

Ocean Protection Council Science Advisory Team

First Year Accomplishments, July 2009

“The Ocean Protection Council Science Advisory Team has advanced the OPC’s mandate of ensuring that science informs policy decisions. The recently-formed team has already been instrumental in improving the quality of the products and projects we support, thereby ensuring the OPC funds science-based projects that are of the highest priority and quality.” –Secretary for Natural Resources, Mike Chrisman, Chair of the Ocean Protection Council

Introduction

In 2003 and 2004, two influential reports on ocean and coastal management from the [Pew Oceans Commission](#) and the [U.S. Commission on Ocean Policy](#) called for improved application of science to the decision-making process. According to the Pew Oceans Commission, “improving how existing [scientific] information and knowledge is used is the first and most important step to improve the scientific foundation for ocean and coastal management.”¹ The State of California also recognized this need in its 2004 report to Governor Schwarzenegger, “[California’s Ocean Action Strategy](#).”

As a leader in new and creative solutions to ocean and coastal management problems, the [California Ocean Protection Council](#) (OPC) strives to ensure that the best available science is

¹ Pew Oceans Commission. 2003. *America’s living oceans: Charting a course for sea change*. Available at http://www.pewtrusts.org/pd/env_pew_oceans_final_report.pdf.

applied to policy decisions. One of the OPC’s many innovative actions was the establishment of a Science Advisory Team (OPC-SAT) in February 2008. Coordinated by the [California Ocean Science Trust](#) (OST) and co-chaired by the OST’s Executive Director and Dr. Rich Ambrose of the University of California, Los Angeles, the OPC-SAT secures the OPC and California’s place at the forefront of novel approaches to ocean management. Through its highly multidisciplinary [membership](#), the recently-formed OPC-SAT enables the OPC to have the foresight to tackle a diversity of issues – such as ocean acidification, disaster scenario planning, and the environmental effects of wave energy and desalination facilities – as they emerge. Because of its role as a coordinating body for other ocean and coastal management agencies, the OPC – with the support of the OPC-SAT – represents one of the few groups with a built-in mechanism for achieving ecosystem-based management. Finally, as a well-respected, diverse, and independent team of scientists, the OPC-SAT lends credibility to the scientific information the OPC uses to inform and guide its decisions – a valuable factor given the complexity and controversy that often surrounds issues in ocean and coastal management.²

Since the establishment of the OPC-SAT just over a year ago, the OPC, the OST, and OPC-SAT have already made great strides toward advancing the

² Administrative Secretary of GESAMP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection. 2005. *The new GESAMP: Science for Sustainable Oceans: A strategic vision for the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection*. London, IMO. 21 p.

Ocean Protection Council Science Advisory Team

First Year Accomplishments, July 2009

use and application of ocean and coastal science to management. The following provides a brief summary of the OPC-SAT's notable first-year accomplishments and describes how the OPC-SAT has helped improve and ensure the quality of scientific information provided to the OPC.



S. Henkel

Strengthening the Scientific Quality of Projects and Proposals

Providing technical advice on OPC reports, evaluating the technical merit of scientific projects proposed to the OPC, and recommending outside experts to serve as peer reviewers for OPC proposals and projects are fundamental functions of the OPC-SAT. As the OPC continues to expand its programmatic reach and the partners with whom it works, the variety and diversity of scientific projects that come before it increase. Through the peer review process, the OPC-SAT provides the OPC with a tool to ensure that these projects and proposals employ the best and most relevant scientific information; standard approaches and methods

of analysis; the most innovative and applicable techniques available; and the most cost-effective methods available. Additionally, scientific peer review helps guide the allocation of state funds toward projects that will have the greatest impact on improving coastal and ocean management activities. Therefore, both the peer reviews themselves – as well as the process and protocol for conducting peer reviews – have the ability to greatly strengthen the scientific caliber of projects and proposals by guaranteeing the robustness of the scientific process and assuring the quality of the products.

During its first year of operation, members of the OPC-SAT worked with the OST to review and revise the protocol for peer review of OPC projects, proposals, and reports. This revised protocol, which has been used since December 2008, has already strengthened the quality and applicability of peer reviews and assured that the reviews can be used both to guide the timely allocation of OPC funds and strengthen existing research. Additionally, for OPC projects with a scientific component, all peer reviews come from individuals recommended by the OPC-SAT or OPC-SAT members themselves. Thus, as an established, multidisciplinary, and well-connected team of scientists, the OPC-SAT links the OPC to an extensive and diverse network of accomplished scientists who are able to provide the OPC with scientific advice in a timely and cost-effective manner. This broad access to high quality scientific expertise builds the state's scientific capacity and increases the credibility and authority of OPC's products.

Ocean Protection Council Science Advisory Team

First Year Accomplishments, July 2009

The OPC-SAT has provided the OPC with more than 200 recommendations for peer reviewers and advisory committee members, which resulted in the selection of 51 peer reviewers and 15 advisory committee members during its first year. Projects, proposals, and reports for which the OPC-SAT has provided recommendations for peer reviewers and peer reviews include:

- Proposals to conduct risk assessments for six aquatic invasive species vectors
- The OPC report “Developing Wave Energy in Coastal California: Potential Socio-Economic and Environmental Effects”
- Nominations for members of the Expert Advisory Committee for the Oil and Gas Platform Decommissioning Study
- Three toxicological profile reports from the California Office of Environmental Health and Hazard Assessment on Bisphenol A, Nonylphenol, and Di-(2-Exthylhexyl) Phthalate

For these projects, proposals, and reports, the peer review process was an essential tool to the OPC for guiding the selection of proposals that were chosen for funding; strengthening the content of published reports; and informing the composition of an advisory body that has played an essential role in the Oil and Gas Platform Decommissioning Study.

