CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation
September 10 - 11, 2008

CALIFORNIA SEAFLOOR MAPPING PROGRAM

Developed By: Sheila Semans

RECOMMENDED ACTION: Consideration and possible modification of the Council's prior resolution of October 25, 2007, by authorizing the expenditure of an additional $7,500,000 for the continued implementation of the California Seafloor Mapping Program, involving data acquisition and processing for nearshore and offshore substrate and marine habitat mapping.

LOCATION: *Statewide*

STRATEGIC PLAN OBJECTIVE: Research and Monitoring

EXHIBITS

Exhibit 1: October 2007 staff recommendation

Exhibit 2: NOAA-SCC MOU

Exhibit 3: Map showing 2008 data collection progress in Southern CA

Exhibit 4: Map of the seafloor around Catalina Island

RESOLUTION

Staff recommends that the Ocean Protection Council adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

"The Ocean Protection Council (Council) hereby modifies its October 25, 2007 authorization and authorizes the expenditure of up to an additional $7,500,000 (seven million five hundred thousand dollars) for the continued implementation of the California Seafloor Mapping Program (Program), involving data acquisition and processing for nearshore and offshore substrate and marine habitat mapping.

Prior to disbursement of any funds under this authorization, any public agency or contractor retained to carry out Program work shall submit for the review and approval of the Secretary to the Council:

1. A work plan, including schedule and budget.

2. The names of any subcontractors to be retained.

3. Evidence that all permits and approvals necessary to undertake the Program work have been obtained."

Staff further recommends that the Council adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the Council hereby finds that:

1. The proposed project remains consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act.
2. The proposed project remains consistent with the Ocean Protection Council's project selection guidelines."

PROJECT SUMMARY

At its October 25, 2007 meeting, the Ocean Protection Council (OPC) authorized the provision of up to $15,000,000 for the implementation of the California Seafloor Mapping Program (CSMP) to map seafloor substrates, marine habitat types, and bathymetry (Exhibit 1). At that meeting, however, the OPC authorized the expenditure of only the initial $7,500,000. It was anticipated that the expenditure of the remaining balance would be subsequently authorized, upon a future appropriation to the Conservancy from the "Safe Drinking Waters, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006" (Proposition 84) for purposes of the Ocean Protection Council. Staff now recommends that the OPC authorize the expenditure of the additional balance of up to $7,500,000 for the continued planning and implementation of the CSMP. Since the 2008-09 budget has not been adopted and since there are sufficient funds remaining from the fiscal year 2007-08 appropriation from Proposition 84 for purposes of the OPC, staff further recommends that these funds be used for the proposed additional expenditure of $7,500,000. Upon passage of the 2008-09 State budget, some or all of the funding for the Program may come from the 2008-09 appropriation of Proposition 84 funds for OPC purposes.

As intended in the initial authorization, over the past year the Coastal Conservancy, on behalf of the OPC, has entered into agreements with:

1) The National Oceanic and Atmospheric Administration (NOAA) for seafloor mapping data collection, data archiving and survey vessel support. SCC has entered into a Memorandum of Understanding (MOU) with the National Ocean Service (Exhibit 2), and NOAA has issued a work order to begin data collection for the CSMP. Fugro Pelagos, Inc (FPI) has surveyed all unmapped areas along the mainland in the southern California, and begun data collection around the Channel Islands. FPI has now sent their boats to the far north to complete data collection when the sea states are most compliant.

2) The Foundation of California State University Monterey Bay (FCSUMB) for data collection, data management, and product development. CSUMB has purchased new survey equipment, begun mapping the unmapped central coast marine protected areas, and has worked through initial CSMP data storage and management issues. Through additional funding from the Resources Legacy Fund Foundation and SCC, CSUMB also mapped Catalina Island in July to assure this data would be included in the MLPA discussions in the fall.

