City of Long Beach
Working Together to Serve

Memorandum

Date: October 13, 2016

To: Mayor and Members of the City Council

From: Patrick H. West, City Manager

Subject: **U.S. Army Corps' East San Pedro Bay Ecosystem Restoration Study Reaches Alternative Milestone**

The U.S. Army Corps of Engineers (Army Corps) officially began the East San Pedro Bay Ecosystem Restoration Feasibility Study (Study) in February 2016. All Army Corps feasibility studies work progressively through a six-step planning process, with five key decision points or milestones. On September 9, 2016, the Army Corps reached the first milestone in the East San Pedro Bay Ecosystem Restoration Study.

A public meeting will be held on October 26, 2016 from 6:00-7:30 pm at the Bixby Park Community Center to provide our community, local businesses and other interested parties with an update on the Army Corps' progress through the Alternatives Milestone.

Following the initial dual public meetings at Bixby Park in Long Beach on April 6, the Army Corps collaborated with U.S. Fish and Wildlife Service (USFWS) National Wildlife and Fisheries, and the National Oceanic and Atmospheric Agency (NOAA) to reach the Alternatives Milestone, which is the first milestone in the Army Corps' feasibility study process. Reaching this milestone in the Study means staff from the Army Corps' Los Angeles District, South Pacific Division, and Headquarters believe there is sufficient information, and an agreeable way forward, to continue analysis and evaluation of a focused array of Study alternatives. This enables the Army Corps to use available and targeted data to reduce study risk.

Progress to Date

The feasibility study process involves extensive collaboration among federal agencies, local governments and key stakeholders, including the study's sponsor, which in this case, is the City of Long Beach. To kickoff this Study, the Army Corps held two public scoping meetings in Long Beach and collected stakeholder comments on the Study's purpose. The public scoping meetings were followed by one 3-hour interactive stakeholder workshop. Over the course of these three meetings, feedback was received from stakeholders ranging from the community to industry. To date, the project is on schedule and on budget.

While it is still too soon in the Study to know what the viable project alternatives are, a number of notable benchmarks were achieved as a part of reaching the Study's first milestone. These include:

Agreed upon Study measures. Following the initial public scoping meetings, the Army Corps held one 3-hour interactive stakeholder workshop for the purpose of collecting "measures" to evaluate as part of the feasibility study; "measures" are individual restoration components such as the creation of rocky reef habitat and potential alterations of the breakwater. Over 200 distinct measures were collected and compiled from various public, industry and federal partner agencies going back to 2009 and cumulating with recent meetings and written public comments this year. The Army Corps evaluated all 200 measures, and identified 15 measures that align with the Study's purpose, are effective, efficient, and acceptable. These 15 measures will be used to develop potential Study alternatives after a series of modeling techniques to determine viability based on location, magnitude, costs and other factors. Viable alternatives will be evaluated based on a Cost Effectiveness and Incremental Coast Analysis (CE/ICA) model to identify the combination of measures that provides the greatest ecosystem restoration benefit for the least amount of money and potential ancillary impacts, while remaining acceptable to the City and stakeholders. The CE/ICA model is currently being developed and certified by the Army Corps for this Study.

Initial modeling tools. The Army Corps, City of Long Beach (City) and Port of Long Beach (Port) have agreed to use new and developing information that is being gleaned from the Army Corps' current Port Navigation Study. Specifically, existing models developed by the Port for implementing the Water Resources Action Plan (WRAP) are being modified for use with the current study. These models, which are based on Environmental Fluid Dynamics Code (EFDC), include more than ten years of water and sediment data collection and several years of biological data from the Port of Long Beach/Port of Los Angeles Biological Assessments and provide a solid framework for evaluating changes within East San Pedro Bay. Whereas, some feasibility studies use generic modeling tools, the EFDC and WRAP models will enable the Army Corps and the City to evaluate proposed changes in the East San Pedro Bay Ecosystem Restoration Study using information specific to the East San Pedro Bay. These changes could include alterations to the Federal breakwater or to the channel bathymetry, both of which may improve water circulation.

Breakwater modifications discussion. While no one breakwater modification alternative has been selected, the Army Corps and the City agreed to use modeling tools that are available to evaluate a wide range of reconfiguration alternatives. The Army Corps had originally proposed to evaluate only three breakwater reconfiguration options: (1) the lowering of the full length of the Long Beach Breakwater; (2) lowering 1/3 of the eastern Long Beach Breakwater; or (3) no reconfiguration at all. The City's opinion is that limiting reconfiguration alternatives to only these three options would be too restrictive. As a result, the Army Corps agreed to widen the range of reconfiguration options that will be modeled as a part of the Alternative Formulation and Analysis portion of the Study. This will provide the Army Corps and the City with the highest probability for identifying a viable breakwater reconfiguration option that will improve water circulation sufficient to

support and sustain aquatic habitat within the East San Pedro Bay during the period of Study evaluation.

