



US Army Corps of Engineers
Los Angeles District



**Notice of Public Review and Public Meeting
Encinitas and Solana Beach, San Diego, California
Draft Shoreline Protection Feasibility Report**

**Tuesday, September 20, 2005 6:00pm-9:00pm
Poinsettia Conference Room, Encinitas City Hall
505 South Vulcan Avenue, Encinitas, California
and
Wednesday, September 21, 2005 6:00pm-9:00pm
Solana Beach City Council Chambers, City Hall
635 Highway 101, Solana Beach California**

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, US ARMY CORPS OF ENGINEERS
COASTAL STUDIES GROUP
P.O. BOX 523711
LOS ANGELES, CA 90053-2325

OFFICIAL BUSINESS

FIRST CLASS MAIL

Interested Parties:

This is an open invitation to all interested parties to provide views and comments on the Draft Feasibility Report and Draft EIS/EIR for shoreline protection prepared by the U.S. Army Corps of Engineers and the Cities of Encinitas and Solana Beach. Two public meetings on the study and the proposed storm damage reduction plan will be held on **September 20, 2005 at 6:00pm** in the Poinsettia Conference Room at City Hall in **Encinitas, California, 505 South Vulcan Avenue** and **September 21, 2005 at 6:00pm** in the City Council Chambers at City Hall, in **Solana Beach, California.**

At the public meeting, the results of the draft feasibility study will be presented as well as the proposed plan. In Encinitas the proposed plan involves bluff toe protection (notch fill) and beach nourishment along a 2.4 km (1.5 mile) shoreline from the 700 block of Neptune Avenue to the Self Realization Fellowship Property, north of Swami's Reef. In Solana Beach the protection would extend 2.2 km (1.4 miles) from just south of Table Tops Reef to the Solana Beach/Del Mar boundary and will involve notch fills and beach nourishment. The Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) on this plan will also be presented and discussed. The draft feasibility report and EIS/EIR are available for public review at the Cardiff Library, 2081 Newcastle Avenue, Cardiff, California and the Solana Beach Public Library, 157 Stevens Avenue, Solana Beach, California. The feasibility Report and the Executive Summary of the draft EIS/EIR can be downloaded from the study home page at: <http://www.spl.usace.army.mil/encinitas/encinitas.htm> A summary of the study results and a brief description of the Recommended Plan and Environmental Impacts are included in this announcement.

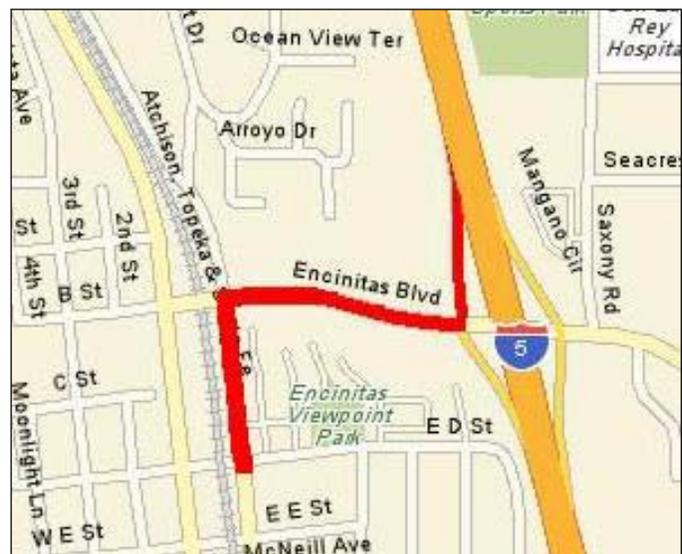
The purpose of this public meeting is to solicit public comments and concerns with respect to the draft feasibility study findings and the proposed recommended plan. All comments and information received will be carefully reviewed and fully considered in reaching the final feasibility study conclusions and recommendations. Therefore, we urge all interested parties to participate. Anyone wishing to express his or her views at the meeting will be offered a full opportunity to do so. In addition, written comments may be submitted at the meeting or mailed to the Corps of Engineers at the address below. A record of proceedings will be taken during the meeting and a transcript prepared. All statements, oral or written, will become part of the official record of the study. Appropriate statements or recommendations for change will be incorporated into the final study documents.

The review period for receiving views and comments is 45 days. All written statements should be received by the Corps no later than October 14, 2005. Written comments or further information regarding the Encinitas and Solana Beach Shoreline, Draft Feasibility Report and Draft EIS/EIR or the public meeting can be addressed to Mr. Robert Blasberg, Study Manager, Coastal Studies Group, U.S. Army Corps of Engineers, P.O. Box 532711, Los Angeles, California, 90053-2325. Mr. Blasberg may also be reached by telephone at (213) 452-3836 and email: robert.a.blasberg@usace.army.mil.

