

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

2375 Northside Drive, Suite. 100, San Diego, CA 92108
Phone (619) 516-1990 • Fax (619) 516-1994
<http://www.waterboards.ca.gov/sandiego/>

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

PROJECT: Wheeler North Reef Expansion - Phase 3
Certification Number R9-2019-0090
WDID: 9 000003336

Reg. Meas. ID: 423086 Place ID: 849539 Party ID: 527103 Person ID: 445350
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APPLICANT: Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

ACTION:

<input type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input checked="" type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004-DWQ
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	

PROJECT DESCRIPTION

An application dated July 20, 2018, was submitted by Southern California Edison (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 Wheeler North Reef Expansion - Phase 3 Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on March 7, 2019. 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. The Applicant has also applied for a Clean Water Act section 404 permit from the United States Army Corps of Engineers for the Project (USACE File No. SPL-2018-00501-RRS).

The Project is located offshore of the City of San Clemente, Orange County, California extending from the onshore points of Capistrano Beach to San Mateo Point. The Project center reading is located at latitude 33.44222 and longitude -117.65623. The Applicant has paid all required application fees for this Certification in the amount of \$141,562.00. On an annual basis, the Applicant shall also pay all fees.¹ On March 7, 2019, 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.

¹ Additional information regarding fees can be found electronically on the State Water Resources Control Board website at the following location: http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredgefillcalculator.xlsx

The Applicant proposes to create approximately 210.6 acres of kelp reef on low-relief quarry rock located on submerged lands in a water depth of 10-15 meters. The Project is needed to comply with California Coastal Commission Permit #6-81-330-A, and to mitigate the impact of the San Onofre Nuclear Generating Station (SONGS) on marine resources. Phases 1 and 2 of the Wheeler North Reef (WNR), with a running average of 18.8 U.S. tons, falls short of complying with the fish biomass condition that requires a standing fish stock of 28 U.S. tons. Phase 1 of WNR was completed in September 1999 and consists of 22.4 acres of quarry boulders and concrete. Phase 2 was completed in September 2008 and included 152 additional acres of quarry boulders. The Project will supplement the existing reef to ensure that in the future, existing permit conditions remain in compliance, even in years of adverse oceanographic conditions. The submerged lands to be used are owned by the State of California, the lease of which is administered by the California State Lands Commission.

Polygon site selection relied primarily on the historical locations of kelp beds (maps) and multibeam and sub-bottom profiling sonar surveys conducted at the project site. The acoustic surveys were verified by SCUBA diver surveys. Additionally, the diver surveys evaluated the biological diversity and habitat value of the lease area. The design also considered the historical, physical, and biological data collected during previous studies in the area and the results of experimental reef monitoring between 1999 and 2004.

The Project, consists of 23 polygons covering a total area of 210.6 acres. The reef will be created through the placement of 150,000-175,000 tons of quarry rock on top of the sandy ocean bottom, which has a thickness of less than 0.6 meters. The reef will have a relief of less than 1 meter and cover approximately 17% of the project area. The volume of material discharged to the ocean is approximately 62,500 cubic meters. A "push off" construction method using a front-end track loader will be used for placing the quarry rock within the 210.6-acre project area. Two differential GPS (DGPS) receivers will be mounted on the derrick barge to keep the barge accurately positioned as it moves along the lines. No compensatory mitigation is required, as this is a mitigation project and is expected to increase habitat value and beneficial uses in the marine environment offshore of San Onofre.

The quarry rock will be sourced from Catalina Island and transported to the site via tugboat and flat deck barge. If the Catalina quarry cannot produce enough material, some rock may be obtained from a quarry near Ensenada, Mexico.

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 downstream erosion, damage to downstream properties, or otherwise damage stream habitats in violation of water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan).

Project construction will permanently impact 210.6 acre (24,000 linear feet) of ocean waters of the United States and/or State. 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.

Additional Project details are provided in Attachments 1 through 4 of this Certification.

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Attachments:

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

The San Diego Water Board has independently reviewed the record of the Project to analyze the extent and nature of proposed Project impacts to the water quality and beneficial uses of waters of the United States and/or State and associated compensatory mitigation required to offset impacts attributed to the Project. In accordance with this Certification, the Applicant may proceed with the Project under the following terms and conditions:

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. R9-2019-0090 (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) five (5) 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/gowdr401regulated_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 Water Quality Control Plan, Ocean Waters of California (Ocean Plan), 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 any 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 prior review and written approval. 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.** 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 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 or its tributaries;
 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.** 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 annually thereafter, 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 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. **Downstream Erosion.** Discharges of concentrated flow during construction or after Project completion must not cause downstream erosion or damage to properties or stream habitat.
- H. **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.
- I. **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. Pollutants discharged to areas within a stream diversion must be removed at the end of each work day or sooner if rain is predicted.
- J. **Surface Water Diversion.** All surface waters, including ponded waters, must be diverted away from areas of active grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of the receiving water quality objectives. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.
- K. **Re-vegetation and Stabilization.** All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. The Applicant shall implement and maintain BMPs to prevent erosion of the rough graded areas. After completion of grading, all areas must be re-vegetated with native species appropriate for the area. The re-vegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be accessed at <http://www.cal-ipc.org/ip/inventory/>.
- L. **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.
- M. **Vegetation Removal.** Removal of vegetation must occur by hand, mechanically, or through application of United States Environmental Protection Agency (USEPA) approved herbicides deployed using applicable BMPs to minimize adverse effects to beneficial uses of waters of the United States and/or State. Discharges related to the application of aquatic pesticides within waters of the United States must be done in compliance with State Water Resources Control Board Water Quality Order No. 2004-

0009-DWQ, the *Statewide General National Pollution Discharge Elimination System Permit for the Discharge of Aquatic Weed Control in Waters of the United States*, and any subsequent reissuance as applicable.

- N. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.
- O. **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 be given 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.
- P. **Beneficial Use Protection.** The Applicant must take all necessary measures to protect the beneficial uses of waters of Pacific Ocean. This Certification requires compliance with all applicable requirements of the Basin 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.
- Q. **Turbidity.** Turbidity shall be monitored daily by a qualified observer from a high vantage point (e.g., a lifeguard tower) during construction. If significant water quality impacts are evident, then the discharge activities shall be modified or suspended as follows:
1. If visual monitoring indicates significant turbidity greater than ambient one-half mile from the discharge site for two (2) consecutive days, then the monitor shall:
 - a. evaluate littoral conditions (wind, tide, wave climate, and littoral drift) to determine if the plume distribution is likely of a short term nature;
 - b. evaluate effectiveness of discharge site BMPs and opportunities to modify shore placement methods to further reduce sediment discharge during periods of strong long-shore movement;
 - c. record and implement the necessary modifications to the BMPs;
 - d. notify the San Diego Water Board and U.S Army Corps of Engineers (Corps) contacts by telephone or email; and

- e. the Applicant shall comply with any measures identified by the San Diego Water Board, in consultation with other responsible agencies, as appropriate, to mitigate project-related turbidity, including modifying or halting discharge.
2. If significant turbidity persists on the third day, the monitor shall commence daily water clarity testing and reporting to the San Diego Water Board and the Corps. Testing shall consist of measuring transmission of light through the water using a transmissometer or other turbidity measuring device. Daily testing shall continue until no project-related turbidity is detectable (i.e., until offshore and downcoast reading return to ambient). Testing shall be designed to document the areal extent and concentration of the turbidity plume at the time of day it is most developed, and shall include at least: samples taken as close as practicable to the discharge site, one-half mile upcoast of the discharge site, one-half mile downcoast of the discharge site (minimum four samples). Sampling shall be done throughout the water column. These sampling protocols may be modified with the San Diego Water Board's written approval. The applicant shall document logistical arrangements for such potential water quality sampling and shall include draft quality assurance/quality control protocols in the projects monitoring plan.
 3. If significant turbidity is greater than ambient one-half mile from the discharge site (either offshore or downcoast) for five (5) consecutive days, the discharge shall be halted or modified to reduce turbidity.
- R. The rock used for reef construction must be clean and free of any contaminants, especially those that could dissolve in seawater.
- S. The Applicant must implement a quality control audit after the construction of the first two reef polygons to ensure compliance with all construction and material specifications. Engineering change notices will be issued if needed to bring the project into compliance. Upon acceptance of the two audit polygons, construction will continue on the remaining polygons to complete the reef.

