



**DEPARTMENT OF THE ARMY**  
**CHIEF OF ENGINEERS**  
**2600 ARMY PENTAGON**  
**WASHINGTON, DC 20310-2600**

DAEN

**SUBJECT:** East San Pedro Bay Ecosystem Restoration, Los Angeles County, California

**THE SECRETARY OF THE ARMY**

1. I submit for transmission to Congress my report on the study of ecosystem restoration improvements for East San Pedro Bay, Los Angeles County, California. It is accompanied by the report of the Los Angeles District Engineer and South Pacific Division Engineer. This report serves as an interim response to the Senate Committee on Public Works Resolution, approved 25 June 1969, reading in part:

“Resolved by the Committee on Public Works of the United States Senate, that the Board of Engineers for Rivers and Harbors, created under Section 3 of the River and Harbor Act, approved June 13, 1902, be, and is hereby requested to review the report of the Chief of Engineers on the Los Angeles and San Gabriel Rivers and Ballona Creek, California, published as House Document Numbered 838, Seventy-sixth Congress, and other pertinent reports, with a view to determining whether any modifications contained herein are advisable at the present time, in the resources in the Los Angeles County Drainage Area.” The Energy and Water Development and Related Agencies Appropriations Act for Fiscal Year 2010, Pub. L. 111-85, provided funds for the Long Beach Breakwater Reconnaissance Study, as specifically listed in Conference Report No. 111-278 to accompany H.R. 3183 dated September 30, 2009. Preconstruction, engineering, and design activities, if funded, will continue under the authority cited above.

2. The reporting officers recommend authorizing a plan for ecosystem restoration within East San Pedro Bay, off of the coast of the City of Long Beach in Los Angeles County, California, to include:

- a. Construction of 24 separate kelp beds totaling approximately 121 acres, consisting of a single layer of rock approximately 5 acres each in size;
- b. Construction of two separate open water rocky reefs totaling approximately 29 acres, with each reef containing roughly 50 individual mounds of rocks ranging in height between 3'-12' by approximately 80-100' diameter;

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<sup>1</sup> This report contains the proposed recommendation of the Chief of Engineers. The recommendation is subject to change to reflect Washington-level review and comments from federal and state agencies.

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c. Construction of six separate nearshore rocky reefs totaling approximately 20 acres, with each reef covering 4-5 acres in a linear configuration similar to open water rocky reef;

d. Dredging of approximately 100,000 cubic yards of sand from the Surfside/Sunset borrow area, and placing sand on leeward or beach side of nearshore rocky reefs for eelgrass beds;

e. Installation of six eelgrass beds totaling approximately 30 acres on leeward side of the six nearshore rocky reefs using transplanted eelgrass material from donor beds.

3. The recommended plan is the National Ecosystem Restoration (NER) Plan and will result in the restoration of approximately 201 acres of kelp beds, rocky reef, and eelgrass habitat within East San Pedro Bay.

4. In accordance with the cost sharing provisions of Section 103 of WRDA 1986, as amended (33 U.S.C. 2213), the federal share of the total project first costs would be 65 percent of the first cost of the NER Plan, and the non-federal share would be 35 percent of the first cost of the NER Plan. Based on Fiscal Year 2022 price levels, the NER Plan has an estimated total project first cost of \$262,411,000. In addition, an estimated \$1,290,000 would be required for aids to navigation (ATONs). The cost of ATONs would be a responsibility of the U.S. Coast Guard. The project provides ecosystem restoration outputs of 161 average annual habitat units (AAHU) based on the Southern California Coastal Bay Ecosystem Model. The federal share of the total project first cost of the recommended plan is estimated at \$170,567,000 the non-federal share is estimated at \$91,844,000. The non-federal cost includes the value of lands, easements, rights-of-way, relocations and disposal areas estimated at \$9,703,000. The non-federal sponsor will be responsible for operation, maintenance, repair, rehabilitation, and replacement (OMRR&R) of the project after construction, at an estimated average annual cost of \$535,000. The project components are all considered structural features which would require OMRR&R in perpetuity by the non-federal sponsor. However, annual OMRR&R is not anticipated for any of the restoration features except for occasional repairs of the nearshore rocky reef following strong storm events.

