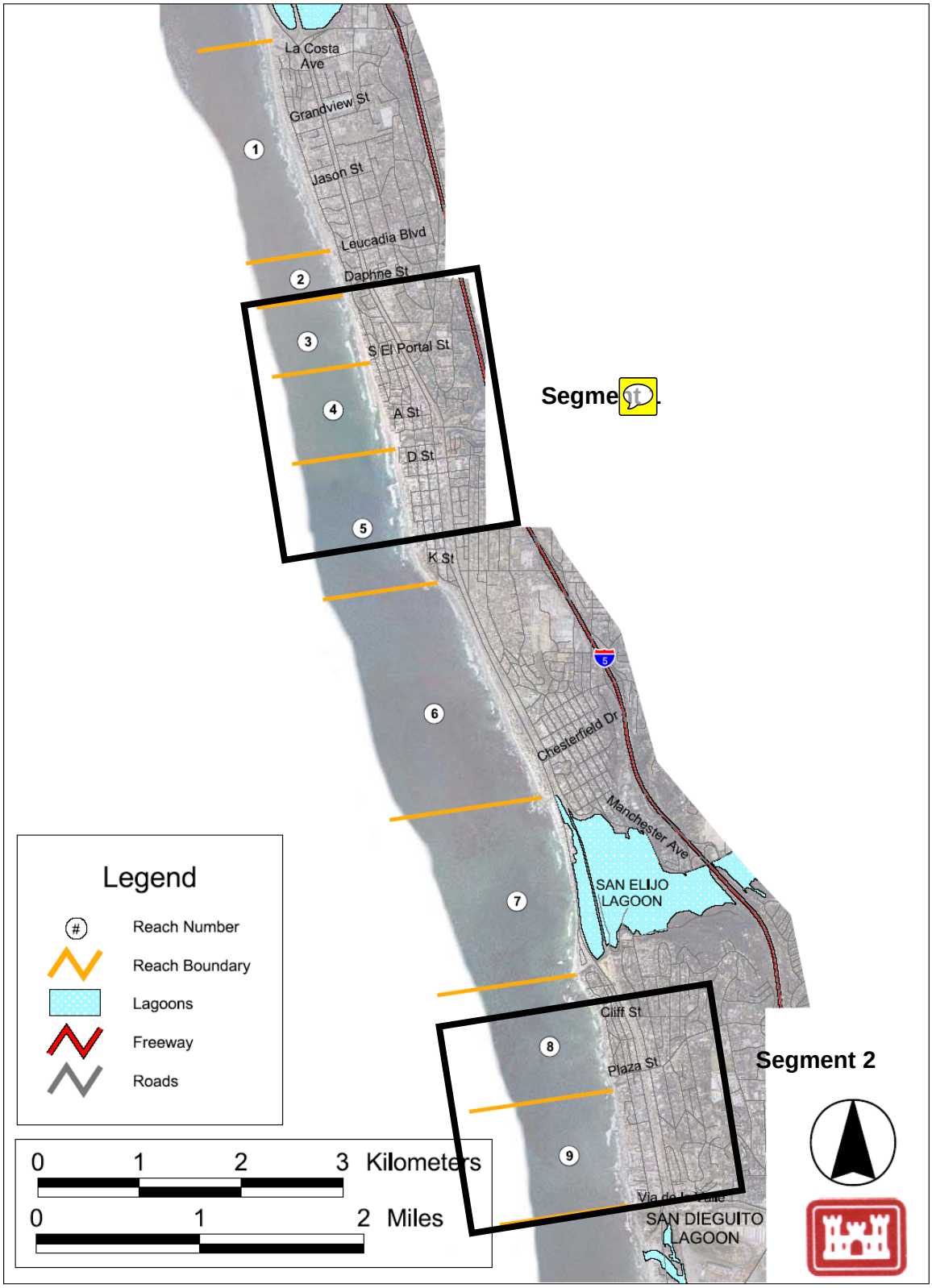

Figure 1.8-2 Project Location

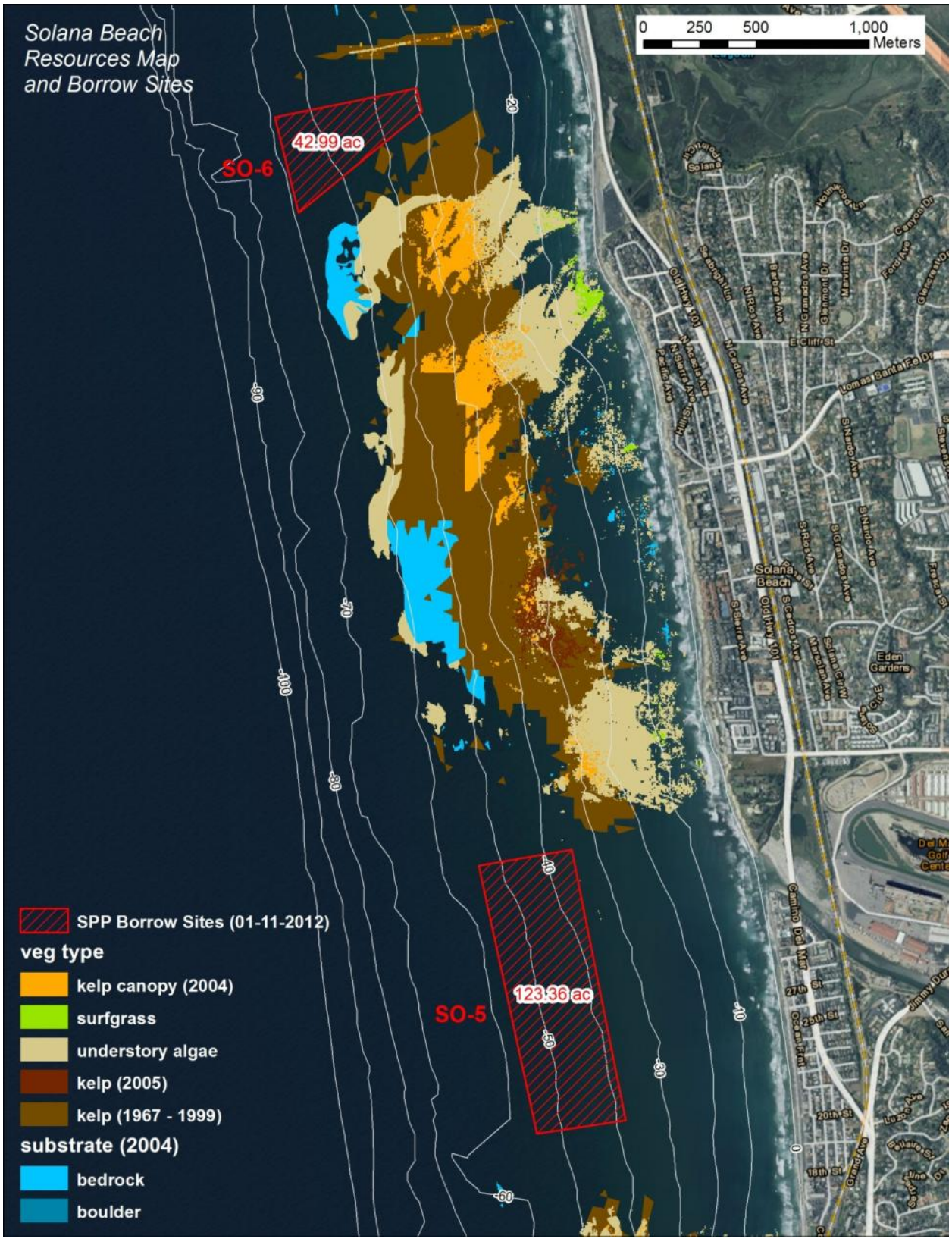

Figure 5.5-1 Nearshore resources in vicinity of SO-5 and SO-6 borrow sites.