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 stream 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 the Pacific Ocean within the San Juan Watershed must not exceed the type and magnitude of impacts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable temporary and permanent Project impacts to waters of the United States and/or State must be achieved as described in the table below:

	Impacts (acres)	Impacts (linear ft.)	Mitigation for Impacts (acres)	Mitigation Ratio (area mitigated :area impacted)	Mitigation for Impacts (linear ft.)	Mitigation Ratio (linear feet mitigated :linear feet impacted)
Permanent Impacts						
Ocean	210.6	24,000	NA ¹	NA	NA	NA

1. No compensatory mitigation is required, as this is a mitigation project and is expected to increase habitat value and beneficial uses in the marine environment offshore of San Onofre.

C. Temporary Project Impact Areas. The Applicant must restore all 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. Restoration must include grading of disturbed areas to pre-project contours and re-vegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.

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. Monitoring Reports.** Monitoring results shall be reported to the San Diego Water Board at the intervals specified in section VI of this Certification.
- C. Monitoring and Reporting Revisions.** The San Diego Water Board may make revisions to 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.
- D. 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.
- E. **Caulerpa Taxifolia.** If *Caulerpa taxifolia* is found prior to or during implementation of dredge and fill activities, the Applicant must not begin or continue dredge and/or fill activities until authorized by the San Diego Water Board. If the invasive seaweed is discovered, it must not be disturbed and the San Diego Water Board must be notified within 24 hours of the discovery.
- F. **Discharge Commencement Notification.** The Applicant must notify the San Diego Water Board in writing **at least 5 days prior to** the start of Project construction.
- G. **Geographic Information System Data.** The Applicant must submit Geographic Information System (GIS) shape files of the Project impact sites within 30 days of the start of project construction and GIS shape files of the Project mitigation sites within 30 days of mitigation installation. All impact and mitigation site shape files must be polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.
- H. **Annual Project Progress Reports.** The Applicant must submit annual Project progress reports describing status of BMP implementation and compliance with all requirements of this Certification to the San Diego Water Board prior to **March 1** of each year following the issuance of this Certification, until the Project has reached completion. Annual Project Progress Reports must be submitted even if Project construction has not begun. The monitoring period for each Annual Project Progress Report shall be January 1st through December 31st of each year. Annual Project Progress Reports must include, at a minimum, the following:
1. **Project Status and Compliance Reporting.** The Annual Project Progress Report must include the following Project status and compliance information:
 - a. The names, qualifications, and affiliations of the persons contributing to the report;
 - b. 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;
 - c. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion; and
 - d. A description of each incident of noncompliance during the annual monitoring period 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.

- I. **Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project.** The final report must include the following information:
 1. Date of construction initiation;
 2. Date of construction completion;
 3. BMP installation and operational status for the Project;
 4. As-built drawings of the Project, no bigger than 11"X17";
 5. Photo documentation of implemented post-construction BMPs and 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; and
 6. A final construction survey based on high-resolution sonar and diver observations. The report must include a map showing the perimeter and position of each reef polygon, the average topographic relief of each polygon, average percentage of seafloor covered with quarry rock within each polygon, the average topographic relief of each polygon, average percentage of seafloor covered with quarry rock within each polygon.

- J. **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.

- K. **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. R9-2019-0090:849539:dbradford
2375 Northside Drive, Suite 100
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), converted to text searchable format using Optical Character Recognition (OCR), and not be password protected. 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. R9-2019-0090: 849539:dbradford.

L. 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.

M. 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 Orange, 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 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 responsibility for compliance with this Certification in the event that a transferee fails to comply.

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

- A. The California State Lands Commission 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 February 4, 2019, for the Subsequent Environmental Impact Report (EIR) titled Subsequent Environmental Impact Report for the Construction and Management of an Artificial Reef in the Pacific Ocean Near San Clemente, California (Wheeler North Reef Expansion Project) (State Clearing House Number 1998031027). 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 EIR 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 EIR 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 EIR, 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

Darren Bradford, Environmental Scientist
Telephone: (619) 521-3356
Email: darren.bradford@waterboards.ca.gov

X. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Wheeler North Reef Expansion - Phase 3 Project** (Certification No. R9-2019-0090) 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. R9-2019-0090 issued on April 2, 2019.



DAVID W. GIBSON
Executive Officer
San Diego Water Board

2 April 2019

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.

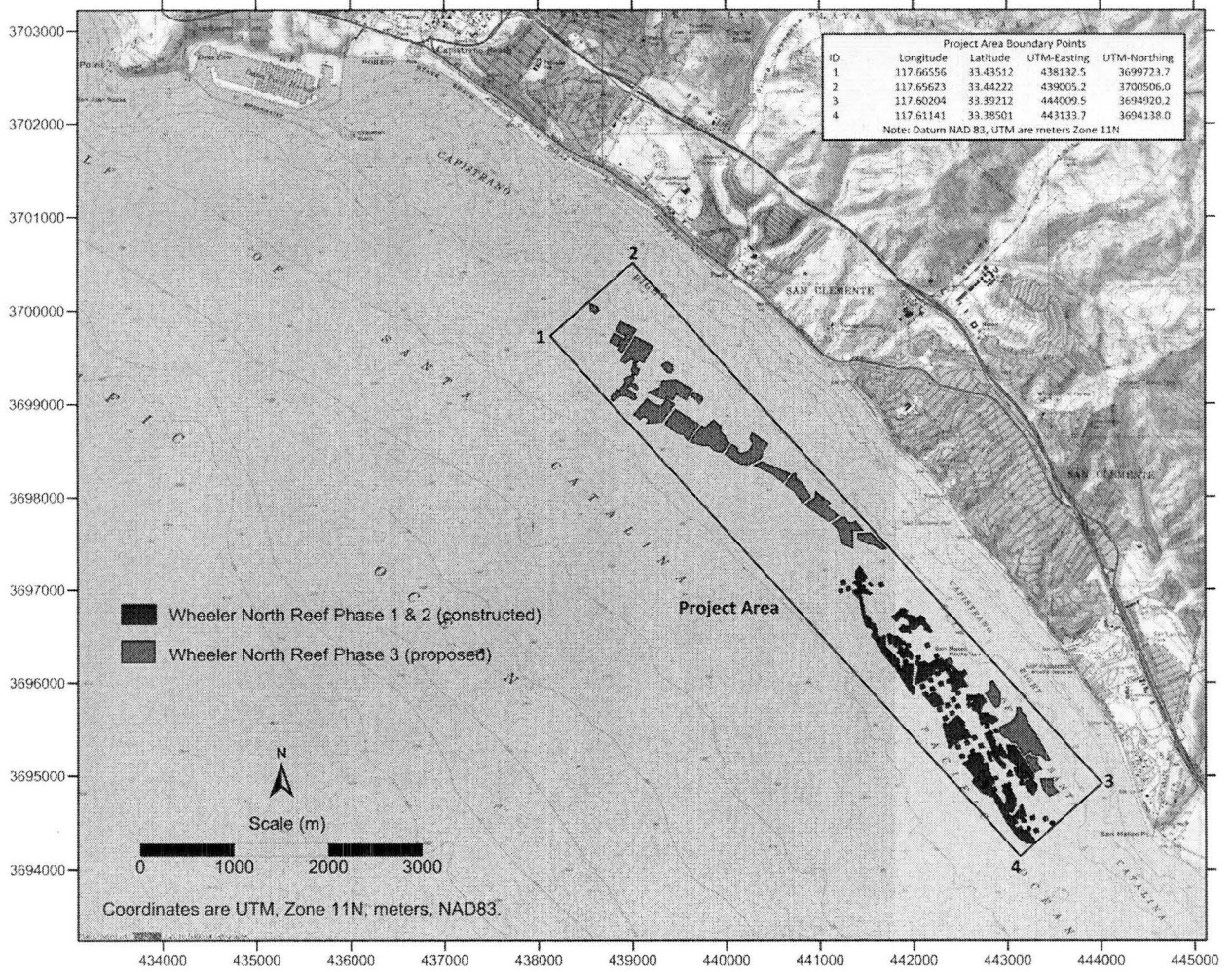
Southern California Edison
Wheeler North Reef Expansion - Phase 3 Project
Certification No. R9-2019-0090

**ATTACHMENT 2
PROJECT LOCATION MAPS**

Attachment 1: Vicinity Map

Figure 3-7. Distance from Santa Catalina Island to the project area.