3) The United States Geological Survey (USGS), Coastal and Marine Geology Program, for data collection and ground-truthing. The USGS has continued bathymetry and seismic-reflection surveys along the Santa Barbara Channel, leveraging CSMP funds with a grant from Minerals Management Service to collect data past the 3 mile limit. The USGS has also begun surveys in northern Monterey Bay.

Work proceeding under all contracts has initially been directed to support the Marine Life Protection Act Initiative in southern California (Exhibit 3). Data products are currently being delivered to the Department of Fish and Game staff for that effort. This authorization would provided funds to continue the CSMP work envisioned in these contracts and described in more detail in the original staff recommendation (Exhibit 1).

However, a number of challenges have arisen since the first CSMP authorization. Fuel costs have risen substantially in the past year, adding roughly $1 million to the data collection budget. Also, funds originally awarded under the Coastal Impact Assistance Program for final map production have been reduce by 30%, creating a larger funding gap for that effort. The budget is currently being re-evaluated in consultation with our federal partners, and priorities reset.

Difficulty negotiating numerous contract details with NOAA substantially delayed the start of data collection this spring. Data was collected by FPI in Southern CA at their own risk, and was later purchased by NOAA once the contract was awarded. Lastly, both FPI and CSUMB survey teams are employing the latest sonar technology for the CSMP, and numerous problems with the equipment had to be worked out with the manufacturer once in the field. Now fully operational, the data quality resulting from these surveys is outstanding (Exhibit 4).

At this time, the CSMP budget supports mapping for the entire mainland coast, the Channel Islands and Catalina Island (excluding the very nearshore). Funding is not currently available for data collection around the remaining southern California islands: San Clemente, San Nicholas, and Santa Barbara. The following table provides a generalized budget for CSMP, and includes the funds being contributed by other agencies.

Task	**Revised Estimate**	**Committed as of August 2008 (including in-kind contributions)**
Mapping (3nm-10m)	$19,000,000	$16,500,000
Ground truthing	$4,500,000◊	$1,370,000
Seismic Profiling	$4,000,000◊	$200,000
Product Production	$3,500,000	$1,600,000
Data Mgmt and Delivery	*	$400,000
TOTAL	35,000,000	

◊ *Ship time constitutes 68% of the pre-overhead budget, so any donation of vessel support would reduce these estimates.*

* *Actual data management and delivery costs are still being developed.*

Staff has worked continuously in coordination with other agencies, particularly within NOAA, to promote the efforts of the CSMP to raise or leverage additional funds for the remaining unfunded portions of the program. Most notably, this included participation at the federal Interagency Working Group on Ocean and Coastal Mapping (IWG-OCM) strategic planning workshop to help develop the National Ocean and Coastal Mapping Strategic Action Plan. Work with the

IWG-OCM will help identify common mapping needs and coordinated state, federal, industry, academic, and NGO mapping programs and leverage available resource and technology assets. As a result of this collaboration, additional partnerships with the National Marine Fisheries Service, the National Geophysical Data Center, the National Marine Sanctuaries Program, National Parks Service and Minerals Management Service have developed. Discussions are also underway with industry (particularly related to ocean energy projects) and donor organizations about potential support of CSMP efforts. Staff has also worked with organizations in Oregon and Washington to coordinate mapping programs, share lessons learned, and set priorities for the West Coast Governors Agreement on Ocean Health.

Project Description: The CSMP is an ambitious undertaking, and will continue to require participation and collaboration with many other organizations to be successful. This portion of the program will continue the following three project components originally approved under the initial $15,000,000 authorization: 1) seafloor mapping data collection (high-resolution bathymetry and acoustic backscatter) in collaboration with NOAA NOS, including contracting with the private sector; 2) data collection, data management, and product development by the CSUMB Seafloor Mapping Lab through an agreement with the Foundation of California State University Monterey Bay (FCSUMB); and 3) continued data collection, ground-truthing and sub-bottom profiling through an agreement with the USGS. Staff recommends authorization to expend up to $7,500,000 from the 2008/2009 appropriation of Proposition 84.

