

CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation

February 29, 2008

**California Sea Grant Research to Support Improved Management of
Ocean and Coastal Resources**

File No: 08-017-01

File No: 08-018-01

Project Manager: *Valerie Termini*

RECOMMENDED ACTION: Consideration and possible adoption of 2009 Ocean Protection Council (OPC) Funding Priorities for Sea Grant projects; authorization to disperse up to \$1 million to the University of California Sea Grant and University of Southern California (USC) Sea Grant programs to fund research that directly supports the OPC's strategic plan.

LOCATION: Statewide

STRATEGIC PLAN OBJECTIVE: *Research and Monitoring*

EXHIBITS

Exhibit 1: [California Sea Grant Call for Proposals](#)

Exhibit 2: [USC Sea Grant Call for Proposals](#)

RESOLUTION AND FINDINGS:

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

“The council hereby adopts the 2009 OPC Funding Priorities for Sea Grant projects and approves the disbursement of an amount not to exceed one million dollars (\$1,000,000) to the two California Sea Grant programs, comprised of eight hundred thousand dollars (\$800,000) to the California Sea Grant College Program and two hundred thousand dollars (\$200,000) to the University of Southern California Sea Grant Program, subject to the condition that projects selected through this review process will be presented to the council for final concurrence on the grant awards.”

Staff further recommends that the OPC adopt the following findings:

“Based on the staff report and attached exhibits, the OPC hereby finds that:

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

PROJECT SUMMARY:

OPC staff recommends the disbursement of funds to each of the two California Sea Grant programs to fund research which will inform and improve management decisions affecting the ocean and coastal environment. There are two distinct Sea Grant Programs in California: 1) the California Sea Grant College Program housed within the University of California System (UC Sea Grant) and 2) the University of Southern California Sea Grant Program (USC Sea Grant). Each of these programs focuses on separate issue areas and has distinct roles in the Sea Grant college program. The OPC has a solid relationship with both programs and has worked with each over the past several years to promote research projects that benefit state management needs and help inform policy development at the state level. If these projects are authorized, the OPC will continue these partnerships and disburse the following amounts: 1) \$800,000 to the California Sea Grant College Program, and 2) \$200,000 to the USC Sea Grant Program.

California Sea Grant College Program (UC Sea Grant)

The proposed approach to funding research with the UC Sea Grant program is different this year from past funding cycles. One of the major tasks assigned to the OPC is to improve coordination of the collection and sharing of scientific data related to coastal and ocean resources between scientists and state resource managers. While OPC-funded research projects in past years have resulted in data that can be incorporated into management decisions, staff believes that enhancing these connections during the project development and data collection stages will ultimately result in better products. Thus, this round of proposed funding will support one focused research and outreach initiative. The initiative team will be comprised of researchers from diverse scientific backgrounds, who together can examine all facets of an issue, including how state managers can apply their findings to improve decision making. For example, a team who takes on the issues of climate change and ocean acidification could examine potential biological impacts but also elucidate secondary economic effects of changes to the marine ecosystem.

As the request for proposals dictates (exhibit A), proposed initiatives will only be considered for funding if they are comprised of a multidisciplinary research team that also must include a state resource manager or scientist. Teams will also be required to:

- Synthesize the current state of the knowledge on their research topic into a series of policy papers;
- Produce applied tools or products (such as useful indicators or predicative models); and
- Disseminate their results to policy makers and other interested communities.

Proposed Priorities for the UC Sea Grant College Program

Climate Change and Ocean Acidification – Proposals focused on climate change and ocean

acidification should improve the state's understanding of the impacts of climate change and ocean acidification on California's ocean and coastal ecosystems with a particular focus on biological resources. Research should lead to the development of products, tools, and recommendations designed to allow the state to adapt management practices to address anticipated climate change impacts.

Harmful Algal Blooms (HABs) – Proposals focused on HABs should generate information that will help coordinate existing efforts and methodologies to advance California's capabilities to predict and monitor such events. The chosen initiative should advance the understanding of the factors, including anthropogenic and natural drivers, which influence HABs. It should lead to the development of a HAB information network, (e.g. data sharing protocols) – coordinated with existing or planned observing systems – that will improve California's predictive capabilities for HAB events.

Invasive Species – Proposals focused on invasive species should provide information that will enable more strategic and effective prevention, detection, and early intervention strategies to deal with this threat. Examples of potential approaches include: quantifying the risks posed by all vectors of marine and estuarine invasive species; developing statewide invasive species detection protocols; and improving the state's capacity to respond to, eradicate, and control invasive species once they have been detected. It will be left to the applicant to decide whether to focus on a specific group of high impact invasive species or all possible invasive species within a particular region.

Water Quality – Proposals focused on water quality will focus on developing a transparent and scientifically-valid basis for pollutant standards, water quality indicators, improved predictive models that include field verification of Total Maximum Daily Loads (TMDLs) and watershed functioning, and/or pollutant origin and dynamics.