We have attempted to send this information to all individuals and organizations that may have an interest in the Cities of Encinitas and Solana Beach shoreline. If you know of individuals who may desire to attend and have not been contacted by us, please bring this invitation to their attention.

Directions to City Hall, Encinitas:

From I-5, take the Encinitas Blvd exit. Turn West on Encinitas Blvd. Turn Left on South Vulcan Avenue, City Hall is on the Northwest corner of South Vulcan Avenue and D street



Directions to City Hall, Solana Beach:

From I-5, take Lomas Santa Fe Dr. Exit. Turn West on Lomas Santa Fe Dr. Turn Left on South Highway 101, City Hall is on the Right, 635 South Highway 101.



PROJECT SUMMARY

Authority and Purpose

The Solana Beach and Encinitas Shoreline Feasibility Study was authorized by a 13 May 1993 Resolution of the House Public Works and Transportation Committee, that reads as follows:

“Resolved by the Committee on Public Works and Transportation of the United States House of Representatives, That, in accordance with Section 110 of the River and Harbor Act of 1962, the Secretary of the Army, acting through the Chief of Engineers, is directed to make a survey to investigate the feasibility of providing shore protection improvements in and adjacent to the City of Encinitas, California, in the interest of storm damage reduction, beach erosion control, and related purposes.”

And, a 22 April 1999 Resolution of the House Committee on Transportation and Infrastructure, that reads as follows:

Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That the Secretary of the Army, in accordance with Section 110 of the River and Harbor Act of 1962, is hereby requested to conduct a study of the shoreline along the City of Solana Beach, San Diego County, California, with a view to determining whether shore protection improvements for storm damages reduction, environmental restoration and protection, and other related purposes are advisable at the present time.

Public Law 106-60 (H.R. 2605), the Energy and Water Development Act for FY2000, dated September 29, 1999, provided funds in the amount of \$100,000 to conduct the reconnaissance phase of the coastal bluff erosion problem at the Cities of Encinitas and Solana Beach, California, including investigating opportunities for the ecosystem restoration of San Elijo Lagoon, potentially using sediments from the lagoon to provide shore protection. The reconnaissance analysis (Section 905 (b), WRDA 96), which was initiated on 28 March 2000, found that there is a Federal interest in continuing the study into the feasibility phase. The lagoon restoration and shoreline protection investigations were joined in one feasibility study to facilitate this potential beneficial re-use of lagoon sediment for beach nourishment.

Recently, the lagoon restoration and the shoreline protection investigations were split into two separate feasibility studies. The document just recently released describes the findings and recommendations for shoreline protection and is therefore an interim response to the study authority. The final feasibility study of the ecosystem restoration opportunities within the San Elijo lagoon, will complete the response to the study authority.

Study Participants

The Feasibility study was prepared by the Los Angeles District, U.S. Army Corps of Engineers, in coordination with the Cities of Encinitas and Solana Beach. Coordination was also conducted with the Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Department of Fish and Game (CDFG), California Coastal Commission (CCC), California Department of Boating and Waterways, (CDBW), Regional Water Quality Control Board (RWQCB), State Historic Preservation Office (SHPO), local municipalities and other interested parties. The Non-Federal Sponsors of this project are the Cities of Encinitas and Solana Beach.

Problem Description

Before the 1970s, beaches in the study area were generally wide enough to provide protection to the coastal bluffs, and the shoreline was more stable. However, loss of littoral sediment supplied historically by rivers has resulted in severely depleted beaches in the study area. Since the beach was lost, the annualized rate of marine erosion of the coastal bluffs has at least doubled in Encinitas, and has increased an order of magnitude in most of Solana Beach, prompting property owners to install seawalls and other protective structures. The California Coastal Commission (the state permitting agency created to implement the California Coastal Act) has historically been very resistant to granting permanent seawall permits, but is legally compelled to grant emergency permits when a structure is in imminent danger of failure from wave attack and/or undermining. The result is a patchwork of shore protection devices of varying building materials and levels of protection. The study investigates comprehensive solutions to the problem.

Plan Formulation

Plan formulation considered the Planning Objectives of reducing the storm damage potential within Encinitas and Solana Beach, enhancing recreational opportunities, and preserving or improving environmental resources. An array of both structural and non-structural alternatives were considered and evaluated based on their capability of meeting the Planning Objectives. Through a process of screening out alternatives, beach nourishment, beach nourishment with bluff base protection, and seawalls were considered most viable.

The final alternatives were evaluated based on comparisons to the No Action Plan and contributions to National Economic Development (NED) and environmental impacts to determine compliance with environmental laws, policies and other guidelines. The plan selected is the NED Plan.