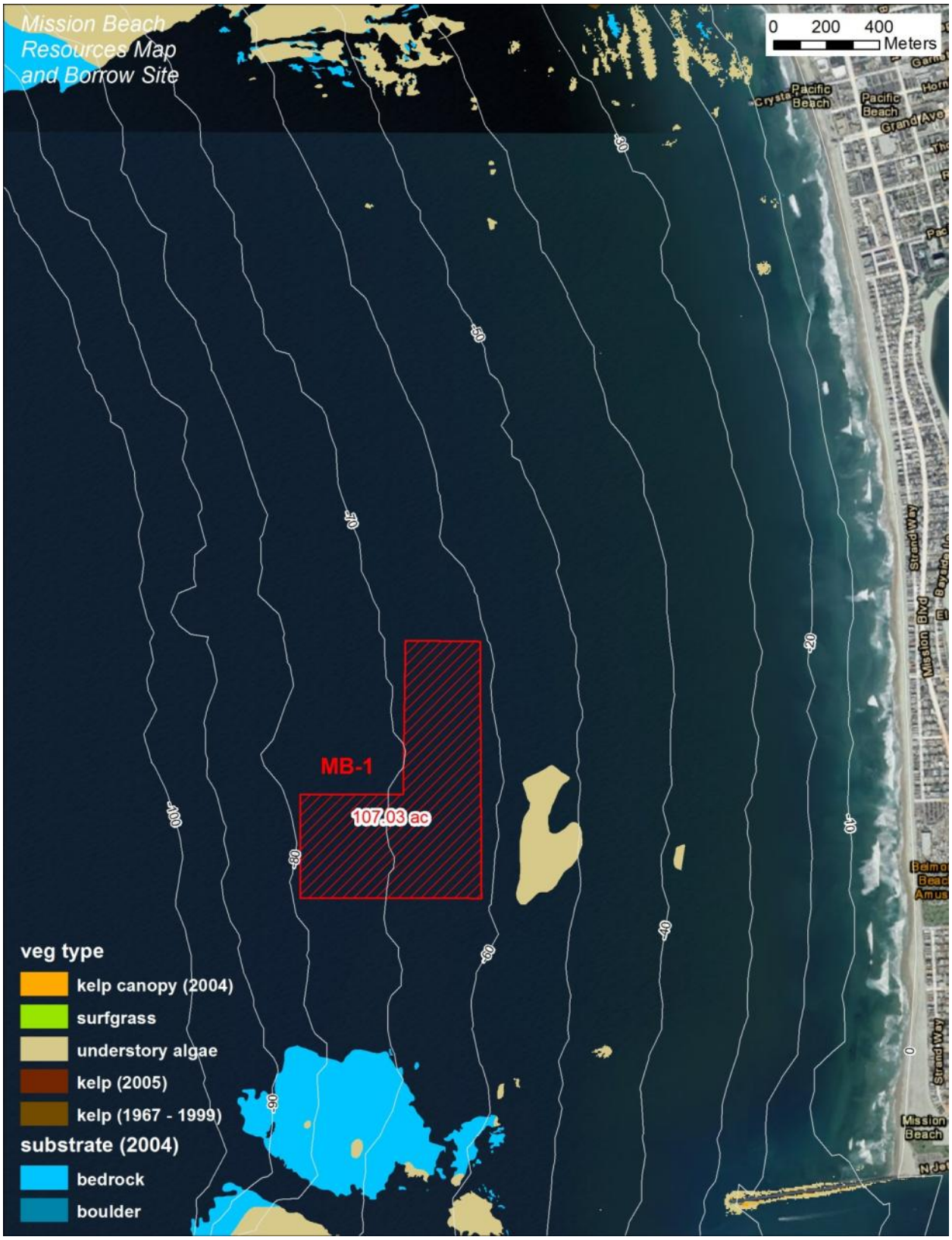

Figure 5.5-2 Nearshore resources in vicinity of MB-1 borrow site

ATTACHMENT 3

PROJECT FIGURES

1. Encinitas and Solana Beach Shoreline Study Final Report, Encinitas Receiver Site Under Alternatives EN-1B and EN-2B, Figure 5.5-4

2. Encinitas and Solana Beach Shoreline Study Final Report, Solana Beach Site Under Alternatives SB-1B and SB-2A, Figure 5.5-7