5. Based on a 2.25 percent discount rate and a 50-year period of analysis, the total average annual costs of the NER plan are estimated at \$10,200,000 in accordance with Section 101(b)(1) of WRDA 1986, as amended (33 U.S.C. 2211(b)(1)). All project costs are allocated to the authorized purpose of ecosystem restoration. The average annual cost per AAHU is \$63,400 and the average annual cost per acre restored is \$1,304,000.

6. The risk and uncertainty of the NER plan's performance was evaluated to assess the reliability of ecological success and to support the development of a monitoring and adaptive management plan. A cost-shared monitoring and adaptive management period

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will begin after construction of each feature and after successful installation and establishment of native plantings. It will continue until ecological success criteria are met, but for no more than ten years. After ecological success criteria are met, the non-federal sponsor will be responsible for OMRR&R. Long-term management will conform to and be aligned with activities and requirements laid out in the OMRR&R manual and respective City documents covering Tidelands jurisdictional areas within East San Pedro Bay. U.S. Army Corps of Engineers and non-federal sponsor activities will be coordinated to ensure continuing fulfillment of commitments made under the Endangered Species Act, the Fish and Wildlife Coordination Act and other compliance agreements.

7. In accordance with the U.S. Army Corps of Engineers policy on the review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and rigorous review process to ensure technical quality. This includes District Quality Control, Agency Technical Review, Independent External Peer Review, and a U.S. Army Corps of Engineers Headquarters policy and legal review.

8. Washington-level review indicates that the project recommended by the reporting officers is technically sound, environmentally acceptable, and cost effective. The plan complies with all essential elements of the 1983 U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation studies and complies with other administrative and legislative policies and guidelines. The views of interested parties, including federal, state, and local agencies have also been considered.

9. I concur with the findings, conclusions, and recommendations of the reporting officers. I recommend that ecosystem restoration for East San Pedro Bay, Los Angeles County, California, be authorized in accordance with the reporting officers' recommended plan, with such modifications thereof as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing and other applicable requirements of federal laws, regulations, and policies. Federal implementation of the project for ecosystem restoration includes, but is not limited to, the following required items of local cooperation to be undertaken by the non-federal sponsor in accordance with applicable federal laws, regulations, and policies:

a. Provide the non-federal share of project costs including 35 percent of construction costs allocated to ecosystem restoration, as further specified below:

(1) Provide, during design, 35 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

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(2) Provide all lands, easements, and rights-of-way, including those required for relocations and placement areas, and perform all relocations determined by the Federal Government to be required for the project; and

(3) Provide, during construction, any additional contribution necessary to make its total contribution equal to 35 percent of construction costs.

b. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) that might reduce the outputs produced by the project, hinder operation and maintenance of the project, or interfere with the project's proper function;

c. Ensure that the project or lands, easements, and rights-of-way required for the project shall not be used as a wetlands bank or mitigation credit for any other project;

d. Operate, maintain, repair, rehabilitate, and replace the project or functional portion thereof at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable federal laws and regulations and any specific directions prescribed by the Federal Government;

e. Hold and save the Federal Government free from all damages arising from design, construction, operation, maintenance, repair, rehabilitation, and replacement of the project, except for damages due to the fault or negligence of the Federal Government or its contractors;

f. Perform, or ensure performance of, any investigations for hazardous toxic, and radioactive wastes (HTRW) that are determined necessary to identify the existence and extent of any HTRW regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §9601-§9675, and any other applicable law, that may exist in, on, or under real property interests that the Federal Government determines to be necessary for construction, operation, and maintenance of the project.

g. Agree, as between the Federal Government and the non-federal sponsor, to be solely responsible for the performance and costs of cleanup and response of any HTRW regulated under applicable law that are located in, on, or under real property interests required for construction, operation, and maintenance of the project, including the costs of any studies and investigations necessary to determine an appropriate response to the contamination, without reimbursement or credit by the Federal Government;

h. Agree, as between the Federal Government and the non-federal sponsor, that the non-federal sponsor shall be considered the owner and operator of the project for the

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purpose of CERCLA liability or other applicable law, and to the maximum extent practicable shall carry out its responsibilities in a manner that will not cause HTRW liability to arise under applicable law; and

i. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, (42 U.S.C. §4630 and §4655) and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring real property interests necessary for construction, operation, and maintenance of the project including those necessary for relocations, and placement area improvements; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

10. The recommendations contained herein reflect the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to the Congress, the sponsor, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

SCOTT A. SPELLMON  
Lieutenant General, USA  
Chief of Engineers