Recommended Plan

The Recommended Plan is the beach nourishment with bluff base protection. The plan consists of two components: notch fill at the bluff base and sand nourishment on the beach.

Notch fill- The construction procedure consists of scraping sand layer away to expose the bedrock layer; and sealing up eroded notches with erodible concrete. The shotcrete gunite with special grout material is typically used for the notch-fill construction as it builds up the concrete seal layer-by-layer and is less impacted by the rising tides. The construction equipment required includes a backhoe for sand scraping and a high-pressured nozzle for concrete fill. In Segment 1, the Notch fill will extend approximately 2.4 km along the toe of the bluff in Segment 1 and approximately 2.2 km in Segment 2. The erodible concrete will be colorized and textured to match the existing bluffs. The particular design for a notch fill is based on the geotechnical characteristics of the area and the size of the notch. The size and quantity of notch fill will depend on depth and height of notch at each specific location.

Beach fill- In Encinitas, approximately 628,100 cm of beach quality sand would be initially placed along 2.4 km (1.5 mi) of shoreline providing a nourishment width of 60 meters at a berm elevation of approximately +3.9 meters (+12.8 feet) Mean Lower Low Water (MLLW). The berm would be flat and approximately 60 meters wide. The beach fill would then naturally slough seaward approximately 43 meters (134 feet) at a slope of 10:1 (horizontal distance:vertical distance). The beach fill will be tapered into the existing beaches to the north and south of the segment. Beach replenishment of an additional sand volume of 261,500 cm would occur on average every 5 years within the 50-year project lifetime.

In Solana Beach, approximately 309,600 cm of beach quality sand would be initially placed along 2.2 km of the shoreline, providing a nourishment width of 30 meters at a berm elevation of approximately +3.9 meters (+12.8 feet) Mean Lower Low Water (MLLW). The berm will be flat and approximately 30 meters wide. The beach fill would then naturally slope seaward approximately 38 meters (119 feet) at a slope of 10:1 (horizontal distance:vertical distance). The beach fill will be tapered into the existing beaches to the north and south of the segment. Beach replenishment of an additional sand volume of 140,300 cm would occur on average every 5 years within the 50-year project lifetime.

Environmental Impacts of the Recommended Plan

The environmental impacts and mitigation plans associated with the Recommended Plan are presented in detail in the EIS/EIR. Environmental impacts were evaluated for the offshore sand borrow sites and the receiving beach. There are no long-term unavoidable significant impacts resulting from implementation of the Recommended Plan. There are significant short term unavoidable impacts to air quality during construction. The following table shows the environmental commitments to be undertaken to ensure all other environmental impacts are reduced to a level of insignificance.

Summary of design features/monitoring commitments and mitigation measures (if necessary).

	Purpose	Timing	Implementation Responsibility
Design Features			
Topography, Geology, and Geography: Use of erodible concrete for notch fill material	Mimic natural erosive processes	During notch fill	Construction contractor
Oceanographic Characteristics and Coastal Processes: Use of erodible concrete for notch fill material	Mimic natural erosive processes	During notch fill	Construction contractor
Water and sediment quality: Construct "L"-shaped berms at all receiver sites	Anchor sand placement operations and reduce nearshore turbidity	During beach fill	Construction contractor
Water and sediment quality: Maintenance for land-based vehicles will occur in staging area away from beach and sensitive areas	Avoid minimal contamination from leaks, if any	During beach nourishment/notch fill	Construction contractor
Water and sediment Quality: Use proper BMPs during vehicle fueling	Avoid petroleum spills	During beach nourishment/notch fill	Construction contractor
Water and sediment quality: Generate plan for hazardous spill prevention and containment	Ensure minimal contamination from fuel leaks, if any	During operation of equipment on the beach or in the water	Construction contractor
Biological Resources: Design borrow sites to maintain adequate distance from artificial reefs, kelp, and other features	Avoid direct impacts to artificial reefs and kelp	Final engineering and during construction	Engineering contractor and construction contractor
Biology: Construct second transverse berm to begin a new cell if grunion spawning or eggs are encountered during construction	Section of beach with grunion would be avoided and bypassed	If grunion spawning or eggs are encountered	Construction contractor, in coordination with USACE
Biology: No construction shall be performed within 430 m of any sensitive bird species that have clear line of site to the construction area during breeding and nesting season; no beach construction within 215 m of any sensitive bird species during the breeding and nesting season	Minimize impacts to sensitive wildlife of noise emissions	During beach nourishment/notch fill	Construction contractor
Air quality: Use of BMPs to reduce air quality impacts such as the use of BACT and/or BART for the dredge	To reduce air emissions	During all construction activities	Construction contractor
Air quality: Construction equipment will be properly maintained and tuned	To reduce air emissions	During beach nourishment/notch fill	Construction contractor
Noise: Construction equipment shall be fitted with mufflers, air intake silencers, and engine shrouds; stationary noise sources will be located far from residential receptor locations	Minimize noise emissions	During beach nourishment/notch fill	Construction contractor
Noise: A noise variance shall be obtained for work done after 7 pm from the City of Encinitas and the City of Solana Beach	Public notification and approval	Prior to the commencement of any work	Construction contractor
Noise: In Reach 8, no beach construction shall be performed within 430 m (1,400 ft) of any sensitive bird species that have a clear line of sight to the construction area during the breeding and nesting season; and no beach construction shall be performed within 240 m (790 ft) of any sensitive bird species during the breeding and nesting season	Minimize impacts to sensitive wildlife of noise emissions	During beach nourishment/notch fill	Construction contractor
Aesthetics: Notch fill material will be colorized and textured to match the existing bluff face	Improve aesthetics of erodible concrete	During Notch fill	Construction contractor
Recreation: Communicate with local jurisdictions to avoid recreational events	Avoid disruption of established recreational events	During beach nourishment/notch fill	Construction contractor
Public safety: Avoid placing fill material near storm drain outlets	Continue proper drainage	During beach nourishment/notch fill activities	Construction contractor, in coordination with City Engineer
Public safety: Generate plan for hazardous spill prevention and containment	Ensure minimal contamination from fuel leaks, if any	During operation of equipment on the beach or in the water	Construction contractor
Public Safety: Issue Notice to Mariners and maintain 500-foot buffer around active dredge	Warn boaters/fishermen of dredging activities to	Before and during dredging activities	Coast Guard (via construction

