

# CITY OF SANTA BARBARA WATERFRONT DEPARTMENT

## MEMORANDUM

**Date:** January 21, 2010  
**To:** Harbor Commission  
**From:** John N. Bridley, Waterfront Director  
**Subject:** **Facilities Management Report**

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### **Federal Channel Dredging**

AIS Construction Company continues to make good progress dredging the Federal Channel. With AIS's regular dredge, *La Encina*, conducting dredging in Morro Bay, their smaller dredge, *Corrin*, has removed approximately 50,000 c.m. to date. The *Corrin*'s production is about half of what the *La Encina* can dredge, but with the recent mild weather and series of swells passing by Santa Barbara Harbor with very little additional deposition of sediment, the current dredging is almost complete. Although the contract allows for 120,000 c.m. of sand removal, conditions have been mild with less than average longshore sediment transport and deposition in the harbor. Dredging must be completed by January 25 and the Corps expects a total of approximately 70,000 c.m. removed during this cycle. The Corps has secured \$1.54 million for dredging in Santa Barbara Harbor this year with spring cycle dredging tentatively scheduled to commence the end of February.

### **West Beach Sand Management**

The Santa Barbara County Parks Department (County Parks) secured approximately \$1.6 million in FEMA funds to conduct beach nourishment operations at Goleta Beach. West Beach has been identified as the source of sand for the proposed Goleta Beach nourishment. The joint powers agency, Beach Erosion Authority for Clean Oceans and Nourishment (BEACON), conducted a similar operation in 2003 using a hopper dredge to move approximately 60,000 c.y. as well as trucking an additional 18,000 c.y. of sand to replenish the eroding beach. County Parks and BEACON have developed a similar project for this winter.

Pre-frontal southeasterly wind and waves reverse the typical west to east nearshore currents transporting sand "upcoast" and depositing it at West Beach within the wave shadow of the harbor. Once sand is deposited at West Beach, there is no natural process for eroding the beach and transporting the sand back downcoast towards Montecito and Carpinteria. Coastal scientists have estimated as much as 7% of the total volume of sand dredged by the Corps of Engineers (Corps) has been deposited at West Beach. The Corps only dredges sand from the Federal Channel and any sand deposited on West Beach must be removed mechanically by other funding sources.

The Waterfront developed a Sediment Management Plan (SMP) for the City's beaches from Leadbetter Point to the Clark Estate in 1999. The SMP identified preferred beach contours for West Beach emphasizing the need to maintain a quiet water area just outside the harbor to accommodate junior sailing programs as well as other boating activities preferring protected waters.

A bid package was prepared by County Parks identifying approximately 18,000 c.y. of sand to be excavated from the inter-tidal area of West Beach and trucked to Goleta Beach. In addition, approximately 40,000 c.y. of sand is proposed to be dredged from the sub-tidal areas off West Beach north of the Federal Channel. The dredged material will be pumped into vessels capable of transporting the material to Goleta Beach (scow, barge, or hopper dredge) and then pumped onto the beach once they reach that destination. Bids are due on January 25 with construction tentatively scheduled to begin by February 24. The project will take approximately three weeks to complete.

### **Stearns Wharf Annual Pile Driving and City Pier Structural Upgrades**

Annual inspections of Stearns Wharf identified fewer than normal necessary structural upgrades such as pile replacement, new pile caps, stringers, and deck boards. Eight piles are scheduled to be replaced which is about 20 fewer than average along with 100' of pile caps, 10 stringers, and 300 deck boards. The past winter was relatively mild and damage to Stearns Wharf requiring replacement of key structural components is minimal. Staff keeps an inventory of heavy timber that is normally replaced annually but with a very limited scope of work will suffice to make the necessary repairs. This is the second year in a row with limited work required to maintain Stearns Wharf structural integrity thus allowing for upgrades to the City Pier.

Last summer the Waterfront received an unsolicited proposal to conduct a squid offloading operation on the City Pier. The proposed machinery is very heavy bringing in to question the load bearing capacity of the pier. Penfield & Smith Engineers conducted an evaluation of the City Pier structure and concluded that the load bearing capacity of the pier was inadequate to support the squid offloading machinery. Although the evaluation confirmed that typical City Pier operations such as offloading urchins are adequately supported by the structure, heavier loads such as fire trucks and cranes frequently used to load research and commercial vessels are not safely supported. Therefore, staff proposes to increase the City Pier's load bearing capacity by adding stringers to each bent to safely support these infrequent but necessary loads.

Staff is preparing a bid package with the combined Stearns Wharf pile driving and City Pier structural upgrades. Bids are expected to open the middle of February with construction tentatively scheduled during the month of March. Spring construction allows the contractor to include additional work as necessary due to winter storms. This project is included in the Capital Improvement Program for \$300,000.

Prepared by: Karl Treiberg, Waterfront Facilities Manager