UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

February 26, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
ATTN: Mr. Larry Smith (CESPL-PD-RN)
Los Angeles, California 90053-2325

Subject: Draft Environmental Impact Statement for the Encinitas-Solana Beach Coastal Storm Damage Reduction Project, San Diego County, CA (CEQ# 20120400).

Dear Ms. Axt:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for Encinitas-Solana Beach Coastal Storm Damage Reduction Project (Project), San Diego County, California. Our review is provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act. Our comments were also prepared in accordance with the provisions of the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA).

EPA recognizes the need to minimize threats to public safety from collapsed bluffs, and we support this goal. Based on our review of all of the project action alternative scenarios, we have rated the DEIS as *Environmental Concerns – Insufficient Information* (EC-2) (see enclosed "*Summary of Rating Definitions*"), due to our concerns regarding climate change and sea level rise, and impacts to water quality. We also have concerns regarding the source and quality of beach nourishment materials; biological quality surveys and monitoring; endangered species; floodplain management; cumulative impacts and air quality.

EPA recommends that the FEIS give greater consideration to the project's potential impacts and mitigation needs under high sea level scenarios and that further consideration be given to the need for monitoring and mitigation plans to address environmental impacts from the proposed fill activities, such as loss of surf grass, loss of hard bottom habitat, and water quality. We also encourage the U.S. Army Corps of Engineers to include, in the Final Environmental Impact Statement (FEIS), the results of a comprehensive biological survey of the Encinitas-Solana Beach shoreline. Without such a survey, it is difficult to accurately evaluate the potential environmental impacts of the various alternatives described in the proposed action.

EPA appreciates the communication between our offices and the opportunity to review this DEIS. When the FEIS is released, please send one hard copy and three CD's to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or have your staff contact James Munson, the lead reviewer for this project. James can be reached at (415) 972-3852 or munson.james@epa.gov.

Please note that, as of October 1, 2012, EPA Headquarters no longer accepts paper copies or CDs of EISs for official filing purposes. Submissions must be made through the EPA's new electronic EIS submittal tool: e-NEPA. To begin using e-NEPA, you must first register with the EPA's electronic reporting site - https://cdx.epa.gov/epa_home.asp. Electronic submission does not change requirements for distribution of EISs for public review and comment, and lead agencies should still provide one hard copy and three CD's of each Draft and Final EIS released for public circulation to the EPA Region 9 office in San Francisco (Mail Code: CED-2).

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

EPA'S DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE ENCINITAS-SOLANA BEACH COASTAL STORM DAMAGE REDUCTION PROJECT, SAN DIEGO COUNTY, CA, (CEQ# 20120400)

Alternatives Analysis/Climate Change

The DEIS includes no-action alternatives and multiple action alternatives for each beach, and each alternative has a high sea level rise scenario and a low sea level rise scenario. The document identifies a tentatively recommended plan with two alternatives that call for beach nourishment on two project areas but with different beach widths, (EN-1A Encinitas Beach 100 feet and SB-1A Solana Beach 200 feet). The tentatively recommended plan assumes a low sea level rise scenario, but does not provide a sufficient rationale for why this was chosen. Page 115 of the DEIS states, "Should high sea level rise scenario predictions become evident during the course of the project, adaption of the design to the high sea level rise scenario would be implemented. To achieve that adaption the higher re-nourishment volumes would be implemented." EPA is concerned that the impacts analysis and mitigation is primarily calibrated using the low sea level rise scenario; hence, there is insufficient data to fully analyze the impacts and mitigation needs should the high sea level rise scenario become the federal action.

Page 47 of the DEIS states: "The low sea level rise is represented by a trendline analysis of yearly MSL data recorded at La Jolla in San Diego County from 1924 to 2006. This indicates an upward trend of approximately 0.0068 ft per year, as described in the Coastal Engineering Appendix." Page 46 indicates that this number is formulated using a "Curve I from the National Research Council (1987)." Using a low sea level rise from a curve created in 1987 that reflects data calculating changes from 1924 to 2006 may not fully capture probable sea level rise levels over the next 50 years. At 0.0068 feet per year, this amounts to an increase of 0.34 feet over the 50 year life of the project; however, Table 1.8-4 on page 48 of the DEIS shows conflicting data from the "'Projections from year 2000 baseline' Source: California Ocean Protection Council, 2011." Those data project an average rise of approximately 1.17 feet or "14 inches" by 2050, which is less than $^{4}/_{5}$ of the project's 50 year action period -- a difference of approximately 0.84 feet over the life of the project.