Wheeler North Reef Expansion – Phase 3
U.S. Army Corps of Engineers 404 Permit Application
Applicant: Southern California Edison
Attachment 1: Vicinity Map



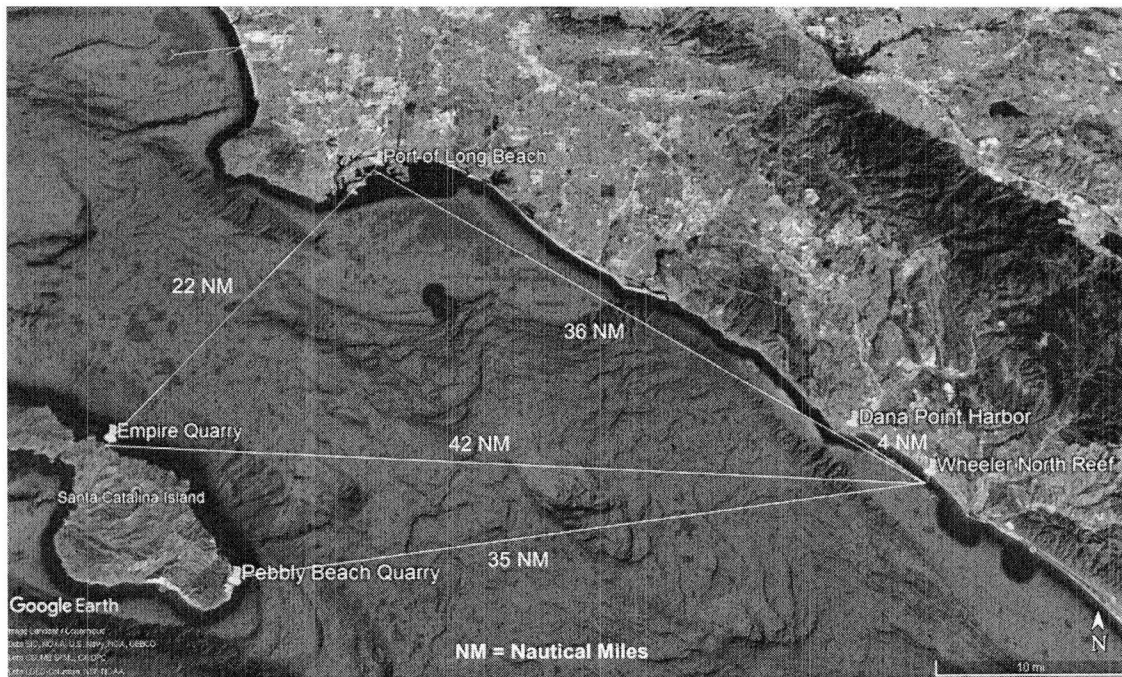


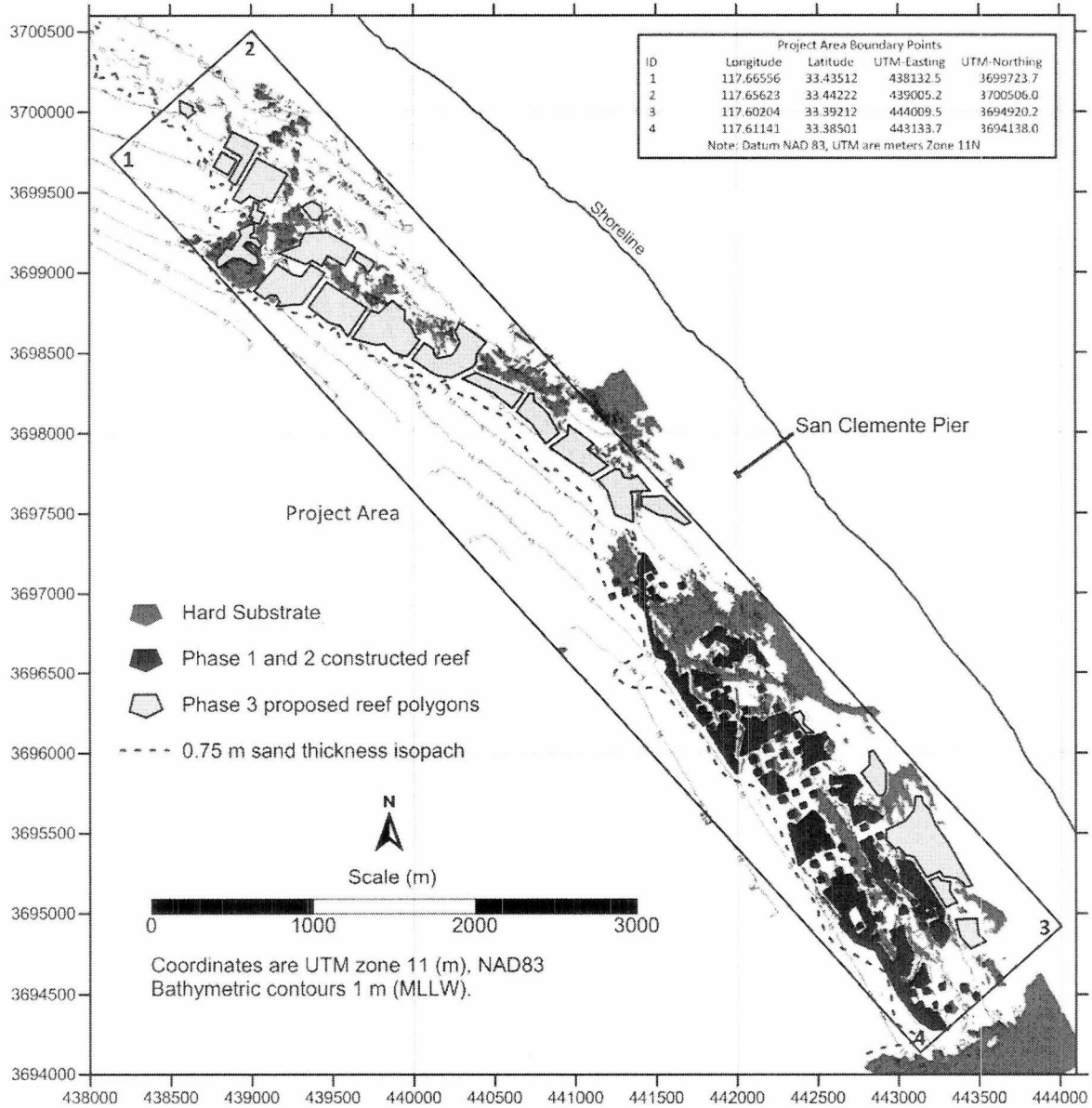
Figure 3-7. Distance from Santa Catalina Island to the project area.