A full description of the project can be found in Exhibit 1. However, it is important to reiterate that for this phase of the project, hydrographic data collection will focus on vessel surveys from 10 meters water depth (or the depth of safe vessel navigation) to the state 3-mile limit. Data in the nearshore, from MHHW to 10m, is mostly efficiently collected with bathymetric LiDAR collected by aircraft, but past efforts to utilize this technology have not produced acceptable results in California's turbid waters. Because this nearshore zone is one of the most critical for ocean management, acquiring this data set remains a priority for the CSMP. Options will continue to be investigated, and staff will update the Council when a feasible strategy is developed.

SITE DESCRIPTION

Project location includes all unmapped state waters from the mean high tide line out three nautical miles. Hydrographic surveys in this phase of the program will focus on data collection from 10 meters water depth (the depth of safe vessel navigation) to the state 3-mile limit.

PROJECT HISTORY

In October 2007 the OPC approved the overall California Seafloor Mapping Program, authorizing an initial $7.5 million in FY 2007/2008, and authorized its Secretary to place on a future Council consent calendar an item for Council authorization to expend up to an additional $7,500,000 for the Program, if additional Proposition 84 funds were appropriated in a subsequent fiscal year by the Legislature pursuant to Section 75060(g) (Exhibit 1). The requested funds represent the second authorization for the program.

PROJECT FINANCING

Possible Funding Sources:	
Ocean Protection Council	$15,000,000
USGS In-kind Contribution	
Data Collection	$500,000
Ground-truthing	$500,000
NOAA	
Office of Coast Survey*	$9,000,000
National Marine Fisheries Service	$250,000
National Geophysical Data Center◊	$300,000
National Marine Sanctuary In-kind Contribution	$200,000
Resources Agency-Coastal Impact Assistance Plan (*pending*)	$910,000
Total Project Cost	**$26,660,000**

**estimate is based on industry costs for the proposed work. Matching funds are dependant on budget appropriations.*
◊ *NGDC estimates an ongoing contribution of $300,000 per year.*

The anticipated source of OPC funds for the proposed project is from the "Safe Drinking Waters, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006" (Proposition 84). Proposition 84 generally authorizes the use of these funds for the protection of coastal waters. The specific appropriation, pursuant to Public Resources Code Section 75060(g), allows for the expenditure of funds on projects consistent with Public Resources Code Section 35650, establishing the California Ocean Protection Trust Fund. Under Section 35650, Ocean Protection Trust Fund monies may be expended for projects authorized by the OPC that are consistent with Chapter 3 of the Ocean Protection Act (Public Resources Code Sections 35600 *et seq.*). As discussed in the section below, the project is consistent with the Ocean Protection Act. In addition, under section Ocean Protection Trust Fund monies may be expended for grants or direct expenditures on "projects or activities that provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources". That is the exact objective of the proposed Program.

Finally, under Section 75060(g), priority for Proposition 84 funding is to be given to projects, which, like the proposed project, contribute to the development of scientific data needed to adaptively manage the state's marine resources and reserves, including the development of marine habitat maps.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT

The project remains consistent with the Ocean Protection Act (Public Resources Code Sections 35500 *et seq.)*, as detailed in the October 25, 2007 staff recommendation (See Exhibit 1).

CONSISTENCY WITH OPC'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S)

The project remains consistent with the OPC's Five-year Strategic Plan, for the reasons specified in the October 25, 2007 staff recommendation (See Exhibit 1).

CONSISTENCY WITH OPC'S PROJECT SELECTION CRITERIA & GUIDELINES

The proposed project remains consistent with the OPC's Project Funding Guidelines adopted June 14, 2007. (See October 25, 2007 staff recommendation, Exhibit 1).

COMPLIANCE WITH CEQA

The proposed project remains categorically exempt from review under the California Environmental Quality Act (CEQA), pursuant to 14 Cal. Code of Regulations, Section 15306 (data collection, research and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource), as discussed in the October 25, 2007 staff recommendation (Exhibit 1) and has not changed in its nature or scope.