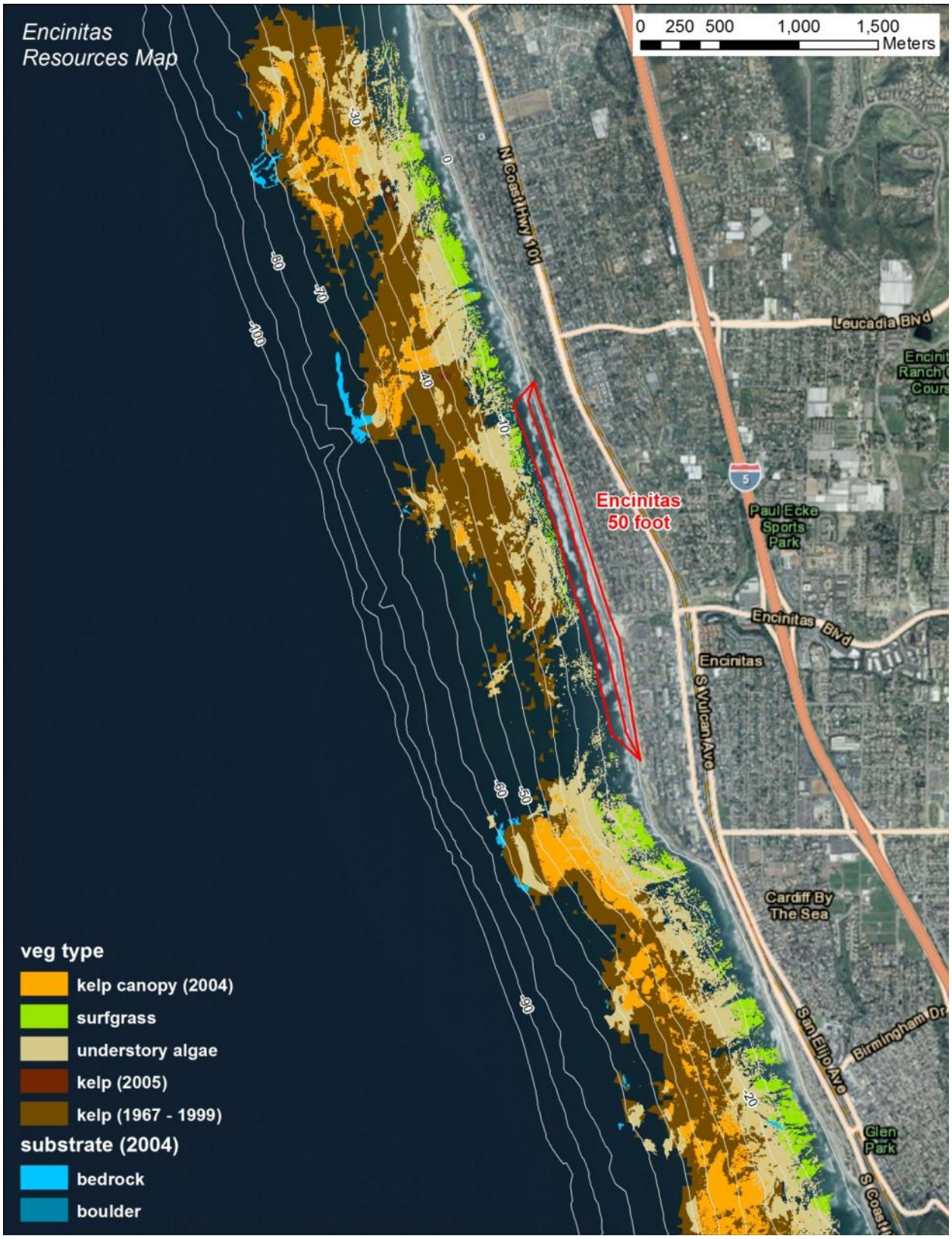

Figure 5.5-4 Encinitas receiver site under Alternatives EN-1B and EN-2B

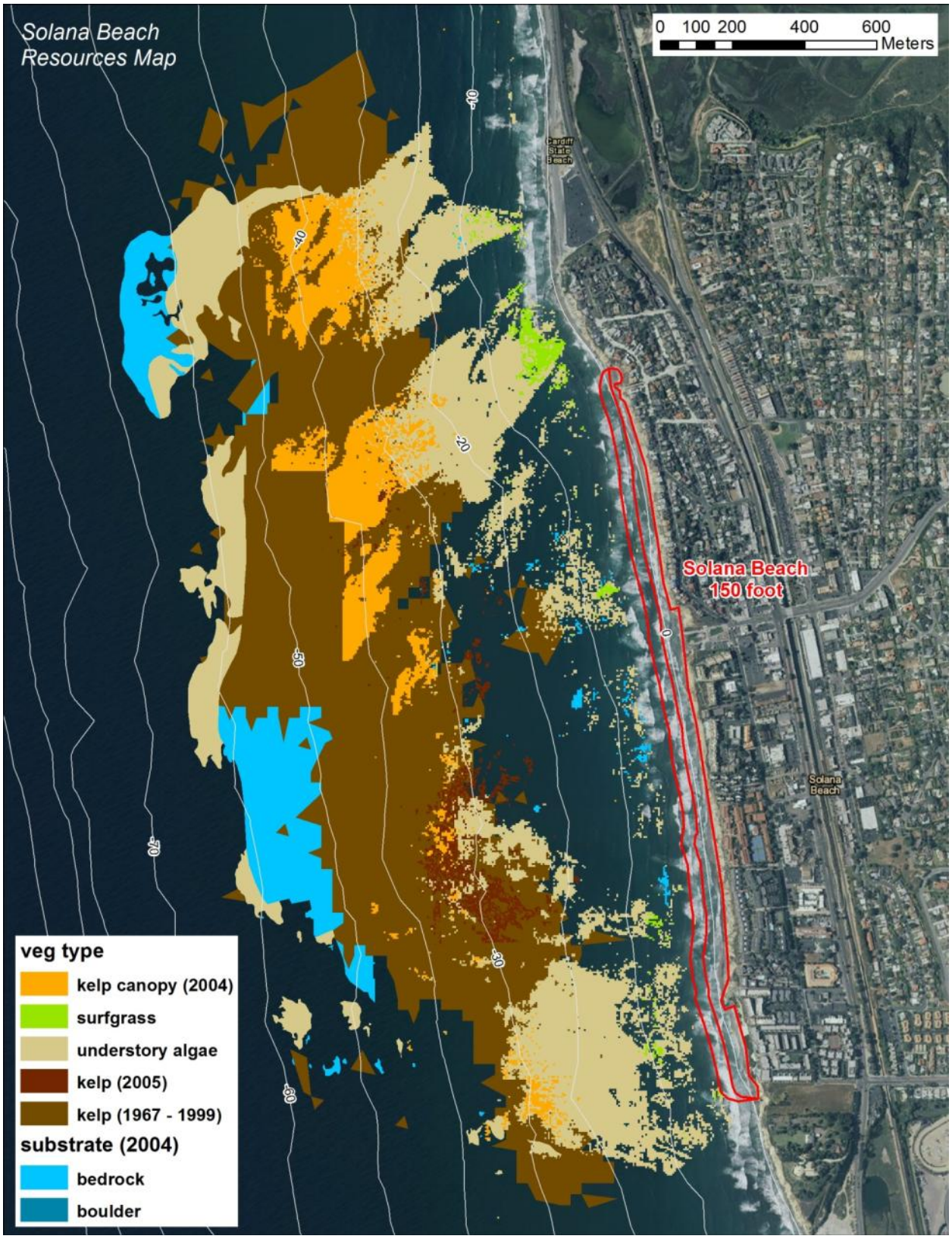

Figure 5.5-7 Solana Beach receiver site under Alternative SB-1B and SB-2A

ATTACHMENT 4

MITIGATION FIGURES

1. Encinitas and Solana Beach Shoreline Study Final Report, Potential Mitigation Areas Off Solana Beach, Figure 5.5-9

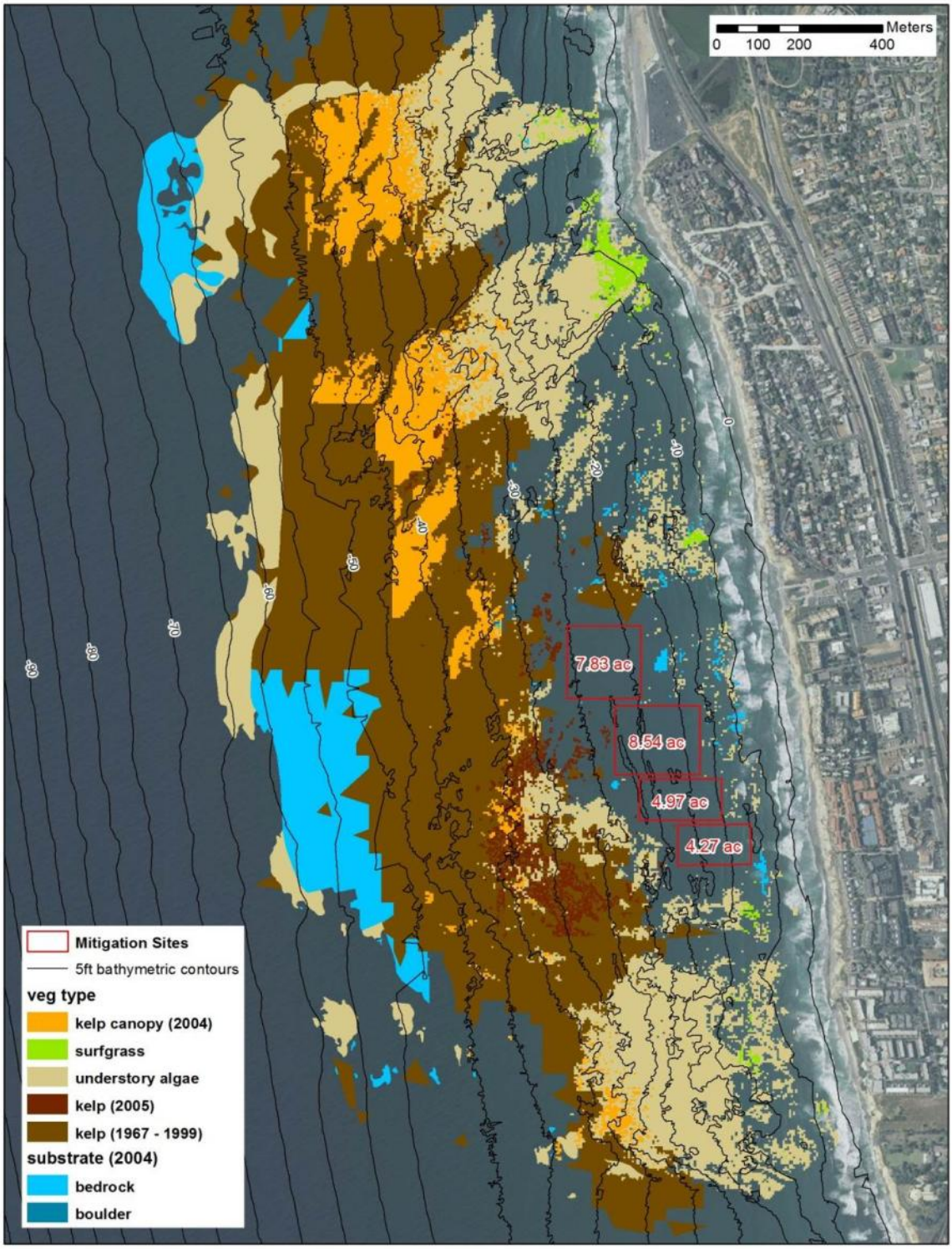

Figure 5.5-9 Potential mitigation areas off Solana Beach

ATTACHMENT 5

CEQA MITIGATION REQUIREMENTS

1. City of Encinitas Mitigation Monitoring and Reporting Program for Coastal Storm Damage Reduction Project Final EIS/EIR October 2015, Attachment 7, Exhibit B

2. City of Solana Beach Mitigation Monitoring and Reporting Program for Coastal Storm Damage Reduction Project Final EIS/EIR August 25, 2015,

CITY OF ENCINITAS
MITIGATION MONITORING AND REPORTING PROGRAM FOR COASTAL STORM DAMAGE REDUCTION PROJECT FINAL EIS/EIR

OCTOBER 2015

PROJECT NAME: Coastal Storm Damage Reduction Project

DESCRIPTION: The USACE and the City of Encinitas and the City of Solana Beach have prepared a joint Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) to evaluate potential options for reducing storm