



California Water Quality Monitoring Council



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John Laird, Secretary for Natural Resources
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Sent via email to opc.comments@scc.ca.gov

**SUBJECT: OPC DRAFT STRATEGIC ACTION PLAN –
NEED FOR COORDINATION WITH THE
CALIFORNIA WATER QUALITY MONITORING COUNCIL**

Dear Chairperson Laird and Members of the Ocean Protection Council:

The California Water Quality Monitoring Council (Monitoring Council) appreciates the opportunity to provide input regarding the Ocean Protection Council's Strategic Action Plan (Action Plan). Under the legal mandate provided by [SB 1070 \(Kehoe, 2006\)](#), the Monitoring Council had been developing a comprehensive approach to improved water quality monitoring, assessment and reporting, as detailed in our [Comprehensive Monitoring Program Strategy for California](#) (Comprehensive Strategy). The Comprehensive Strategy relies on thematic work groups to focus effort on broad areas of water quality and associated ecosystem health, and to develop theme-based internet portals under the umbrella of the *My Water Quality* website at www.CaWaterQuality.net.

The Monitoring Council sees significant opportunity for collaboration with the OPC. We have identified specific areas within OPC's draft Action Plan where the intent for productive collaboration can be incorporated (detailed below). In the big picture, the Monitoring Council recommends that the OPC make two key additions to the Strategic Action Plan:

- Incorporate reference to the Monitoring Council's Comprehensive Strategy into the Action Plan, with description of the relevance of the Comprehensive Strategy to the Action Plan's goals and objectives, and
- Commit the OPC to taking a leadership role to convene an inter-organizational California ocean ecosystem workgroup that will develop a California ocean internet portal, as one of the theme-based portals under the *My Water Quality* information website.

The establishment of the ocean ecosystem workgroup and web portal will provide the context needed to effectively evaluate and then resolve existing problems related to ocean monitoring, assessment, coordination, and data access.

California Environmental Protection and Natural Resources Agencies

Specific Recommendations for Changes to the draft Strategic Action Plan

The following changes would improve the effectiveness of the Strategic Action Plan while acknowledging and embracing the parallel and relevant efforts outlined in the Monitoring Council's Comprehensive Strategy.

A) In Section I, *Introduction*, add a new subsection D that identifies SB 1070 and the resulting [MOU between Cal/EPA and the Natural Resources Agency](#) as applicable mandates that influence the OPC's purpose and mission. Specifically, SB 1070 (California Water Code, Section 13181(a)) provides that

(4) The monitoring council shall review existing water quality monitoring, assessment, and reporting efforts, and shall recommend specific actions and funding needs necessary to coordinate and enhance those efforts.

(5) (A) The recommendations shall be prepared for the ultimate development of a cost-effective, coordinated, integrated, and comprehensive statewide network for collecting and disseminating water quality information and ongoing assessments of the health of the state's waters and the effectiveness of programs to protect and improve the quality of those waters.

(B) For purposes of developing recommendations pursuant to this section, the monitoring council shall initially focus on the water quality monitoring efforts of state agencies...

(C) In developing the recommendations, the monitoring council shall seek to build upon existing programs rather than create new programs.

(6) Among other things, the memorandum of understanding shall describe the means by which the monitoring council shall formulate recommendations to accomplish both of the following:

(A) Reduce redundancies, inefficiencies, and inadequacies in existing water quality monitoring and data management programs in order to improve the effective delivery of sound, comprehensive water quality information to the public and decisionmakers.

(B) Ensure that water quality improvement projects financed by the state provide specific information necessary to track project effectiveness with regard to achieving clean water and healthy ecosystems.

Section IV of the MOU, *State Agency Responsibilities*, provides that

This MOU cannot be successfully implemented without the cooperation and involvement of numerous state agencies, boards, commissions, conservancies, and departments. The Secretaries for Cal/EPA and Resources will oversee the implementation efforts of this MOU. This MOU focuses on agency programs within Cal/EPA and Resources. . .

Under this MOU, the responsibilities of the Secretaries of Cal/EPA and Resources (collectively "the Secretaries") include, but are not limited to, the following:

1. The Secretaries will direct their boards, departments, and offices to establish and cooperatively participate in the Monitoring Council for improving integration and coordination of water quality and related ecosystem monitoring, assessment, and reporting.

B) In Section III of the Action Plan, *OPC's Strategic Approach*, and in Section IV, *Five Year Action Plan*, add references to the Monitoring Council's Comprehensive Strategy as one source of guidance to implement the OPC's cross-cutting focal area of "improved use and sharing of scientific information to support ocean governance and management." The Monitoring Council's strategy directly complements OPC's core strengths to "provide leadership and promote agency coordination" and to "advance the use of science in governmental decision making." The Monitoring Council's strategy provides recommendations that would enhance OPC's stated priority of effective communication and outreach with stakeholders, agencies, scientists, tribes, and the general public.