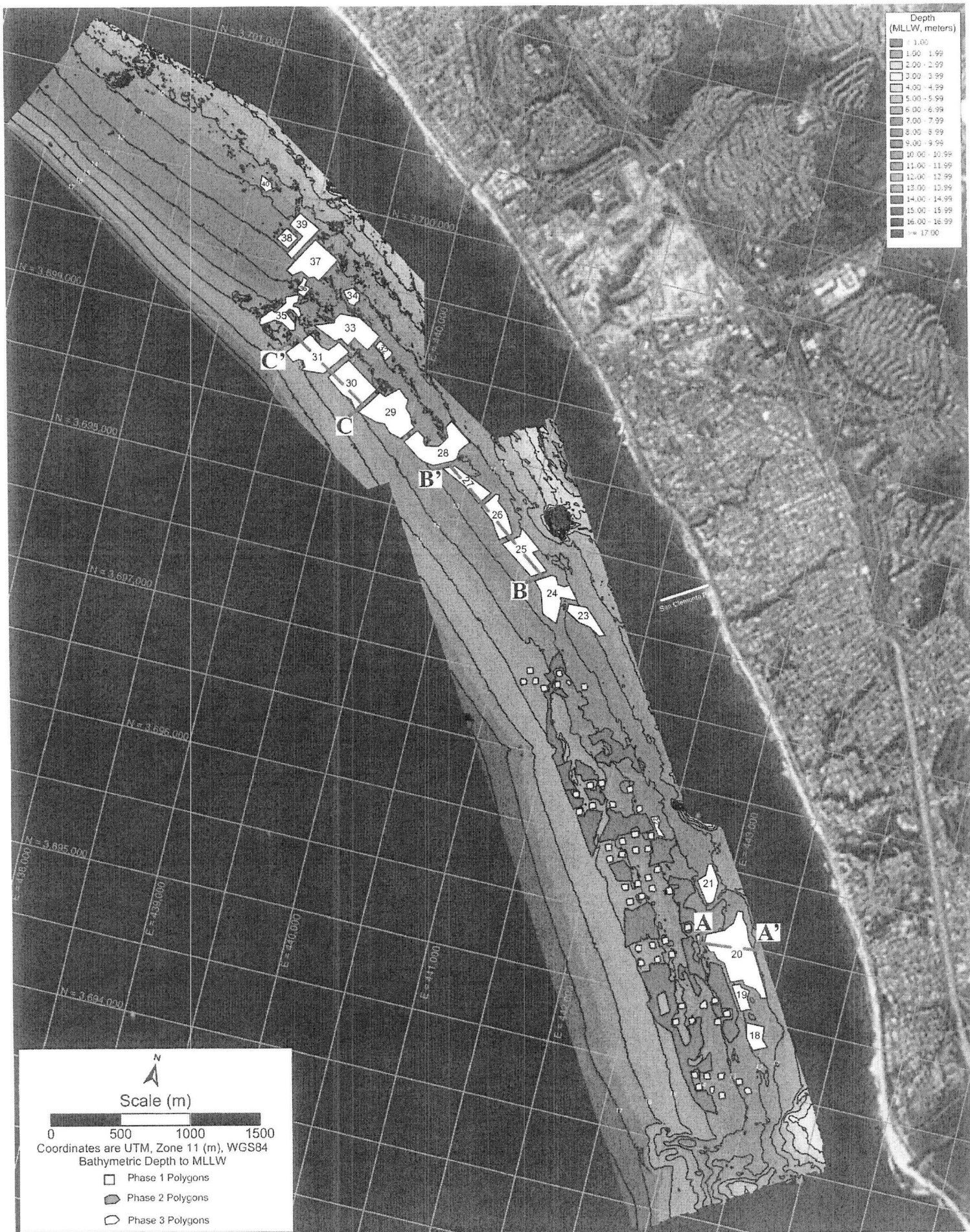
Southern California Edison
Wheeler North Reef Expansion - Phase 3 Project
Certification No. R9-2019-0090

**ATTACHMENT 3
PROJECT SITE PLANS**

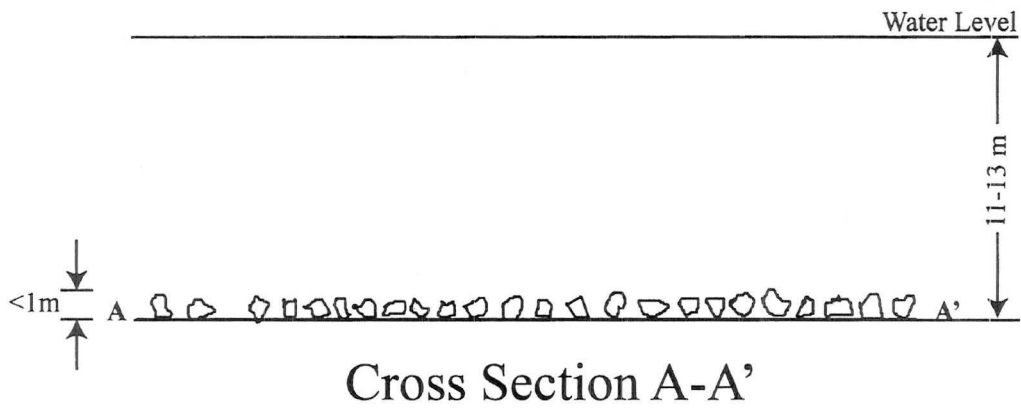
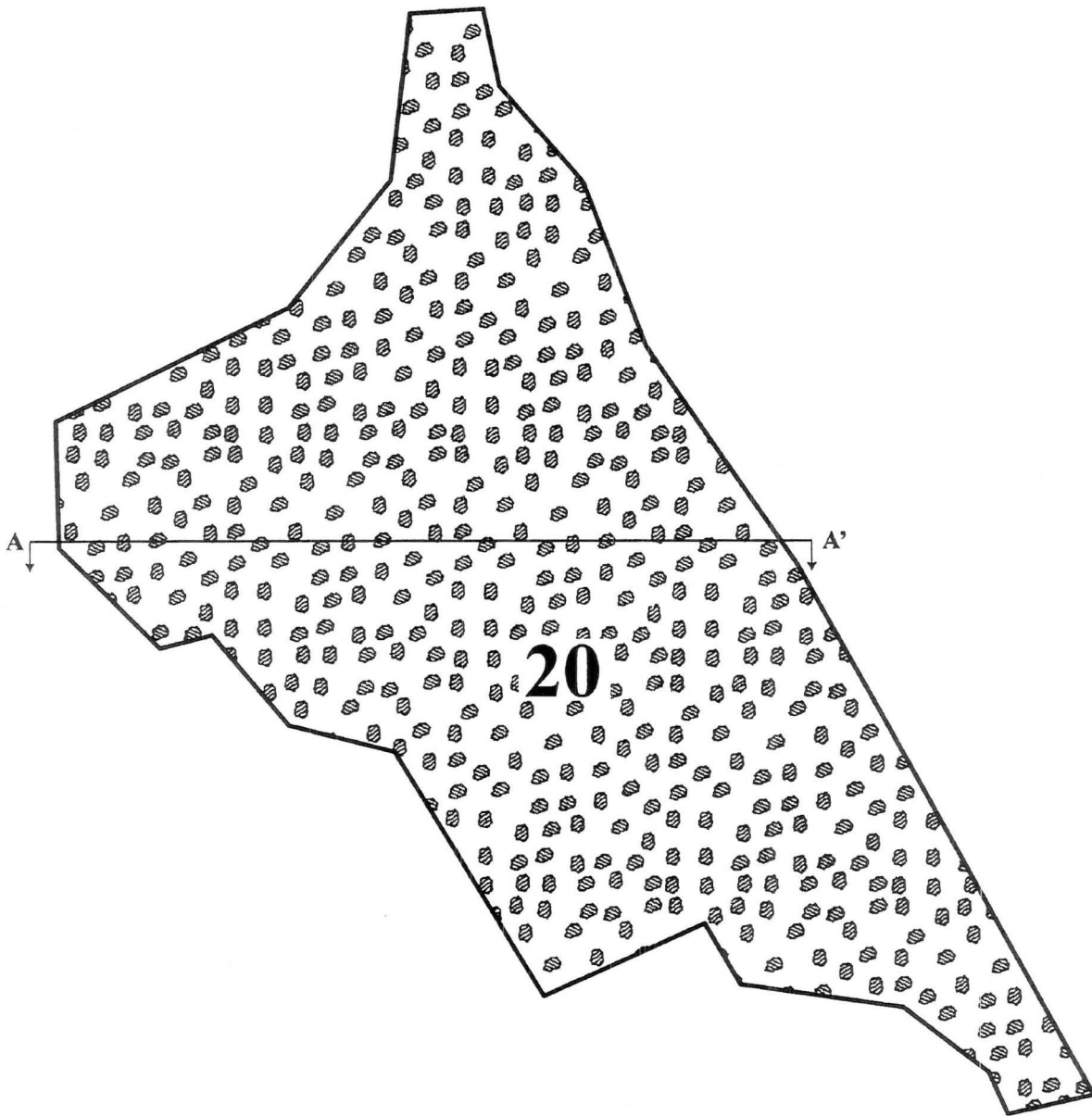
Attachment 2 – Project Plan View
Bathymetric Depth to Mean Lower Low Water (MLLW)
Plan View & Cross Section of Polygon 20
Plan View & Cross Section of Polygons 25, 26 & 27
Plan View & Cross Section of Polygons 30 & 31
Figure 3-8 – Derrick barge, supply barge, frontloader, rock placement lines, and
six-anchor positioning

Wheeler North Reef Expansion – Phase 3
U.S. Army Corps of Engineers 404 Permit Application
Applicant: Southern California Edison
Attachment 2: Project Plan View