damage related coastal erosion over a 50-year period, using material dredged from offshore borrow sites or onshore sources. The Proposed Project Segment in Encinitas includes construction of a 50-foot-wide beach fill along a 7,800-foot-long stretch of shoreline using 340,000 cubic yards of compatible sediment, with renourishment in the amount of 220,000 cubic yards every 5 years on average over a 50-year period of Federal participation, for a total of nine additional nourishments. The Proposed Project in Solana Beach includes construction of a 150-foot-wide beach fill along a 7,200-foot-long stretch of shoreline using 700,000 cubic yards of compatible sediment, with renourishment in the amount of 290,000 cubic yards every 10 years on average over a 50-year period of Federal participation, for a total of four additional nourishments. Material for the beach fills will be dredged from borrow sites located off the coast of San Diego County. Physical monitoring of the performance of the project will be required annually throughout the 50-year period of Federal participation. The Proposed Project would provide coastal storm damage reduction throughout the project areas and would maintain and enhance the existing recreational beach.

LOCATION: There are two proposed project sites/segments which consist of a 7,800 foot segment of the public beach in the City of Encinitas and a 7,200 foot long segment of the public beach in the City of Solana Beach, California.

The following Mitigation Measures and Monitoring Commitments have been incorporated into the Proposed Project Segment (1) in Encinitas and are to be implemented before, during, or after construction of the initial fill and renourishment events as required and as noted below in accordance with the Final EIS/EIS. Additionally the table below includes the project design features used for the purposes of evaluation and identified in the Final EIS/EIR, Volume I, Table 10.2-1 on pages 543 through 546, as well as the Monitoring Commitments identified on Table 10.2-2 on pages 546 through 547. Additional information is contained in Appendices H and M of the Final EIS/EIR. The City of Solana Beach, in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15097 and 15091, has adopted a Mitigation Monitoring and Reporting Program for mitigation measures and, monitoring commitments applicable to the implementation of the Segment (2) in the City of Solana Beach.