Photo courtesy of NOAA



Developing Innovative Research Priorities

Each year the OPC works with the two California Sea Grant Programs to identify and fund research specifically designed to provide state managers with information to make knowledgeable policy decisions. One such effort, known as the Focused Research and Outreach Initiative, is a coherent and well-coordinated program of applied interdisciplinary research and training focusing on one of the OPC’s identified priority issue areas. Each year, the OPC selects multiple issues of importance to the state, and proposals are sought that address one of these issues.

The research priority issues identified for 2009 addressed the following five areas:

- Climate Change
- Land-Sea Interactions and Water Quality
- Harmful Algal Blooms
- Salmon-Ocean Conditions

Ocean Protection Council Science Advisory Team

First Year Accomplishments, July 2009

- Wave and Tidal Energy

The OPC-SAT worked with the OST and the state to develop and define research priorities for each topic. By so doing, the OPC-SAT helped assure that the proposals received by California Sea Grant were targeted toward robust, high quality science that will inform management and provide managers with new tools and approaches to address these critical issues. This work began at the first in-person meeting of the OPC-SAT in September 2008, where the group developed descriptions of the 2009 research priorities. The OPC-SAT's descriptions of the research priorities were included in California Sea Grant's Call for Proposals, which was released in January 2009. California Sea Grant has received multiple project proposals addressing a range of the identified topics and is currently in the process of reviewing the proposals.



Photo courtesy of NOAA

Identifying Critical Emerging Issues

In order to guarantee that the OPC remains at the forefront of innovative ocean and coastal research, the OPC-SAT is charged with identifying critical emerging science issues that should be of concern to the OPC and the state, as well as recommending potential actions that the OPC could take in relation to these issues. At its September 2008 meeting, the OPC-SAT identified the first set of critical emerging issues that it felt the OPC should consider addressing. Following the meeting, the OST established three working groups to address the following five emerging issues:

- Desalination
- Aquaculture
- Disaster Scenario Planning
- Technological Innovations
- Sedimentation, Sand, and Beach Nourishment

The groups are developing written summaries of the issues that outline the problem, provide rationale for action, and suggest potential actions that the OPC could take in relation to these issues. The OPC-SAT's work on these issues will be used by OPC staff to inform future meeting themes, projects, and workshops.

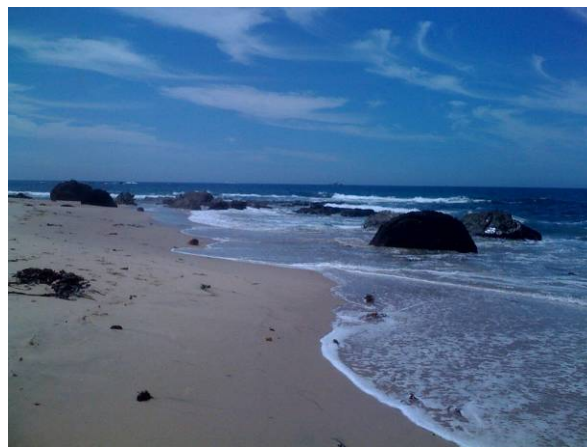
OPC-SAT Members

Members of the OPC-SAT include:

Ocean Protection Council Science Advisory Team

First Year Accomplishments, July 2009

- Richard Ambrose (Co-chair), University of California, Los Angeles
- Alexandra Boehm, Stanford University
- Mark Carr, University of California, Santa Cruz
- Dan Cayan, Scripps Institution of Oceanography, University of California, San Diego
- Francisco Chavez, Monterey Bay Aquarium Research Institute
- Kenneth Coale, Moss Landing Marine Laboratories, San Jose State University
- Christopher Costello, University of California, Santa Barbara
- John Field, National Marine Fisheries Service, Santa Cruz Laboratory, Southwest Fisheries Science Center
- Steve Gaines, University of California, Santa Barbara
- Gary Griggs, University of California, Santa Cruz
- Frances Gulland, Marine Mammal Center
- Madeleine Hall Arber, Massachusetts Institute of Technology
- Tony Haymet, Scripps Institution of Oceanography, University of California, San Diego
- Sam Johnson, U.S. Geological Survey
- Karen McLeod, Oregon State University/ Communication Partnership for Science and the Sea
- Mark Moline, California State Polytechnic University, San Luis Obispo
- Steve Murray, California State University Fullerton
- Karina Nielsen, Sonoma State University
- Jeff Paduan, Naval Postgraduate School
- Harry Scheiber, University of California, Berkeley
- Jerry Schubel, Aquarium of the Pacific
- John Jay Stachowicz, University of California, Davis
- Bill Sydeman, Farallon Institute for Advanced Ecosystem Research
- Steve Weisberg, Southern California Coastal Water Research Project



D. Pietri