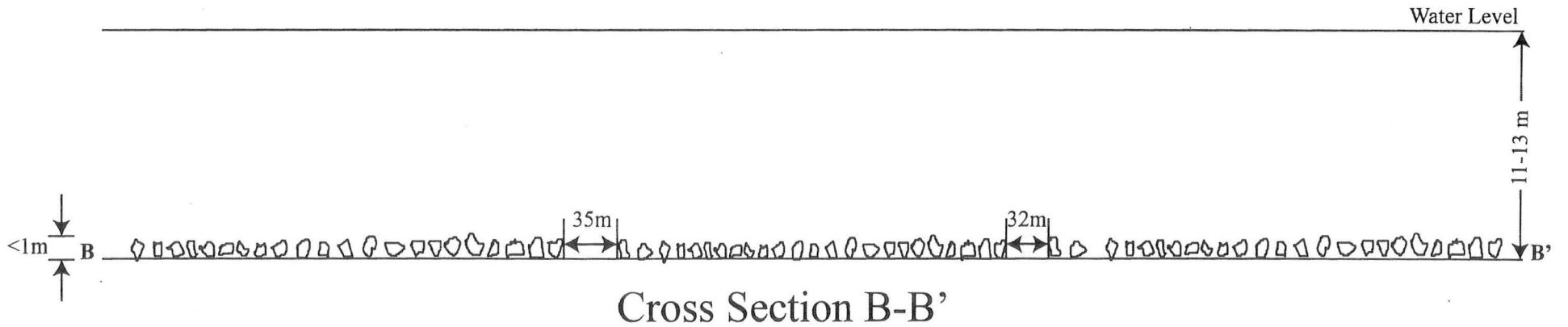
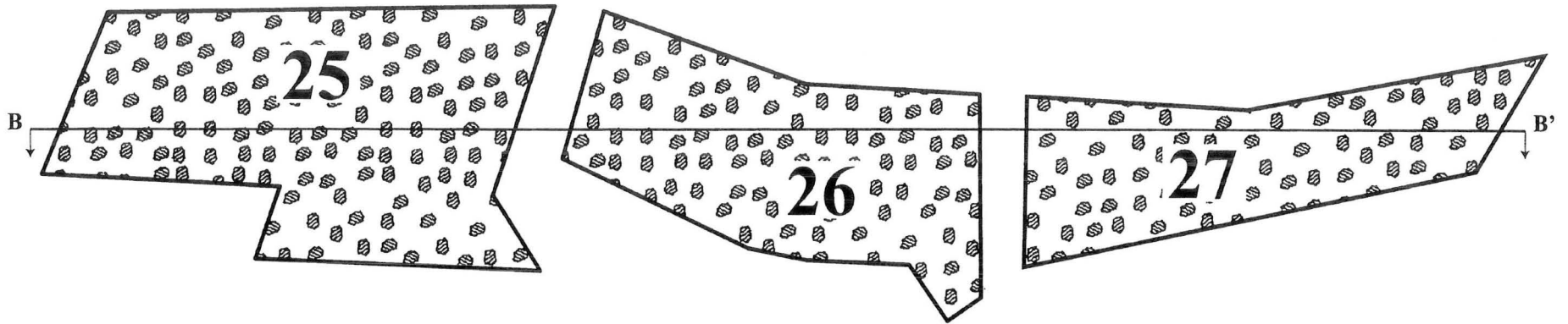




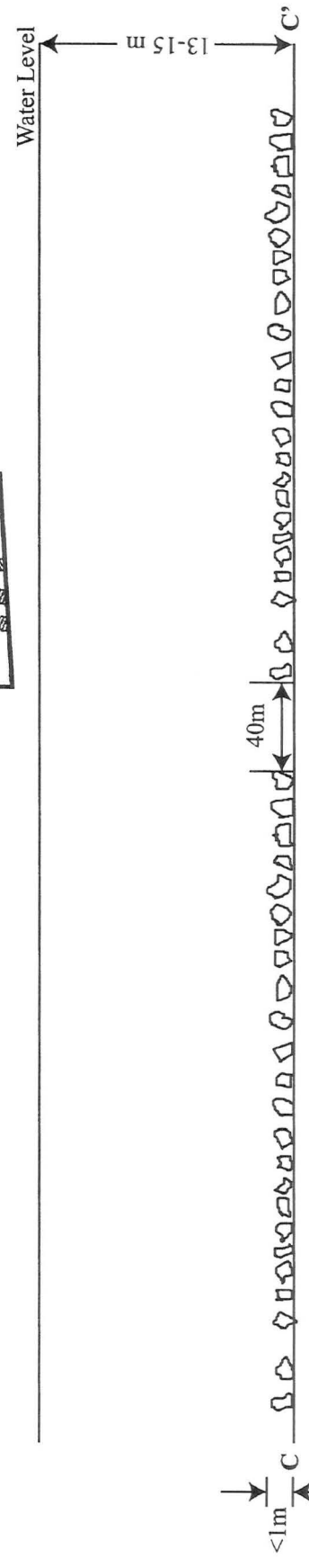
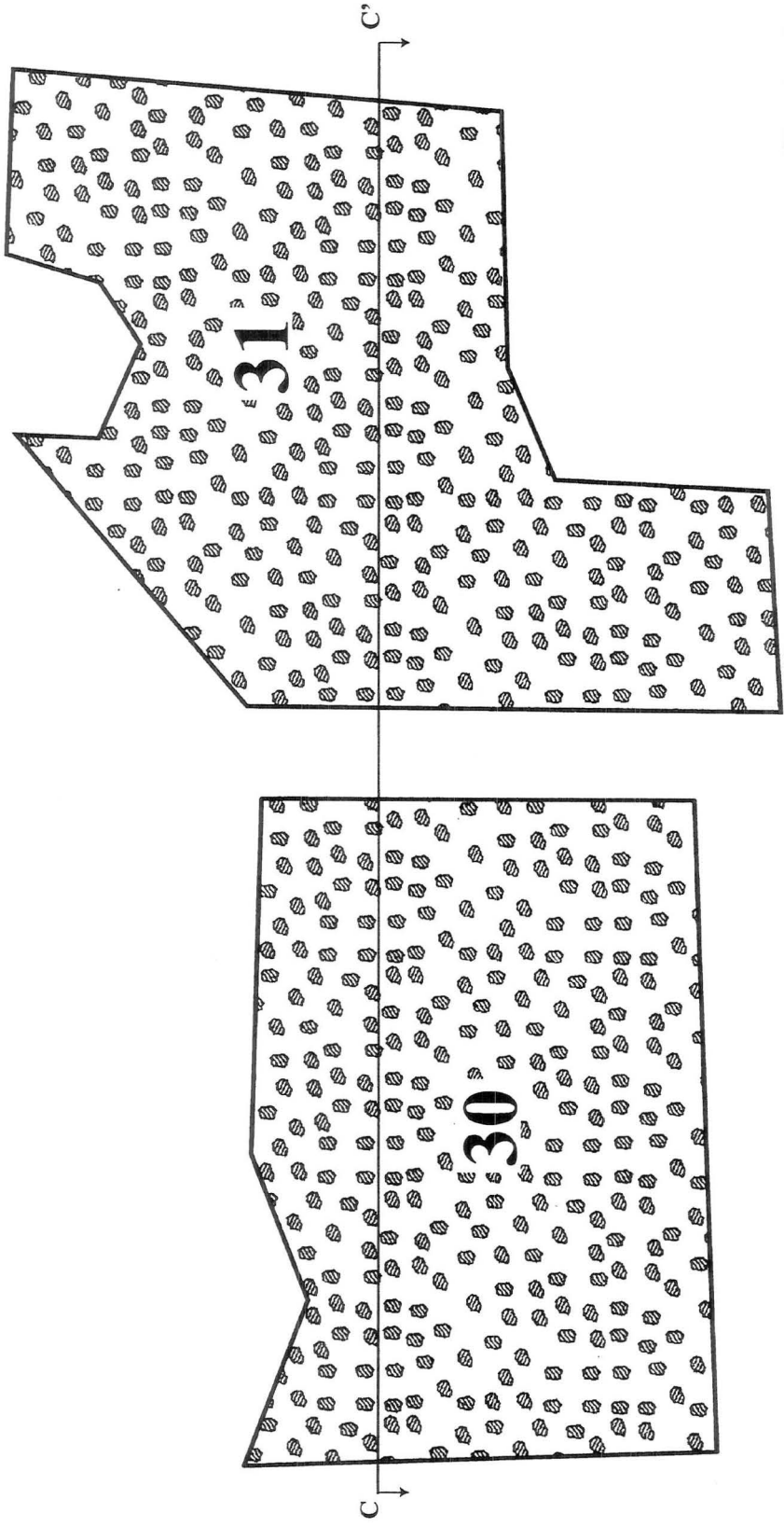
Plan View of Rock Coverage - Polygon 20



Plan View of Rock Coverage - Polygon 25, 26 and 27



Plan View of Rock Coverage - Polygon 30 and 31



Cross Section C-C'