Wave and Tidal Energy Development – Proposals focused on wave and tidal energy development issues will assess the potential ecological and economic impacts of wave and tidal energy development in California; identify and assess the effectiveness of methods to reduce or eliminate harmful effects; and develop indicators that can inform development and monitoring plans.

The USC Sea Grant Program

Given the smaller scale of the USC program implementing a similar approach of a single, large-scale initiative is not possible with the two hundred thousand dollars, (\$200,000). Therefore, funding for the USC program will be allocated the same way as it has in past years. Proposals will still, however, be required to illustrate a strong connection to management by specifying outreach mechanisms to integrate results with state management needs.

Proposed Priorities for the USC Sea Grant College Program

The USC program focus is on urban water quality. The proposed OPC priorities build from this, requesting projects that provide a better understanding of scientifically-based pollutant standards, water quality indicators, TMDLs, watershed functioning, and/or pollutant origin and dynamics. Please see exhibit B for the complete request for proposals for the USC Sea Grant Program.

Prior Release of 2009 Research Priorities

A partnership with the Sea Grant programs is beneficial to the OPC because the call for proposals, proposal submissions, and the review process happen concurrently with the yearly awards made by the programs. To match the timeline for the two Sea Grant programs, the proposed priority areas for both were released in advance of this OPC meeting. This was necessary to allow applicants sufficient time to prepare proposals and still meet application deadlines. The Request For Proposals (RFPs) (exhibits A and B) note that changes to the priorities could be made at the February OPC meeting. If this happens, staff will post a final, revised list of priority areas immediately following today's meeting.

Proposal Review Process for both programs

Proposals will undergo the same review process as all other California Sea Grant proposal submissions, including review by the Resources Agency Sea Grant Advisory Panel (RASGAP), which will review proposals for OPC priorities. OPC staff will be involved in all stages of the review process, including the technical review and final decision-making. At its discretion, the OPC may request additional review by likely user groups of the research findings or suggest coordination of complimentary proposals. Projects selected through this process will be brought back to the council for concurrence at the Fall 2008 meeting.

Each Sea Grant program will provide all post-award grant administration, including reporting and financial accounting on the grants chosen for funding.

PROJECT GRANTEE:

The two Sea Grant programs are natural partners for this endeavor because they have an established, well-respected process for evaluating, prioritizing, and administering research grants related to coastal and ocean resources. Nationally, the Sea Grant College Network consists of 30 university-based programs funded primarily by the National Oceanic and Atmospheric Administration (NOAA) and dedicated to the understanding, conservation and sustainable use of coastal and marine resources. The California Sea Grant College Program is the largest of the 30 Sea Grant programs, and works along the entire state's coastline and coastal watersheds. It is administered by the University of California and is based at Scripps Institution of Oceanography in San Diego. The University of Southern California Sea Grant Program focuses primarily on the state's southern coastal metropolitan region, with particular emphasis on topics related to the interface between urban areas and the ocean.

The two programs review projects and administer grant awards according to the same national standard; the programs' annual solicitation and review happens concurrently with the proposed OPC process, therefore resulting in minimal extra effort and low overhead costs. Sea Grant's credible review process and compatible mission makes it an obvious partner to review and select research projects that address the priorities of the council.

PROJECT HISTORY:

For the past two years, the OPC has approved grants of \$1 million per year to the state's two Sea Grant programs. Due to the shared priorities and the existing relationship between Sea Grant and the council, coordinating OPC research projects with the Sea Grant review process is practical and cost effective. An additional benefit of continuing this partnership for a third cycle of research grants is the ability to collaboratively tackle issues deemed a priority for the OPC and Sea Grant. This is particularly critical as Sea Grant works with the states of California, Oregon, and Washington in developing a regional research plan to support the West Coast Governors' Agreement on Ocean Health.

The proposed project also benefits from an existing relationship between the Resources Agency and Sea Grant. RASGAP was formed through legislation to give the state a role in the review of scientific proposals submitted to Sea Grant. RASGAP reviews project proposals to determine their benefit to the management of the state's ocean and coastal resources. RASGAP is chaired by the Assistant Secretary for Ocean and Coastal Policy and consists of representatives from state government, the state legislature, state universities, and industries related to the ocean and coastal environment.

PROJECT FINANCING:

Ocean Protection Council to California Sea Grant College Program	\$800,000
Ocean Protection Council to USC Sea Grant Program	<u>\$200,000</u>
Total Project Cost	\$1,000,000

Staff anticipates using \$1 million of the OPC's tidelands oil funds, appropriated to the Secretary of the Resources Agency in the FY 04/05 budget for projects authorized pursuant to the California Ocean Protection Act. The Resources Agency has entered into an interagency agreement with the Coastal Conservancy to administer these funds on behalf of the OPC and recommend projects for funding.