As written, the DEIS' alternatives and economic sections are insufficient to demonstrate why the Corps chose the "tentative recommended plan" or why this plan was chosen over the "Environmentally Superior Plans (EN-1B & SB-1C)". We also note that the artificial reef alternative was dismissed, but the "tentative recommended plan" includes 16 acres of artificial reef; detailed description of the artificial reef alternative that was discarded is not available for comparison. Furthermore, although a CWA Section 404 permit is not needed for the proposed action, this Civil Works project should meet the intent of the CWA Section 404(b)(1) Guidelines. The DEIS alternatives analysis does not demonstrate the project's consistency with the nature of the Clean Water Act Section 404(b)(1) Guidelines and selection of the Least Environmentally Damaging Practicable Alternative (LEDPA).

Recommendations:

The FEIS should include a full detailed description of the tentatively recommended plan, including high sea level scenarios, using up-to-date data, and looking forward through at least the life of the project.

The FEIS should include a description of how each alternative would meet the needs of the project while reducing adverse impacts to species of concern, coral reefs, and surf grass.

The FEIS alternatives analysis should include a reasonable range of practicable alternatives that meet the project purpose and demonstrate the project's consistency with the CWA Section 404(b)(1) Guidelines and selection of the LEDPA.

Water Quality

While the project will have impacts to high value marine habitats, including special aquatic sites (defined at 40 CFR 230.3(q-1)), the Section 404(b)(1) Analysis (Appendix D) concludes that all impacts are localized and temporary and, therefore, insignificant. There is little discussion of the basis for this conclusion.

As a result of the large volumes of sand being placed on receiver beaches, (1.64 million cy), the Tentatively Recommended Plan described on page 501 could lead to significant and unavoidable adverse impacts on surface water quality, benthic habitat, and fisheries from increased turbidity and fill in special aquatic sites. Page 333 of the DEIS states that, "turbidity is limited to the bottom and is rarely visible at the surface"; however, little information is provided in the document to support this statement. Other short and long term threats to water quality include construction-related contaminants such as oil and hydraulic fluid and increased turbidity that would occur during future maintenance activities for the proposed project.

Recommendations:

The FEIS should include the results of a comprehensive biological survey of the Encinitas-Solana Beach shoreline.

The FEIS should address the potential of the project to contribute to elevated turbidity levels. The Corps should consider marine design modifications regarding factors such as location and size to minimize these environmental impacts.

Additional minimization measures for impacts to the aquatic environment should be discussed in the FEIS, such as measures related to timing and rate of fill placement.

The FEIS should commit to: 1) placement in fall or winter to better mimic natural shoreline turbidity processes and reduce impacts during high recreational use times, and 2) development of debris management plans to ensure that the borrow site materials do not deposit trash or other debris that may be harmful to the ocean environment.

Source & Quality of Beach Nourishment Materials

The DEIS briefly considers sources of sand such as onshore and offshore borrow sites (DEIS p. 100); however, in regards to possible onshore borrow, the document states, "Some potential for beach replenishment material exists within the quarry and the surrounding area, although the cost would be much higher than offshore sources due to the costs associated with transport."

Recommendation:

The Corps should evaluate and discuss, in the FEIS, any opportunities to further minimize impacts to the aquatic environment by coordinating with other Corps permitted dredging projects that may produce suitable material for beach nourishment purposes, or using sources from which the dredging might provide enhancement of environmental, navigational, or recreational conditions. The ROD should include a commitment to consideration of opportunistic sources of beach nourishment material prior to each nourishment cycle.

We note that the chemical testing of the sediments in the proposed Oceanside borrow pit occurred several years ago. Due to this lapse of time, additional testing may be necessary. Page 203 of DEIS describes an initial general sampling scheme, with an unspecified number of cores taken at depths of 2 feet and approximately 20 feet; however, it is unclear how many of those cores were taken from borrow sites planned for the Tentative Recommended Plan. EPA is also concerned that the document fails to include plans to take core testing down to the anticipated dredging depth.