Bottom contouring discussion. The City and the Army Corps are evaluating several options for dredging new channels or modifying existing shipping channel depths/widths in a configuration that would allow for greater water exchange into East San Pedro Bay. This is important as having improved water circulation will be a benefit to the East San Pedro Bay, and the City deems it important to evaluate all responsible options for achieving this objective. Previous modeling work conducted during the WRAP development process suggested that deep water currents may be more important conduits for water movement than surface waves.

Goods movement considerations. Since the Port serves deep draft navigation, the Army Corps evaluated the potential for conflicts between ecosystem restoration in the East San Pedro Bay, and business continuity at the Port. Based on a survey of existing Port operations and proposed Port projects known to the Army Corps, it was determined there would be no conflicts. Furthermore, no restoration actions are anticipated west of the entrance to Pier J, thereby avoiding conflicts with navigation and Port development. Modification of the west end of the Long Beach Breakwater was also excluded from alternative development to ensure there are no conflicts with navigation as a result of changes in wave conditions in the main navigation channels and anchorage areas.

Beach erosion and sediment transport. Pending the completion of the WRAP model, the Army Corps will quantitatively model sediment transport in the project area. Longshore transport and wave diffraction by the Long Beach Breakwater will become important considerations as alternatives are developed. Quantitative modeling will be used to assess the impact of sediment transport on habitat and ecosystem function. Similarly, modeling will be used to evaluate potential impacts to beach residents within the City, particularly those located on Peninsula Beach.

Water quality value. The Army Corps and the City have had several lengthy discussions about pollutants that could impact the aquatic health of the East San Pedro Bay. It has been agreed that the Los Angeles and San Gabriel Rivers are the major contributors of waterborne contaminants discharged to the Study area.

Los Angeles River Ecosystem Restoration Study. The City and the Army Corps considered how the City of Los Angeles' LA River Revitalization Plan could help with accelerating and augmenting ecosystem restoration efforts in the East San Pedro Bay. Discussions concluded with a recognition that there are 13 cities between the downstream terminus of the LA River Revitalization Plan and the East San Pedro Bay Ecosystem Restoration Study area. Consequently, there is not a direct relationship between LA River Revitalization Plan and the East San Pedro Bay effort.

Naval Weapons Station Seal Beach, Joint Land Use Study. The cities of Long Beach and Seal Beach have co-sponsored a joint land use study of the Naval

Weapons Station Seal Beach. Long Beach's primary objective in this study is to collect information about the Navy's use of the explosives anchorage on the east end of the Long Beach Breakwater. The explosives anchorage is a major constraint with respect to the East San Pedro Bay Ecosystem Restoration Study. In 2008 and 2010, the Navy sent letters to the City regarding the explosive anchorage. The 2008 letter notes:

> "Although the Navy's presence in Long Beach has decreased substantially since the late 1980's, the Seal Beach Naval Weapons Station still actively uses an explosives anchorage protected by the eastern portion of the [Long Beach] breakwater. The anchorage is used for ordinance operations involving ships that either exceed the net explosives weight capacity of the station's wharf, or are too large to enter Anaheim Bay. The breakwater helps moderate sea state conditions, and changes to the breakwater could limit the Navy's ability to use the anchorage... The explosives anchorage is a national asset, and is the only operational one of its type of the West Coast or in Hawaii."

The 2010 letter notes:

> "The Navy also has concerns about the effects of any breakwater reconfiguration on sediment transfer rates in and around Anaheim Bay. A $10 million dredging project is currently underway to ensure that the weapons station can continue to carry out its mission. With the continually rising costs and regulatory hurdles associated with dredging operations, any action with the potential to increase sediment transfer could have profound effects on the long-term sustainability of the base's mission."

It is the City's intention to use the Joint Land Use Study framework as a formal means of communicating and collaborating with the Navy to identify breakwater reconfiguration options that may be potentially suitable to the U.S. Department of Defense. The City of Seal Beach is the administrative lead on the Joint Land Use Study, and along with the City of Long Beach, conducted interviews in September 2016 to select a consultant to assist with managing the effort. It is expected that an award will be made in October 2016, and the Joint Land Use Study will commence from that point forward.

Ecosystem restoration success rate. The City and the Army Corps engaged in an in-depth discussion on achievable ecosystem restoration plan elements to increase the opportunities for a successful project. The idea is to choose habitat restoration types that already exist in the East San Pedro Bay in limited quantities and support the growth of these elements (i.e., kelp and rocky reef habitat). Army Corps Headquarters staff directed Los Angeles District staff to define success in terms of thresholds/targets for measures being considered in plan formulation, based on

ecological significance, scarcity, bio-diversity, or other measures of resource values, along with acreage or other measures of quantity of outputs, or a combination of some or all of these considerations. This is intended to help guide model development, as well as alternative evaluation and selection, as these factors provide the basis for comparing plan alternatives to the project objective.

While the Army Corps has a robust planning process they must follow, City staff have been present and intimately involved with nearly all project discussions. The primary purpose for the City's involvement is to provide comments and feedback into the Army Corps' process so that it continues to focus on Long Beach's interest in ecosystem restoration, and the potential for a responsible reconfiguration of the Long Beach Breakwater.

