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NEW Focused Research and Outreach Initiative Priorities Ocean Protection Council and California Sea Grant College Program

This document provides guidance to research teams preparing research proposals to submit to California Sea Grant College Program for possible funding by the California Ocean Protection Council (OPC). This grant to the California Sea Grant program is part of the continuing grants made annually by the OPC for management-oriented coastal and ocean research.ⁱ

Background

The California Ocean Protection Council (OPC) was established to improve the management and protection of ocean and coastal resources and ecosystems. One of the many ways the OPC achieves this purpose is by supporting innovative research that directly informs and improves the stewardship of ocean resources through a partnership with the two California Sea Grant programs. At its public meeting on February 29, 2008, the OPC will consider furthering this partnership by authorizing a third round of scientific research which will address current OPC priorities. Pending approval, the OPC may disburse up to \$1,000,000 to the California Sea Grant College and University of Southern California (USC) Sea Grant programs. These priorities pertain only to the California Sea Grant College Program; details of the USC Sea Grant allocation are available through the USC Sea Grant Program.

This round of funding addresses priority issues derived from the OPC five-year strategic plan *A Vision for Our Ocean and Coast*;¹ the OPC FY2007/2008 Funding Priorities;² and the California Ocean and Coastal Information, Research, and Outreach Strategy.³

Proposed Priority Issues (not in priority order)

The following are proposed priority issues for consideration and possible adoption at the February 29, 2008 OPC meeting. These proposed priority issues are being released in advance of the meeting to provide sufficient time for research proposal preparation. However, this list of priority areas is subject to change, and a final list of priority issues will be posted immediately following the February meeting if funding is approved.

- Climate Change and Ocean Acidification
- Harmful Algal Blooms (HABs)
- Invasive Species
- Water Quality
- Wave and Tidal Energy Development

See priority issues descriptions below.

NEW Focused Research and Outreach Initiatives

California's coastal environment is facing an increasing number of pressing environmental challenges. Experts agree that addressing these challenges will require coordinated, long-term,

ⁱ The proposed disbursement will be made to the Sea Grant programs (\$200,000 to USC Sea Grant Program and \$800,000 to California Sea Grant College Program) as a directed project pursuant to the OPC Funding Guidelines updated on June 14, 2007.

interdisciplinary research efforts across the state. Accordingly, the OPC seeks to develop a new approach to support interdisciplinary research and education.

For the first time, pending OPC approval, the California Sea Grant College Program will allocate \$600,000 (not including up to 3 years of funding for 2 trainees) of OPC funding to a single research, application, and outreach initiative in an area relevant to state resource management needs (see description of priority issues below). This amount will be disbursed over a 3 year period to one team of several researchers and manager(s).

Initiatives are envisioned as coherent and well-coordinated programs of applied interdisciplinary research and training focusing on one important priority issue. Each proposal should describe a coordinated program of research, application, and training that will enable real-world improvements in how California addresses a key challenge to ocean health and sustainability.

By supporting a single initiative team comprised of multidisciplinary researchers, the OPC hopes to comprehensively address challenging issues and ensure that new data and ideas are incorporated into management. By examining a single issue from a multidisciplinary perspective and by directly linking the research to managers' needs and uses, the initiative should produce effective and applied outcomes.

Initiative Team

The initiative team must consist of a multidisciplinary assemblage of principle investigators (PIs) whose diverse backgrounds serve to benefit the goals of the initiative. The team must include at least one representative of a California resource management agency who should be actively involved early in the proposal development to guide the initiative towards high priority research needs to improve resource management. In addition, each proposal should provide for recruiting at least two Sea Grant Trainees as part of the initiative team. Given the required diversity of participants, the OPC anticipates that proposals may include multiple institutions.

State of Knowledge

The chosen initiative must assess the current state of knowledge. The successful team will be required to write a synthesis of the current state of knowledge and information needs as well as one or more short papers aimed at a broad audience that can be used by managers and others to quickly get up-to-speed on the initiative's focal issue.