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
MONITORING COMMITTMENTS			
Geology and Topography Monitoring Plan			
Physical Monitoring Plan: Determine if there are changes in the beach and determine the need for the next renourishment event. Monitor lagoon entrances.	USACE and City of Encinitas	One year prior to initial construction, spring and fall. Semi-annually spring and fall for the life of the project. Applies to initial fill and renourishment events.	
Water Quality Monitoring Plan			
Water Quality Monitoring Plan: Monitor at borrow and receiver sites for salinity, pH, water temperature, dissolved oxygen, and light transmissivity (turbidity) to avoid turbidity impacts to fish and aquatic species during dredging and beach fill activities.	USACE	One week prior to construction, weekly during dredging and beach fill operations, and one week after completion. Applies to initial fill and renourishment events.	
Biological Resources Monitoring Plans			
Habitat Monitoring Plan: Map extent of reef habitat and submerged aquatic habitat. Used to determine nature and size of project impacts.	USACE and City of Encinitas	One year prior to initial fill construction in the spring and fall. Annually for two years post-construction in the spring and fall.	

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
California Grunion Monitoring and Avoidance Plan: Identify suitable grunion spawning habitat and monitor use during beach fill operations.	USACE and City of Encinitas	Prior to the start of beach fill operations and during predicted runs occurring on suitable beaches during beach fill operations for the initial fill and renourishment events.	
Borrow Site Monitoring Plan: Monitor seafloor morphology, water quality, and benthic habitat quality at offshore borrow sites.	USACE and City of Encinitas	One year prior to construction, spring and fall. Annually for two years post-construction, spring and fall.	
Cultural Resources Monitoring Plan			
Cultural Resources Monitoring Plan: Monitor dredge and fill operations for the presence of unknown cultural resources. Provisions to halt construction should unknown cultural resources be located until they can be evaluated and coordination with SHPO concluded.	USACE and City of Encinitas	Periodic monitoring during dredge and fill operations.	
Noise Monitoring Plan			
Noise Monitoring Plan: Verify noise levels remain below significance thresholds.	USACE and City of Encinitas	Performed during all beach construction activities.	
N-1: Noise monitoring shall be performed during all beach construction activities to verify that noise levels remain below significant levels. If noise levels exceed significant levels, the contractor shall be required to modify operations to reduce noise levels.	USACE and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
N-2: All construction equipment shall be properly maintained and tuned to minimize noise emissions.	USACE and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	
N-3: All equipment shall be fitted with properly operating mufflers, air intake silencers, and engine shrouds.	USACE and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	
N-4: Stationary noise sources (e.g., booster pumps, generators, and compressors) shall be located as far from residential receptor locations as is feasible, ideally 250 feet or greater.	USACE and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	
N-5: Where feasible, use an electric motor to drive the booster pump, rather than a diesel engine.	USACE and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	
Recreational Monitoring Plan			

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
Surfing Monitoring Plan: Monitor surfing conditions to determine if project-related impacts occur.	USACE and City of Encinitas	One year prior to construction. Annually for two years post-construction for initial fill and for renourishment events.	
MITIGATION MEASURES			
Cultural Resources Mitigation Measure			
CR-1: Implement a monitoring program designed to identify cultural resources encountered during dredging and nourishment operations. Monitoring procedures would be specified in a monitoring plan that is approved before dredging is initiated. The monitoring would be conducted by a qualified archaeologist and would be instituted as material is dredged from each borrow site and placed at the receiver site. Monitoring would consist of periodic spot-checking of materials dredged from low- and moderate-sensitivity contexts and continuous monitoring of materials from high-sensitivity contexts. If monitoring reveals cultural materials indicating that dredging had entered into an archaeological deposit, construction in that area should cease until the requirements of 36 CFR 800.13(b) are met. Then the dredging operation would be permanently relocated away from that site and a 250-ft-wide buffer would be established around the site.	USACE and City of Encinitas	Ongoing during the 50 year life of the project. Periodic monitoring during dredge and fill operations.	
DESIGN MEASURES			

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
Marine Mammal and Turtle Contingency Plan: Monitor for the presence of marine mammals or turtles to determine if activities should be modified or report collisions to Resource Agencies	USACE and City of Encinitas	During all construction activities.	
Construct "L"-shaped berms at all receiver sites	USACE and City of Encinitas	During beach nourishment construction. Same requirements for renourishment events.	
Maintenance for land-based vehicles will occur in staging area away from beach and sensitive areas	USACE and City of Encinitas	During beach nourishment construction. Same requirements for renourishment events.	
Use proper Best Management Practice (BMPs) during vehicle fueling	USACE and City of Encinitas	During beach nourishment construction. Same requirements for renourishment events.	
Generate Oil Spill Prevention and Response Plan (OSPRP) for hazardous spill prevention and containment	USACE and City of Encinitas	Prepare prior to mobilization and implement during beach nourishment construction. Same requirements for renourishment events.	
Prepare Storm Water Pollution Prevention Plan (SWPPP)	USACE and City of Encinitas	Prepare prior to mobilization and implement during beach nourishment construction. Same requirements for renourishment events.	