Next Steps

A public meeting will be held on October 26, 2016 from 6:00-7:30 pm at the Bixby Park Community Center to provide our community, local businesses and other interested parties with an update on the Army Corps' progress through the Alternatives Milestone.

Meeting the Alternatives Milestone in September 2016 enables the City and the Army Corps to move into the Tentatively Selected Plan (TSP) phase and begin identifying viable project alternatives. Over the course of the next 12-14 months, potential alternatives will be developed using various combinations and iterations of the agreed upon measures. Each alternative will be evaluated using the CE/ICA model. The TSP milestone will be reached when Army Corps Headquarters approves of a draft feasibility study report, which will include a summary evaluation of the final array of alternatives and rationale for the TSP selection.

Following the TSP milestone, the Study will move into a feasibility level analysis phase, after which the study advances to the Chief's Report phase. Only projects with a signed Chief's Report may be submitted to Congress as a viable Army Corps project.

If you have any questions, please contact Diana Tang, Manager of Government Affairs, at 562-570-6506.

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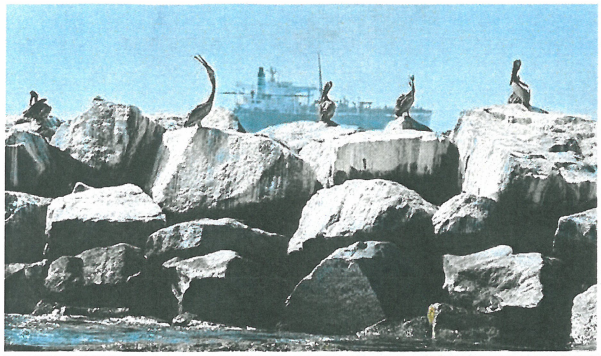

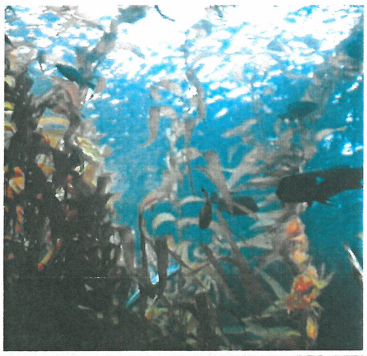

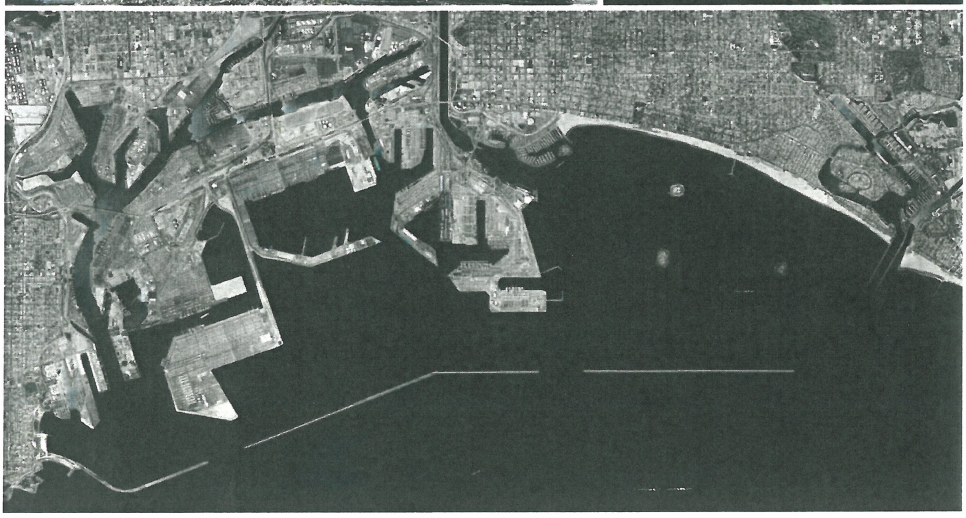

COMMUNITY UPDATE

EAST SAN PEDRO BAY ECOSYSTEM RESTORATION FEASIBILITY STUDY

Please join us for a brief update from the U.S. Army Corps of Engineers and the City of Long Beach on the status of the East San Pedro Bay Ecosystem Restoration Feasibility Study. The U.S. Army Corps of Engineers will present the current state of the feasibility study as well as next steps to complete the feasibility report.

This meeting will be held at:

Date:	Wednesday, October 26th, 2016
Time:	6:00 pm - 7:30 pm
Location:	Bixby Park Community Center 130 Cherry Avenue Long Beach, CA 90802

Please Join Us!

Free and open to the public!

An update from the U.S. Army Corps of Engineers on the status of the East San Pedro Bay Ecosystem Restoration Feasibility Study.

Wednesday, October 26th, 2016

6:00 p.m. - 7:30 p.m.

Bixby Park Community Center
130 Cherry Avenue
Long Beach, CA
90802

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CITY OF LONG BEACH

TIDELANDS
CAPITAL IMPROVEMENT PROJECT