Recommendation:

The discussion of the chemical testing of the proposed Oceanside borrow site should be expanded in the FEIS to describe what was done in greater detail, including why further up-to-date testing is not needed down to the anticipated dredging depth.

Biological Quality Surveys and Monitoring

As discussed in the DEIS, surveys and monitoring have typically been incorporated into beach nourishment projects. We acknowledge the Corps' commitment to a 50 year monitoring period (over the life of the project); however, the document does not sufficiently discuss a biological monitoring plan.

Recommendation:

The FEIS should include a clear detailed description of a survey and monitoring program for the biological impacts of the preferred alternative, and commit to its incorporation as a required project element. This information should be included for both nearshore and borrow areas in order to evaluate the effectiveness of the proposed action in protecting biological diversity and quality. The monitoring plan should include pre- and post-project

dive surveys and benthic community sampling of the borrow site and the receiver site to ensure that each benthic community returns to its pre-project density and structure. We recommend that the monitoring program have a clear adaptive management strategy to ensure that the aquatic environment is protected.

Endangered Species

The DEIS insufficiently evaluates the potential impacts to on shore species of concern such as snowy plover, least tern and their habitat. The document states that the species are found in the area, but does not sufficiently disclose the results of site specific surveys.

Recommendation:

The FEIS should include the results of a comprehensive biological survey of the entire project area as well as the borrow site, including a complete review of species outside the immediate project area that may be affected by the project.

The results of consultation with the United States Fish and Wildlife Service and National Oceanic and Atmospheric Administration, if appropriate, regarding threatened or endangered species or critical habitat should be included in the FEIS.

The FEIS should commit to having beach nourishment activities avoid the nesting seasons for listed species, such as the least tern and snowy plover.

Executive Order 11988: Floodplain Management

Per Flood Insurance Rate Maps (FIRM), portions of the project footprint are in a Zone VE Coastal Flood Zone with velocity hazard and established base flood elevation (BFE). See FIRM#: 06073C1045G San Diego Co Unincorporated & Incorporated Areas 05/16/2012. Executive Order 11988 Floodplain Management requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains.

Recommendation:

The FEIS should discuss any impacts that the Proposed Project may have on the potential for flooding.

Cumulative Impacts

The DEIS does not include a sufficient description of other projects in the area that are under construction or planned within the 50 year time frame and could have cumulative impacts , such as adjacent beach re-nourishment projects and or the ecosystem restoration at the San Elijo Lagoon, which is located between the Encinitas Beach and Solana Beach.

Recommendation:

Given that the Project will take place over the next 50 years, the FEIS should include a comprehensive discussion of reasonably foreseeable projects that may take place in the area during the construction period, such as the San Elijo Lagoon Restoration project, San Clemente Shoreline Feasibility Study and others, and analyze the potential cumulative impacts on affected resources.

Air Quality

Construction Mitigation Measures

EPA recognizes the incorporation of mitigation best management strategies for the project on page S-10 to reduce or minimize air pollutant emissions. More stringent emission controls are available that could further reduce emissions.

Recommendations:
We recommend that all applicable requirements under the South Coast Air Quality Management District (SCAQMD) Rules and the following additional measures be incorporated into the Construction Emissions Mitigation Plan.

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing, and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at California Air Resources Board (CARB) and/or EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. CARB has a number of mobile source anti-idling requirements. See their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations

- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards. In general, only Tier 2 or newer engines should be employed in the construction phase.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.

Administrative controls:

- Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction, and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) Meet CARB diesel fuel requirement for off-road and on-highway (i.e., 15 ppm), and where appropriate use alternative fuels such as natural gas and electric.
- Develop construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

Air Quality Impacts Associated with Transporting Fill Material

EPA is concerned that the air quality analysis in the DEIS does not adequately address mitigation of emissions associated with the multiple collection barge trips needed to remove and transport fill from the Project site, nor does the DEIS appear to include estimates of the number of necessary collection barge trips, distance traveled, and corresponding air emissions.

Recommendations:

The FEIS should include a revised air quality analysis and updated emissions comparison to SCAQMD significance thresholds to account for the emissions from the equipment required to transport fill. The FEIS should also commit to additional minimization measures for emissions from barges, tugboats, dredge equipment and equipment used to place the sand on the beach.