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
Design borrow sites to maintain adequate distance from reefs, kelp, and other features	USACE and City of Encinitas	Final Engineering and during borrow site construction. Same requirements for renourishment events.	
Where practicable, maintain and tune engines per manufacturer's specifications to perform at California Air Resources Board (CARB) and/or EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies.	USACE and City of Encinitas	During all construction activities.	
Where practicable, employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.	USACE and City of Encinitas	During all construction activities.	
Reduce use, trips, and unnecessary idling from heavy equipment.	USACE and City of Encinitas	During all construction activities.	
Prepare an inventory of equipment and identify the suitability of add-on emission controls for each piece of equipment prior to construction. Meet CARB diesel fuel requirement for off-road and on-highway, and where appropriate use alternative fuels such as natural gas and electric.	USACE and City of Encinitas	During all construction activities.	
Where practicable, require contractor adherence to manufacturers recommendations for engine operation and maintenance.	USACE and City of Encinitas	During all construction activities.	
If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards.	USACE and City of Encinitas	During all construction activities.	
Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.	USACE and City of Encinitas	During all construction activities.	

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
Coordinate with commercial fishermen; establish offshore transit corridors in consultation with a commercial fishermen representative; issue Notice to Mariners.	Coast Guard and USACE	During borrow site construction activities.	
Generate safety plan to restrict public access at receiver and notch fill sites and maintain 150-ft buffer around construction areas. Detail safety procedures, including OSHA and safety for recreational beach users.	USACE and City of Encinitas	During beach nourishment construction activities.	
Staging Plan. Details on location of staging areas, precautions for maintenance and fueling of construction equipment, precautions for storing equipment on the beach, minimizing space requirements, safety precautions for equipment operations and fueling to avoid public beaches and public beach parking lots to the maximum extent feasible, utilize minimal number of public parking spaces when not avoidable.	USACE and City of Encinitas	One month prior to construction, during dredging and beach fill activities. Applies to initial fill and renourishment events.	

CITY OF SOLANA BEACH

COASTAL STORM DAMAGE REDUCTION PROJECT FINAL EIS/EIR MITIGATION MONITORING AND REPORTING PROGRAM

SEPTEMBER 2015

PROJECT NAME: Coastal Storm Damage Reduction Project

DESCRIPTION: The U.S. Army Corps of Engineers (USACE) and the City of Solana Beach and the City of Encinitas have prepared a joint Final Integrated Feasibility Study and Final Environmental Impact Statement/Environmental Impact Report (FEIS/FEIR) for the Coastal Storm Damage Reduction Project. The FEIS/FEIR evaluates potential options for reducing storm damage related coastal erosion over a 50-year period. The Proposed Project in Solana Beach includes construction of a 150-foot-wide beach fill along a 7,200-foot-long stretch of shoreline using 700,000 cubic yards of compatible sediment, with renourishment in the amount of 290,000 cubic yards every 10 years on average over a 50-year period of Federal participation, for a total of four additional nourishments. The Proposed Project in Encinitas includes construction of a 50-foot-wide beach fill along a 7,800-foot-long stretch of shoreline using 340,000 cubic yards of compatible sediment, with renourishment in the amount of 220,000 cubic yards every 5 years on average over a 50-year period of Federal participation, for a total of nine additional nourishments. Material for the beach fills will be dredged from borrow sites located off the coast of San Diego County. Physical monitoring of the performance of the project will be required annually throughout the 50-year period of Federal participation. The Proposed Project would provide coastal storm damage reduction throughout the project areas and would maintain and enhance the existing recreational beach.

LOCATION: The Proposed Project consists of two segments: Segment 1 is in Encinitas and consists of a 7,800 foot long section of the public beach and Segment 2 is in Solana Beach and includes a 7,200 foot section of the public beach.

The following Mitigation Measures and Monitoring Commitments have been incorporated into the Project and are to be implemented before, during, or after construction of the initial fill and renourishment events as required and as noted below in accordance with the FEIS/FEIR. Additional project design features are included in the FEIS/FEIR, Volume I, Table 10.2-2 on pages 546 through 547. Further information is contained in FEIS/FEIR Appendices H and M.

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
MONITORING COMMITTMENTS			
Geology and Topography Monitoring Plan			
Physical Monitoring Plan: Determine if there are changes in the beach and determine the need for the next renourishment event. Monitor lagoon entrances.	USACE, City of Solana Beach and City of Encinitas	One year prior to initial construction, spring and fall. Semi-annually spring and fall for the life of the project. Applies to initial fill and renourishment events.	
Water Quality Monitoring Plan			
Water Quality Monitoring Plan: Monitor at borrow and receiver sites for salinity, pH, water temperature, dissolved oxygen, and light transmissivity (turbidity) to avoid turbidity impacts to fish and aquatic species during dredging and beach fill activities.	USACE	One week prior to construction, weekly during dredging and beach fill operations, and one week after completion. Applies to initial fill and renourishment events.	
Biological Resources Monitoring Plans			
Habitat Monitoring Plan: Map extent of reef habitat and submerged aquatic habitat. Used to determine nature and size of project impacts.	USACE, City of Solana Beach and City of Encinitas	One year prior to initial fill construction in the spring and fall. Annually for two years post-construction in the spring and fall.	
Biological Mitigation and Monitoring Plan: Construct estimated 13.6 acres of rocky reef habitat offshore in Solana Beach and monitor for success of any biological mitigation constructed.	USACE and City of Solana Beach	Five years post-mitigation construction at 1, 3, 6, & 12 months for year 1; spring and fall for years 2-5 following mitigation.	