OPC research proposals funded through this partnership require a 50 percent match. In addition, the agreements with the Sea Grant program will place a cap of 25 percent on university overhead for proposed projects.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

The project is consistent with Division 26.5 of the Public Resources Code, the California Ocean Protection Act (COPA), which allows the OPC to fund research to gather data in order to improve management of coastal waters and ocean ecosystems. Specifically, Section 35650 (b)(2)(F) authorizes the OPC to give grants to projects that will, among other things, "provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources."

Research funded through the Sea Grant programs will meet these directives because the projects chosen will directly focus on collecting and disseminating information that will inform current data gaps for managers.

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

The proposed project is consistent with the OPC's Five-Year Strategic Plan by furthering Section II-B, Research and Monitoring, Objective 1: Improve scientific understanding of our ocean and coastal ecosystems. Section B Objective 1b in Appendix A, specifically states that OPC staff shall "work with the California Sea Grant Programs to review and award grants that meet the OPC guidelines and priorities." By working with the two Sea Grant programs, the OPC fulfills this section of its strategic plan and furthers scientific understanding of ocean and coastal management that has the potential to improve management of the state's ocean and coastal resources. The proposed project has been designed explicitly to meet this objective by creating research priorities that address the needs of the state and that are of a priority to the OPC.

CONSISTENCY WITH OPC'S PROJECT SELECTION CRITERIA & FUNDING GUIDELINES:

The proposed project is consistent with the OPC's Project Funding Guidelines adopted June 14, 2007 in the following respects:

Funding Priorities:

1. **Develop practical approaches to implementing ecosystem-based management:** Sea Grant's approach to selecting research projects will encourage scientists to consider all factors which play a role with respect to that particular issue, thereby fostering ecosystem-based management. For example, if a research team is investigating an invasive species in California, they might look at what factors influence the transport of the species into particular areas, distribution throughout the California current, what role climate change plays in further exacerbating the distribution and occurrence of invasions, and the economic impacts of these events. Researchers can then develop holistic approaches for management based on findings devised from this ecosystem-based approach.
2. **Improve the scientific understanding of our ocean resources:** All research projects chosen will examine components of California's coastal and marine ecosystems. The results from these projects will be published in journals and communicated to policy makers, thereby increasing understanding within both the academic and resource manager communities.
3. **Improve ocean and coastal water quality:** Depending on which projects are selected for funding, the sponsored research could focus exclusively on improving our general knowledge of water quality and providing specific solutions to current water quality problems in California.
4. **Promote ocean and coastal awareness and stewardship:** Supporting the two California Sea Grant programs creates avenues for scientists to reach the public with their findings. The selected research teams will work on issues with existing knowledge gaps so that

research will directly benefit the state in a meaningful way. Through outreach and dissemination of research findings, the Sea Grant program will help inform and educate California residents about issues that directly affect them and their children.

Required Criteria

- 1. Directly relate to the ocean and coast:** Projects selected for funding must fit within the proposed priorities. These are climate change and ocean acidification, harmful algal blooms, invasive species, water quality, and wave and tidal energy development. Greater understanding of any one of these areas will improve understanding of ocean and coastal resources and may lead to improved resource management.
- 2. Support of the public:** The Sea Grant program has public support because the funded research will lead to improved management decisions affecting our ocean and coastal environment. A healthy a thriving ocean and coastal environment are important drivers for a healthy economy of California. By increasing our knowledge and figuring out solutions to these problems will make a difference for the Californians who rely on a healthy ocean and coast for employment.
- 3. Greater-than-local interest:** The Sea Grant program is of statewide interest because funded research will ultimately lead to a better understanding of our ocean and coastal ecosystems. Projects will also be conducted on a statewide scale, or the findings will have statewide implications.

Additional Criteria

- 1. Leverage:** The chosen researchers will be required to provide 50 percent matching funds to support these projects.
- 2. Innovation:** Addressing research and management challenges will require *coordinated, long-term, interdisciplinary research efforts* across the state. By design, OPC research projects are innovative because they require researchers to directly link their work to management issues. In particular, it is the first time that Sea Grant will fund a coordinated initiative team that requires scientists to organize themselves, bring a resource manager/scientist into the project from the beginning, and synthesize existing and new data into reports that policymakers can understand.
- 3. Coordination:** The Sea Grant program is a unique collaboration between the University of California, University of Southern California, the national Sea Grant College Network, the State Resources Agency, the OPC and other state resource managers. The Sea Grant program allows the OPC to play a critical role in building bridges between scientific research, responsive policy development, and public education. Links are necessary between university natural and social scientists, state resource managers and policy

makers to ensure that research informs long-term policies that lead to the recovery and sustainability of the state's coastal resources. The Sea Grant programs work closely with the grantees throughout the project. This allows the selected researchers access to Sea Grant outreach mechanisms as well as the Sea Grant Advisor network throughout the state. In addition, the UC Sea Grant initiative will promote coordination between the academic community and the state resource departments who are part of the initiative.

COMPLIANCE WITH CEQA

The proposed project is categorically exempt from review under the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 15306 because the project involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval by the OPC.