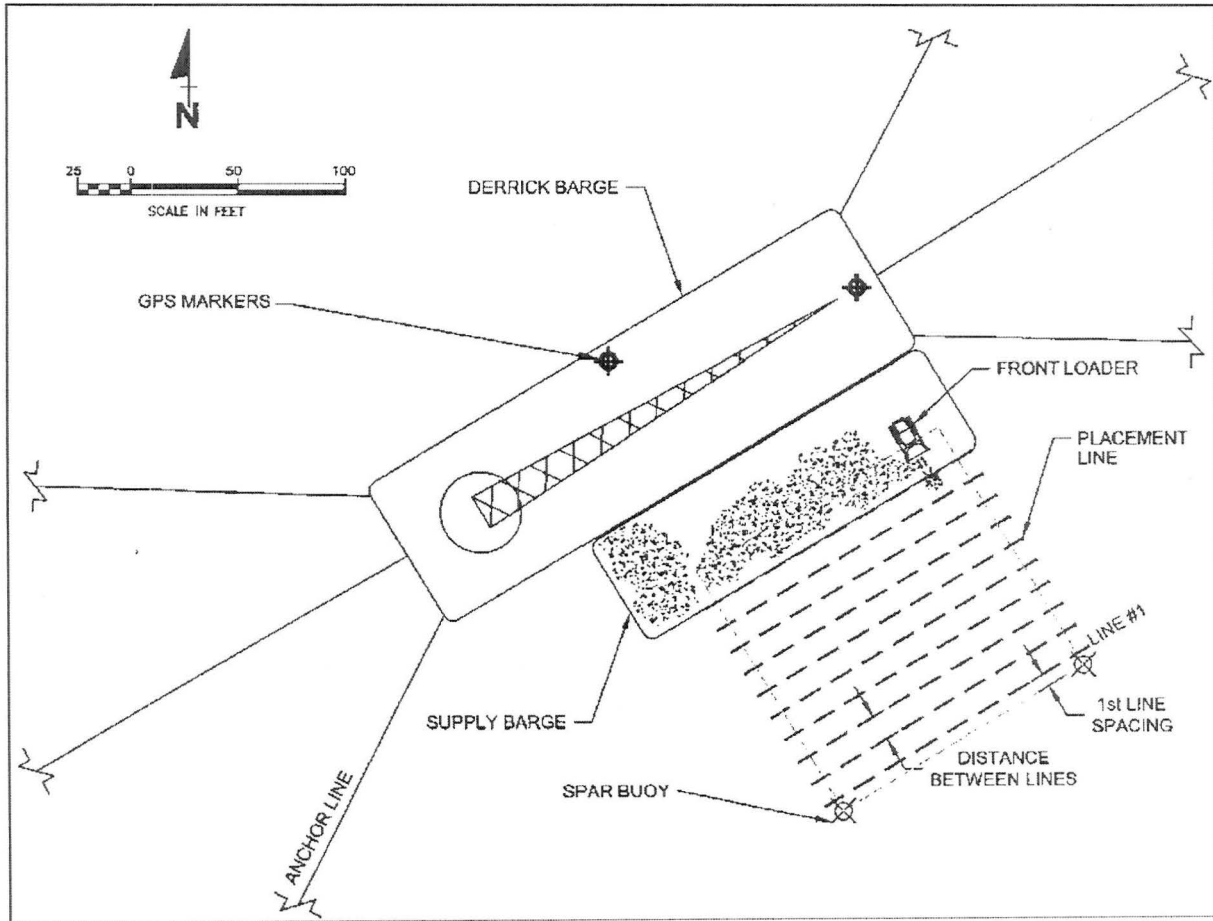


Figure 3-8. Construction method schematic showing derrick barge, supply barge, front-loader, rock placement lines, and six-anchor positioning.

Southern California Edison
Wheeler North Reef Expansion - Phase 3 Project
Certification No. R9-2019-0090

ATTACHMENT 4
CEQA MITIGATION MONITORING AND REPORTING PROGRAM

Table C-1. Mitigation Monitoring Program

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>Impact BIO-2: Introduction or Enhancement of Nonindigenous Species Nonindigenous species could be introduced or enhanced as a result of the proposed Project (Less than Significant with Mitigation).</p>	<p>MM BIO-2: Prevent Import of Nonindigenous Species. In order to control the import of non-native species to the Project location, the following requirements shall be implemented as part of the detailed Project planning. All Project vessels shall:</p> <ul style="list-style-type: none"> • Originate from Oceanside Harbor, Dana Point Harbor, the Ports of Long Beach/Los Angeles, or San Diego Bay • Be continuously based out of Oceanside Harbor, Dana Point Harbor, the Ports of Long Beach/Los Angeles, or San Diego Bay since last dry docking • Have hulls with antifouling coatings • Remain at ports no longer than 5 days <p>Underwater surfaces of barge vessels shall be subject to evaluation by California State Lands Commission (CSLC) Marine Invasive Species Program (MISP) staff, through a Risk Assessment process and pre-construction inspection prior to use for the construction. Pre-construction inspections shall include use of underwater remotely operated vehicles with cameras, or similarly detailed inspection methods, including</p>	Project vessels	Monitor verification of compliance with measure	Implementation will limit spread of nonindigenous species	Contractor, CSLC	Project construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>but not limited to review of the vessel’s dry dock and cleaning records, most recent application of antifouling hull coatings, review of Biofouling Removal and Hull Husbandry Reporting Forms, and any other measures to prevent the spread on non-native species. Should vessels fail to pass Risk Assessment or pre-construction inspection screening as determined by CSLC MISP, cleaning of vessels prior to construction may be required.</p> <p>Additionally, and regardless of vessel size, ballast water for all Project vessels must be managed consistent with CSLC ballast management regulations, and Biofouling Removal and Hull Husbandry Reporting Forms shall be submitted to CSLC MISP staff. Further, as part of the Project kickoff meeting, a qualified marine biologist, approved by CSLC staff, shall provide information to all Project personnel about the spread of non-native species in California waters and the programs (i.e., CSLC Ballast Water Management Program and Biofouling Removal and Hull Husbandry Reporting) that would be implemented to minimize this hazard.</p>					

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>Impact BIO-3: Disturbance or Injury to Marine Mammals and Turtles from Construction Construction activities (including noise) could impact marine mammals and turtles (Less than Significant with Mitigation).</p>	<p>MM BIO-3: Marine Wildlife Monitoring Plan. A Marine Wildlife Monitoring Plan (Plan) shall be prepared by a qualified marine mammal biologist and submitted to California State Lands Commission (CSLC) staff for review and approval 60 days prior to commencement of activities. The Plan is intended to reduce the chance of a significant impact to marine mammals and sea turtles during construction activities. It may also form the basis of a permit application to the relevant agencies (National Marine Fisheries Services and U.S. Fish and Wildlife Service). The Plan should include:</p> <ul style="list-style-type: none"> • Determination of the exclusion zone for eliminating the risk of crushing as a result of rockfall. • Procedures for monitoring marine mammals and sea turtles and specifications for Marine Wildlife Observers (MWO) within the rockfall exclusion zone. • Methods for communicating with contractors to stop work if there is a risk that any marine mammals or sea turtles active in the area may move closer to the construction site and inside a designated exclusion zone. • Procedures for MWO monitoring of barge transport, if necessary. • Methods for communicating with 	<p>Project site, including barge route</p>	<p>CSLC to confirm receipt of satisfactory plan. Monitor to confirm implementation of plan.</p>	<p>Implementing MM will reduce the potential for impacts to marine mammals and sea turtles</p>	<p>Contractor, CSLC</p>	<p>Prior to starting Project construction activities and during all marine vessel use</p>