Summary of design features/monitoring commitments and mitigation measures (if necessary).

	Purpose	Timing	Implementation Responsibility
equipment	ensure avoidance		contractor)
Public Safety: Generate safety plan to restrict public access at receiver and notch fill sites and maintain 45-m (150-foot) buffer around construction areas	Public safety during construction	During beach nourishment/notch fill activities	Construction contractor, in coordination with local lifeguards
Public Safety: Relocation of temporary lifeguard towers	Public safety during construction	During beach nourishment activities/notch fill	Construction contractor, in coordination with local lifeguards
Public Safety: Sand placement to avoid blocking line-of-sight at permanent lifeguard towers	Public safety during construction	During beach nourishment activities	Construction contractor, in coordination with local lifeguards
Socioeconomics: Coordination with commercial fishermen; establishment of offshore transit corridors in consultation with a commercial fishermen representative; issue Notice to Mariners	Avoid gear conflicts and provide for compensation if loss occurs	Before and during dredging operations	Coast Guard (via construction contractor) and USACE
Monitoring Commitments			
Water and Sediment Quality: Monitor turbidity levels	To avoid turbidity impacts to fish and aquatic species	During dredging operations and beach fill activities	
Biology: Conduct nearshore underwater surveys	Establish baseline data for comparison purposes and determine if any natural/ biological resources/habitats have been adversely impacted by the project	Prior to construction and after construction	Qualified biologist
Biology: Monitor weekly for grunion spawning in construction area, establish buffer extending 30 m shoreward of high tide line and 30 m upcoast and downcoast (total 200 feet), until eggs hatch (minimum of one lunar month) and surveys show no subsequent spawning	Avoid grunion eggs and protect until hatched	April through September and per CDFG annual pamphlet <i>Expected Grunion Runs</i> .	Qualified biologist
Public Safety: Generate safety plan to restrict public access at receiver and notch fill sites and maintain 45-m (150-foot) buffer around construction areas	Public safety during construction	During beach nourishment/notch fill activities	Construction contractor, in coordination with local lifeguards
Post-Project Mitigation Measures (If Necessary)			
Biology: Restoration or creation of like habitat at a ratio to be determined with the responsible resource agencies according to the long-term significant impacts, if any, to marine resources	Mitigate for significant, long-term Impacts, if any, to sensitive marine resources caused by sediment placement or transport	Subsequent to resource agency review of monitoring reports and determination that significant impact had occurred	Qualified biologist

Plan Implementation Requirements

The District Engineer's recommended plan will require construction authorization through an Act of Congress, typically in a Water Resources Development Act, prior to project implementation. The estimated first cost of construction for the recommended plan totals \$14,538,000. The Non-Federal Sponsors, the City of Encinitas and the City of Solana Beach, will be required to pay during the period of construction 36% of the first cost of construction or \$5,234,000. Costs borne by the Non-Federal Sponsors for lands, easements, and rights-of-way, associated with the recommended plan may be credited toward the Non-Federal share of the project costs. The Federal government will be responsible for providing 64% of the total project first cost of construction or \$9,304,000. In addition, the Federal government will be responsible for administering contracts for construction and supervision of the project after authorization and funding and receipt of Non-Federal assurances.