Applied Tools and Products

The selected initiative will yield tangible results at the end of 3 years of funding by producing tools and products that will directly improve ocean resource management and establishing mechanisms for ensuring these tools and products reach key user groups. Examples include:

- Identifying useful indicators
- Developing predictive models
- Developing metrics and methods for evaluating the impacts of alternative regulatory choices or management actions

Translation and Integration of Results

The selected initiative will work directly with resource managers to identify needs and deliver results that improve resource management practices. Because translation and dissemination of research results is a critical component of this process, the involvement of one or more Sea Grant advisors or individuals capable of providing an outreach or extension component to the initiative

is recommended. The chosen initiative team will be required to collaborate with California Sea Grant's communication office to further disseminate initiative activities and outcomes.

Priority Issue Descriptions

Climate Change and Ocean Acidification—The initiative 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. It 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)—The initiative should generate information that will help coordinate existing efforts and methodologies to advance California's capabilities to predict and monitor HAB events. The 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—which will improve California's predictive capabilities to HAB events.

Invasive Species—The initiative should provide information that will enable more strategic and effective prevention, detection, and early intervention strategies. Examples of potential approaches include quantifying the risks posed by all vectors of marine and estuarine invasive species; developing state-wide invasive species detection protocols; and improving the state's capacity to respond to, eradicate, and control invasive species once they have been detected. Teams may consider focusing on a specific group of high impact invasive species or all possible invasive species within a particular region.

Water Quality—Teams should focus on developing a transparent and scientifically-valid basis for pollutant standards, water quality indicators, improved predictive models that include field verification of TMDLs and watershed functioning, or pollutant origin and dynamics.

Wave and Tidal Energy Development—An initiative focused on this issue should 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.

OPC Funding Considerations

Proposals requesting OPC funds do not have restrictions on the source of the matching requirement, however, proposals have at least a 50% matching fund requirement. Federal sources and state resource manager salaries will be considered eligible as matching funds.

Research conducted with OPC funds must limit the indirect costs rate to 25% or less.

Review Process

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. The OPC will have staff 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. Before funds are awarded, the OPC will need to provide concurrence on the selected research projects, which will happen in the fall of 2008.

Proposal Submission

In order to submit to this solicitation, you must first contact Russ Moll or Shauna Oh at 858-534-4440 to discuss ideas and intent to submit. Once this has happened, a specific preliminary proposal submission form will be sent to you via email. Do not use the online form.

Proposal Elements

In order to successfully complete an OPC focused research and outreach initiative preliminary proposal, the following five elements must be addressed:

1. Initiative Team

List team members and provide information on the activities to be conducted by each team member. This section should demonstrate how the initiative is designed to effectively merge the unique attributes and knowledge of each PI to reach the initiative goal. The team must include at least one PI who is a California state resource manager or scientist. The team should also include at least 2 Sea Grant trainees.

2. Statement of Problem

Include a problem statement of the particular ocean issue of focus and why knowledge and management of this issue would benefit from a multidisciplinary approach.

3. Project Goals and Objectives

Discuss how the proposed research will advance applied ocean resource management. This should include specific hypotheses to be tested, objectives to be achieved (i.e., product and tool development), and how the objectives relate to OPC priority issue.

4. Intended Approach

Describe the approach to be used and the methodology involved in meeting the stated objectives. The approach must specify which resource managers will be involved in each step as the initiative progresses—from clarifying the problem statement to developing, testing, and disseminating tools and products.

5. Anticipated Results and Who Will Benefit

Identify uses and end users for the proposed data and tools. Describe how the initiative will directly improve the effectiveness of California state agencies in their efforts to manage, protect, conserve, or restore coastal or ocean resources. Each proposal must include one or more letters of support from end users (government or non-government) identifying the anticipated value and use of the project results to the public, research community, and/or state government.

6. Consistency with OPC Goals and Priorities

The proposed research must address the mandatory provisions of California Ocean Protection Act (California Public Resources Code § 35500 et seq.) and be consistent with the actions contained in the OPC five-year strategic plan.

Useful Websites

1. The OPC 5-year strategic plan *A Vision for Our Ocean and Coast*
http://resources.ca.gov/copc/docs/OPC_Strategic_Plan_2006.pdf

2. OPC FY2007/2008 Funding Priorities
http://resources.ca.gov/copc/docs/FinalFundingPriorities2008_amended.pdf

3. California Ocean and Coastal Information, Research, and Outreach Strategy
http://resources.ca.gov/copc/InfoResOut_Strategy_final.pdf