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>the ship's captain if there is a risk of collision with a marine mammal or sea turtle.</p> <ul style="list-style-type: none"> • Limitations that work occur only during daylight hours when visual monitoring of marine mammals and sea turtles can be conducted. 					
<p>Impact BIO-4: Accidental Spills or Vessel Grounding May Result in Habitat Degradation or Species Mortality Boat and ship activity may result in accidental spills or the grounding of vessels, which could lead to habitat degradation or species mortality (Less than Significant with Mitigation).</p>	<p>MM BIO-4: Spill and Grounding Contingency Plan. The Applicant shall prepare and submit for approval to California State Lands Commission staff at least 60 days prior to the commencement of construction activities a Spill and Grounding Plan that includes, at a minimum, the following features:</p> <ul style="list-style-type: none"> • A list of key contacts in the event of an accidental spill that will include senior Project management. • Identification of potential pollutants used in the construction process. These are likely to include diesel fuel, lube oil, hydraulic oil, waste oil, and oil leaking from pipes on the vessels. • Detailed procedures for averting and responding to a spill of these pollutants. • Detailed procedures for addressing a vessel grounding scenario for both vessels underway and vessels that have broken free of moorings at the 	N/A	Review and approve Spill and Grounding Contingency Plan	Implementation of the approved plan will minimize effects of accidental spills and grounding	Contractor, CSLC	Prior to construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	construction site.					
AIR QUALITY						
Impact AQ-1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan Project construction could conflict with the SCAQMD 2016 AQMP or SDAPCD 2016 RAQS as a result of Project-generated emissions (Less than Significant with Mitigation).	MM AQ-1a: Nitrogen Oxides (NOX) Emission Reduction. Prior to the commencement of any construction activities, Southern California Edison or its designee shall provide evidence to California State Lands Commission staff that tugboats used for the Project meet or exceed the Tier 3 emission standards, if such tugboats with the capabilities to construct the project are available. If Tier 3 compliant tugboats with the capabilities to construct the project are not available, Tier 2 compliant tugboats may be used and the difference in NOx emissions shall be offset through purchase of additional NOx emission offset credits.	Project site	Project monitor confirms that all equipment meets the emission standards, or CSLC confirm receipt of evidence of credit purchase for the difference in NOx emissions.	Implementing MM will reduce emissions from construction equipment and vehicles	Contractor, CSLC	Prior to construction
	MM AQ-1b: Nitrogen Oxides (NOX) Emission Offset Credits. At least 30 days prior to the commencement of any construction activities, Southern California Edison or its designee shall provide evidence to California State Lands Commission staff and the South Coast Air Quality Management District that NOx emission offset credits have been purchased to offset the Project's NOx emissions below the South Coast Air Quality Management District construction threshold for NOx.	N/A	CSLC confirms receipt of evidence of credit purchase.	Purchasing credits will offset the Project's unavoidable NOx emissions.	Contractor, CSLC, SCAQMD	Prior to construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>in compliance with South Coast Air Quality Management District's <i>Revised CEQA Policy and Procedure in Allowing the Use of Emission Credits to Mitigate Significant Air Quality Impacts from Construction Phase</i> (as revised 2007). The Project's NOx emissions will be based on those calculated in the SEIR. At the discretion of the South Coast Air Quality Management District, at the end of each construction year Southern California Edison may reconcile the amount of credits purchased with the amount of actual Project emissions subject to review and approval by California State Lands Commission and South Coast Air Quality Management District staff, and receive NOx emission credits based on the excess credits paid. Actual emissions would be calculated at the end of a year's construction, based on documentation of hours of construction operations, number of barge trips, types of equipment used, and other factors.</p>					
<p>Impact AQ-2: Violation of Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation Project construction</p>	<p>Implementation of MM AQ-1a and MM AQ-1b</p>	<p>See specific MMs in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing</p>				

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
could exceed the SCAQMD construction emission thresholds for VOC, NO _x , CO, SO _x , PM ₁₀ , and PM _{2.5} (Less than Significant with Mitigation).						
<p>Impact AQ-3: Result in a Cumulatively Considerable Net Increase of Any Criteria Air Pollutant for Which the Project Region is Nonattainment</p> <p>Project construction could result in a cumulatively considerable net increase in NO_x emissions (Less than Significant with Mitigation).</p>	Implementation of MM AQ-1a and MM AQ-1b					See specific MMs in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing
<p>Impact AQ-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations</p> <p>Project construction could result in exposure of sensitive receptors to substantial pollutant concentrations</p>	Implementation of MM AQ-1a and MM AQ-1b					See specific MMs in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
(Less than Significant with Mitigation).						
CULTURAL AND PALEONTOLOGICAL RESOURCES						
<p>Impact CR-1: Cause a substantial adverse change in the significance of a historical or archeological resource The Project could cause a substantial adverse change in the significance of a historical resource (Less than Significant with Mitigation).</p>	<p>MM CR-1a: Archaeological and Tribal Monitoring. To ensure that impacts to archaeological and tribal cultural resources remain less than significant, the following will occur:</p> <ul style="list-style-type: none"> • A tribal monitor that is culturally affiliated with the area may be present during Project activities. For safety reasons, the monitor would not be able to be in the water during rock placement. During the first week of rock placement, the Applicant will make arrangements so that the tribal monitor can, if desired, dive on the areas where rock has been placed to examine the area and the effects of rock placement. • The Applicant will conduct a post-reef expansion dive with interested tribes to re-assess the Project area and compare with data obtained from the eighteen reconnaissance survey dives; and, • The Applicant and CSLC will document the tribal consultation process and 	Project site	Completion of daily monitoring forms, submittal of weekly summary to CSLC staff.	Implementing MM will reduce the potential for impacts to archaeological resources and tribal resources.	Contractor, CSLC	Project construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>present it as professional paper to benefit future submerged projects.</p>					
	<p>MM CR-1b: Unanticipated Cultural/Tribal Resources. The Applicant shall prepare a Cultural Resources Management Plan (CRMP), subject to review and approval by CSLC. The CRMP shall be prepared in coordination with the CSLC and a California Native American tribe that is culturally affiliated to the Project site. The CRMP will include, at a minimum:</p> <ul style="list-style-type: none"> • Specific discussion on the process for identifying unanticipated discoveries in a submerged context, including how unanticipated tribal cultural resources are identified during project activities, when the project area is not visible. • Specific procedures for handling, recording and treating unanticipated cultural or tribal cultural resources in the event they are found. • Specific procedures for keeping the location of any such finds confidential and what measures will be taken to ensure that the area is 	Project site	Applicant notification of CSLC staff and other agencies, retention of monitor. Construction contracts and plans to include appropriate treatment of human remains notes.	Implementing MM will reduce the potential for impacts to archaeological resources and tribal resources.	Contractor, CSLC	Project construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>secured to minimize site disturbance and potential vandalism.</p> <ul style="list-style-type: none"> • Discussion of the successful tribal cultural resource consultation process for future submerged project consultation efforts <p>To facilitate proper identification and treatment of potential resources that may be discovered, the Applicant shall retain both an archaeologist (approved by the CSLC) and a monitor from a California Native American tribe that is culturally-affiliated to the Project site for coordination, monitoring, and notification purposes. The Applicant shall provide a minimum 5-day notice to the archaeologist and tribal monitor prior to all scheduled activities. In addition, should intact cultural or tribal cultural deposits be uncovered during Project implementation, CSLC staff, the archaeologist, and the tribal monitor shall be contacted as soon as possible, and in no event later than 24 hours, to allow them to evaluate the nature, extent, and significance of the discovery. Impacts to previously unknown significant Tribal cultural resources shall be avoided through preservation in place if feasible.</p>					

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>Impact CR-2: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature The Project could directly or indirectly destroy a unique paleontological resource or unique geological feature (Less than Significant with Mitigation).</p>	<p>MM CR-2: Unanticipated Paleontological Resources. The Applicant shall develop a Paleontological Resources Management Plan (PRMP), subject to review and approval by CSLC, which will include:</p> <ul style="list-style-type: none"> • Specific discussion procedures for on the identification of unanticipated discoveries in a submerged context, including how unanticipated paleontological resources are identified during project activities, when the Project area is not visible. The procedures must reduce the likelihood of disturbing unanticipated paleontological resources or unique geologic resources to the extent feasible, considering the difficulty of observing the submerged Project area during rock placement and that the rocks are likely to cap and preserve paleontological resources in place. • Specific procedures for handling, recording and treating unanticipated paleontological resources in the event they are found. The procedures must include retaining a qualified paleontologist to evaluate the 	<p>Project site</p>	<p>Applicant retention of monitor. CSLC approval of plan, if needed. Construction contracts and plans to include appropriate treatment of paleontological resources notes.</p>	<p>Implementing MM will reduce the potential for impacts to paleontological resources.</p>	<p>Contractor, CSLC</p>	<p>Project construction</p>