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
California Grunion Monitoring and Avoidance Plan: Identify suitable grunion spawning habitat and monitor use during beach fill operations.	USACE, City of Solana Beach and City of Encinitas	Prior to the start of beach fill operations and during predicted runs occurring on suitable beaches during beach fill operations for the initial fill and renourishment events.	
Snowy Plover Monitoring and Avoidance Plan: Screen for presence and monitor effectiveness of avoidance measures (if present).	USACE and City of Solana Beach	Monitor Seaside Parking Lot at Cardiff State Beach, (if proposed for use as staging area) prior to mobilization. Survey and implement avoidance measures whenever Seaside Parking lot is being used as an equipment staging area for initial fill and all renourishment events.	
Borrow Site Monitoring Plan: Monitor seafloor morphology, water quality, and benthic habitat quality at offshore borrow sites.	USACE, City of Solana Beach and City of Encinitas	One year prior to construction, spring and fall. Annually for two years post-construction, spring and fall.	
Cultural Resources Monitoring Plan			
Cultural Resources Monitoring Plan: Monitor dredge and fill operations for the presence of unknown cultural resources. Provisions to halt construction should unknown cultural resources be located until they can be evaluated and coordination with SHPO concluded.	USACE, City of Solana Beach and City of Encinitas	Periodic monitoring during dredge and fill operations.	
Noise Monitoring Plan			

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
Noise Monitoring Plan: Verify noise levels remain below significance thresholds.	USACE, City of Solana Beach and City of Encinitas	Performed during all beach construction activities.	
Recreational Monitoring Plan			
Surfing Monitoring Plan: Monitor surfing conditions to determine if project-related impacts occur.	USACE, City of Solana Beach and City of Encinitas	One year prior to construction. Annually for two years post-construction for initial fill and for renourishment events.	
MITIGATION MEASURES			
Biological Resources Mitigation Measure			

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
BR-1:[1] A monitoring program would be implemented to assess impacts two years following construction. Mitigation would be triggered if certain conditions occur during, and persist through, the two year post-construction monitoring period. If the results of monitoring indicate a significant impact, mitigation would be implemented in the project area at sites to be determined in consultation with the resource and regulatory agencies. Potential mitigation areas offshore of Solana Beach were identified and include areas that consist primarily of sandy bottom habitat. Reef habitat mitigation shall consist of shallow-water, mid-water, or deep-water reef at a functional equivalent to the area of reef impacted based on the water depth of the mitigation reef. Shallow water reef would be for any surfgrass mitigation, mid-water reef would be located inshore of the existing kelp beds, and deep-water reef would be located offshore of the existing kelp beds. Mitigation in the form of a shallow water reef would be constructed at approximately -10 to -14 feet MLLW at a functional equivalent of 2.5:1. Mitigation in the form of a mid-depth reef would be constructed at approximately -30 feet MLLW at a functional equivalent of 2:1. Mitigation in the form of a deep water reef would be constructed at approximately -40 feet MLLW at a functional equivalent of 1.5:1.	USACE and City of Solana Beach	Two years post construction. If monitoring identifies project specific impacts mitigation reefs would be constructed. Five years post-mitigation construction at 1, 3, 6, & 12 months for year 1; spring and fall for years 2-5 following mitigation construction.	

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
Cultural Resources Mitigation Measure			
CR-1: Implement a monitoring program designed to identify cultural resources encountered during dredging and nourishment operations. Monitoring procedures would be specified in a monitoring plan that is approved before dredging is initiated. The monitoring would be conducted by a qualified archaeologist and would be instituted as material is dredged from each borrow site and placed at the receiver site. Monitoring would consist of periodic spot-checking of materials dredged from low- and moderate-sensitivity contexts and continuous monitoring of materials from high-sensitivity contexts. If monitoring reveals cultural materials indicating that dredging had entered into an archaeological deposit, construction in that area should cease until the requirements of 36 CFR 800.13(b) are met. Then the dredging operation would be permanently relocated away from that site and a 250-ft-wide buffer would be established around the site.	USACE, City of Solana Beach and City of Encinitas	Ongoing during the 50 year life of the project. Periodic monitoring during dredge and fill operations.	
Noise Mitigation Measures			
N-1: Noise monitoring shall be performed during all beach construction activities to verify that noise levels remain below significant levels. If noise levels exceed significant levels, the contractor shall be required to modify operations to reduce noise levels.	USACE, City of Solana Beach and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	
N-2: All construction equipment shall be properly maintained and tuned to minimize noise emissions.	USACE, City of Solana Beach and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	

MITIGATION MEASURES AND MONITORING COMMITMENTS	AGENCY RESPONSIBLE	TIMING OF COMPLIANCE	DATE OF COMPLIANCE
N-3: All equipment shall be fitted with properly operating mufflers, air intake silencers, and engine shrouds.	USACE, City of Solana Beach and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	
N-4: Stationary noise sources (e.g., booster pumps, generators, and compressors) shall be located as far from residential receptor locations as is feasible, ideally 250 feet or greater.	USACE, City of Solana Beach and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	
N-5: Where feasible, use an electric motor to drive the booster pump, rather than a diesel engine.	USACE, City of Solana Beach and City of Encinitas	During all beach fill activities for the initial fill and during all renourishment cycles for the 50 year life of the project.	

[1] Mitigation Measure BR-1 is summarized in the MMRP. The entire measure is set forth in full in Volume 1, Section 5.5.7 (Solana Beach Biological Resources Mitigation Measure) of the EIS/EIR and Volume III, Appendix H (Potential Impacts to Nearshore Resources and Mitigation and Monitoring Plan) and Volume V, Appendix M (Mitigation Strategy) and is incorporated herein by this reference.