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	nature and significance of any discovery.					
<p>Impact CR-3: Disturb any human remains, including those interred outside of dedicated cemeteries The Project could result in disturbance of any human remains (Less than Significant with Mitigation).</p>	<p>MM CR-3: Appropriate Treatment of Human Remains. In accordance with state law (Health & Saf. Code, § 7050.5; Pub. Resources Code, § 5097.98), if human remains are found, all ground disturbing activities shall halt within 165 feet (50 meters) of the discovery. The County Coroner will be notified within 24 hours of the discovery. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie potential remains shall occur until the County Coroner has determined whether the remains are subject to his or her authority. The County Coroner must make this determination within 2 working days of notification of the discovery (pursuant to Health & Saf. Code, § 7050.5 subd. (b)). If the County Coroner determines that the remains do not require an assessment of cause of death and that the remains are, or are believed to be Native American, the Coroner must notify the Native American Heritage Commission by telephone within 24 hours, which must in turn immediately notify those persons it believes to be the Most Likely Descendant (MLD) of the deceased</p>	Project site	<p>Applicant notification of CSLC staff and other agencies, as directed in measure. Compliance with CSLC direction after consultation with MLD, if applicable. Construction contracts and plans to include appropriate treatment of human remains notes.</p>	Implementing MM will reduce the potential for impacts to human remains.	Contractor, CSLC, County Coroner, NAHC	Project construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Native American. The MLD shall complete its inspection and make recommendations within 48 hours of being granted access to the site. The MLD may recommend means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. California State Lands Commission staff will discuss and confer with the MLD regarding their recommendations (pursuant to Pub. Resources Code, § 5097.98 subds. (b) and (c)).					
CULTURAL RESOURCES –TRIBAL						
<p>TCR-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource</p> <p>The Project could cause a substantial adverse change in the significance of a tribal cultural resource (Less than Significant with Mitigation).</p>	Implementation of MM CR-1a	See specific MM in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing				
	Implementation of MM CR-1b	See specific MM in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing				
	Implementation of MM CR-3	See specific MM in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing				
HAZARDS AND HAZARDOUS MATERIALS						

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>Impact HAZ-1: Routine Transport, Use, or Disposal of Hazardous Materials Construction of the expansion reef could create a hazard to the public or environment through the routine transport, use, or disposal of hazardous materials (Less than Significant with Mitigation).</p>	<p>MM HAZ-1a: Spill Prevention and Response Plan. At least 60 days prior to commencement of construction, a Spill Prevention and Response Plan for all Project vessels shall be prepared by Southern California Edison or its contractor and submitted to California State Lands Commission (CSLC) staff for review and approval. The plan shall include at a minimum the following elements:</p> <ul style="list-style-type: none"> • A list of all fuels and hazardous materials that will be used or might be used during construction, along with material safety data sheets for each material • Specific protocols for monitoring and minimizing the use of fuel and hazardous materials during offshore construction Project operations, including best management practices that will be implemented to ensure minimal impacts to the environment • An estimate of a reasonable worst-case release of fuel or other hazardous materials at the offshore construction Project site or into coastal waters resulting from the construction activities • A list of all spill prevention and response equipment that will be 	<p>N/A</p>	<p>Review and approve Spill Prevention and Response Plan</p>	<p>Implementation of the approved plan will minimize effects of accidental spills</p>	<p>Contractor, CSLC</p>	<p>Prior to construction</p>

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<p>maintained on the vessels performing the construction activities</p> <ul style="list-style-type: none"> • The designation of the on-site person with responsibility for implementing the plan • A detailed response and clean-up plan in the event of a spill or accidental discharge or release of fuel or hazardous materials • A telephone contact list of all regulatory and trustee agencies, including CSLC and California Coastal Commission staffs, having authority over the development or Project site and its resources to be notified in the event of a spill or material release. 					
	<p>MM HAZ-1b: Prepare for Inclement Weather Condition. Southern California Edison (SCE) or its contractor shall tie down or provide secondary containment for any deck equipment that may discharge contaminants to minimize the potential for unanticipated release of pollutants due to inclement weather or rough sea conditions. In addition, SCE or its contractor shall monitor weather conditions and tsunami warnings and cease work if it they determine that existing or forecast sea states or weather conditions would create unsafe working conditions for personnel or equipment.</p>	Project site	Monitor to confirm appropriate procedures followed in event of inclement weather.	Appropriate preparations will minimize likelihood of spills or unsafe conditions.	Contractor, CSLC	Project construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact HAZ-2: Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment	Implementation of MM HAZ-1a	See specific MM in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing				
Construction of the expansion reef could create a hazard to the public or environment through the release of hazardous material into the environment during accidents or adverse weather conditions (Less than Significant with Mitigation).	Implementation of MM HAZ-1b	See specific MM in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing				
OCEAN WATER QUALITY						
OWQ-1: Impair Marine Water Quality Temporary and localized impacts to ocean water quality could occur as a result of construction related discharges, mismanagement of materials, or accidental spills (Less than Significant	MM OWQ-1: Compliance with Vessel General Permit. Vessel discharges must comply with California State Lands Commission requirements for ballast water discharges and hull fouling to control and prevent the introduction of non-indigenous species. Vessel discharges must not result in violations of water quality objectives in the Ocean Plan. Vessels subject to the federal National Pollutant Discharge Elimination System Vessel	Project site	Monitor to confirm appropriate procedures followed related to vessel discharges	Appropriate preparations will minimize impactful discharges	Contractor, CSLC	Project construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
with Mitigation).	General Permit (VGP) must follow the best management practices for graywater as required in the VGP, including the use of only those cleaning agents (e.g., soaps and detergents) that are phosphate-free, non-toxic, and non-bioaccumulative.					
	Implementation of MM HAZ-1a	See specific MM in MMP for details on Location, Monitoring/Reporting, Action, Effectiveness Criteria, Responsible Agency, and Timing				
PUBLIC SERVICES						
Impact PUB-1: Need for Emergency Response Services during Construction of the Artificial Reef Construction and monitoring of the expansion reef could have a short-term impact on emergency response services (Less than Significant with Mitigation)	MM PUB-1. Notification of Harbor Patrol. The Orange County Harbor Patrol Marine Operations Bureau shall be notified when construction plans/schedules for the artificial reef are finalized. The Orange County Harbor Patrol Marine Operations Bureau shall also be given notification 2 weeks prior to the start of construction activities for both the experimental and mitigation reefs.	Orange County Harbor Patrol Marine Operations Bureau	Project monitor to confirm notification of Harbor Patrol	Implementing MM will ensure effective coordination and response	Contractor and CSLC	Prior to Project construction
APPLICANT-PROPOSED MEASURES						
APM-1. Anchoring Plan. The Applicant shall prepare an Anchoring Plan to reduce impacts sensitive marine areas. <ul style="list-style-type: none"> Anchors should be designed to minimize drag on the seabed. Each anchor should be located on the ocean floor. The cable to the barge would travel via a foam filled can (surge-can) to lift the anchor chains off the seafloor. Anchors should be placed on areas of seabed less than 30 percent hard substrate. 		Project site	CSLC to review and approve plan, monitor to verify anchoring is consistent with plan.	Implementation will reduce impacts to seafloor communities	Contractor, CSLC	Project construction

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<ul style="list-style-type: none"> All anchoring hardware moves would be conducted with ocean-capable tugboats with sufficient capacity to remove anchors from the seafloor to minimize drag damage. Anchors should be checked periodically to ensure movement has not occurred. 					
	<p>APM-2. Forecast Notification. Based on reputable weather forecasts, 24 hours before forecasts indicate conditions that would generate ground swells (waves) greater than 5 feet, all construction vessels would be withdrawn to a safe location. A safe location could include a nearby area where vessels can be anchored safely, deeper waters, or Long Beach Harbor.</p>	Project site	Monitor to confirm appropriate procedures followed after forecast	Appropriate preparations will minimize likelihood of spills or unsafe conditions.	Contractor, CSLC	Project construction
	<p>APM-3: Local Notice to Mariners. A Local Notice to Mariners will be published with the U.S. Coast Guard (USCG) Waterways Branch prior to Project construction to ensure that other vessels in the area, as well as the USCG and area harbor personnel, would be advised of the locations of the vessels and the approximate dates and duration of the construction. A similar notice shall be posted at several locations at Dana Point Harbor, including providing copies to the Sheriff's Harbor Patrol, charter boat businesses, and dive shops. Temporary signs should also be posted at recreational sites, such as the San Clemente Pier and the mouth of San Mateo Creek, to inform recreational users about the Project.</p>	Area harbors, vessel routes, and recreation areas	Project monitor to confirm notification to area harbors and USCG	Implementing MM will ensure effective coordination and response	Contractor, CSLC	Prior to Project construction