The formation of a theme-specific workgroup to coordinate the monitoring, assessment, and reporting of ocean and coastal ecosystem health and the development of a California Ocean

Portal and underlying data exchange network have been identified by the Monitoring Council as tasks that would enable the OPC to better achieve these ends. The Monitoring Council's strategy identifies specific performance measures that this workgroup would use to periodically assess effectiveness. Creation of an Internet portal populated with monitoring data and assessment information that directly addresses key questions of agency decision makers, ocean resource managers, legislators, and the public would help the OPC achieve success in this cross-cutting focal area. Adding a commitment in the Strategic Action Plan to pursue this workgroup leadership role would help OPC to achieve its stated goals while at the same time implement key recommendations of the Monitoring Council. Integration with the MPA Monitoring Enterprise of the Ocean Science Trust, outlined in Issue 5, *Leveraging Investments and Realizing Benefits of the State's Marine Protected Areas*, is a logical place to start this collaborative workgroup effort. Eventually expanding this effort to cover additional ocean and coastal resources would provide a broader assessment of the health of ocean and coastal ecosystems.

- C) Attached are additional suggestions for specific language to be added to the Strategic Action Plan.
- D) Finally, as an indication of increased cooperation between the Monitoring Council and the Ocean Protection Council, the Monitoring Council requests that the OPC include the My Water Quality button link on your website to improve access to this information.

Discussion

To carry out the Ocean Protection Council's mission of ensuring that California maintains healthy, resilient, and productive ocean and coastal ecosystems for the benefit of current and future generations, increased coordination will be required between governmental and non-governmental agencies and organizations that monitor and assess coastal and ocean water quality and aquatic ecosystems. Success will require improved availability of the data and information that results from these efforts. The Ocean Protection Council has initiated this coordination.

Another existing organization, the California Water Quality Monitoring Council, has been mandated to address these deficiencies by the legislature, the California Environmental Protection Agency, and the California Natural Resources Agency. The Monitoring Council's solution to improve water quality and aquatic ecosystem monitoring, assessment, and reporting, contained in our Comprehensive Strategy, is already being implemented for California's wetlands, swimming safety along California's coastal beaches, and the safety of eating fish and shellfish from California's waters. Additional efforts are focusing on streams and rivers, estuaries, and rocky intertidal ecosystems. Integration with these Monitoring Council-sponsored efforts should be reflected in the Ocean Protection Council's Strategic Action Plan.

Multiple pieces of legislation enacted in recent years recognize the lack of coordination between organizations that monitor, assess, and report on water quality and the health of our aquatic resources. Differences in monitoring objectives, data collection methods, assessment strategies, and data management make it difficult or impossible to bring these data together to develop a clear picture of the status of our aquatic resources, related public health and welfare issues, and the effectiveness of agency programs to manage our aquatic resources. Success of the Ocean Protection Council's mission depends on addressing these deficiencies.

Many state, federal and local agencies, regulated dischargers, and water bond grant recipients spend millions of dollars each year monitoring, assessing and reporting on the condition of coastal and ocean waters and ecosystems. While some coordination efforts currently exist, there is no overall structure to coordinate all of these activities nor is there a universally agreed

upon way to integrate the data and information gained from these activities into a coherent ecosystem health assessment. At present, the specific mandates of each agency/organization result in inconsistent monitoring objectives and methods to collect, assess, and manage the data, making it difficult to integrate data from different studies and sources. What is more, there is no single user-friendly place to access the data.

SB 1070 (Kehoe, 2006) calls on both governmental and non-governmental organizations that monitor water quality and associated ecosystem health to collaborate in their monitoring and assessment activities and to make the resulting information available to decision-makers and the public via the internet. Pursuant to this legislation, Cal/EPA and the Natural Resources Agency adopted a Memorandum of Understanding establishing the California Water Quality Monitoring Council and tasked that organization with developing a strategy to address the problems cited in the legislation. The Monitoring Council's approach, as outlined in our Comprehensive Strategy, focuses first on providing a platform for intuitive, streamlined access to water quality and aquatic ecosystem health information that directly addresses users' questions. This approach includes a number of key features:

- A decentralized organizational structure of theme-specific workgroups that operate within common policies and guidelines defined by the Monitoring Council to develop a complete set of theme-based internet portals
- A single, global point of entry to monitoring data and assessment information – the *My Water Quality* website (www.CaWaterQuality.net)
- A set of monitoring program performance measures that each issue-specific workgroup will use to design, evaluate, coordinate, and enhance monitoring, assessment, and reporting efforts
- Coordination of monitoring and assessment methods that achieves an appropriate balance between statewide consistency and regional flexibility
- Decentralized data management practices that maintain data as close as possible to its source to ensure continued high quality, while providing data exchange mechanisms that allow increased access and the combining of data from multiple sources

To date, a number of theme-specific workgroups and portals have been created, including the themes of swimming safety, safety of eating fish and shellfish, and wetland ecosystem health. Their efforts clearly demonstrate that the Monitoring Council's vision is, indeed, correct.

As an example, the California Wetland Monitoring Workgroup has been aggressively working to standardize wetland mapping and assessment methods among twenty-five local, state and federal agencies and non-governmental organizations. Their strategy, [*Tenets of a State Wetland and Riparian Area Monitoring Program*](#), was endorsed by the Monitoring Council last year. Included in their strategy are standard tools for mapping wetland extent, rapid methods for assessing the condition of wetlands (California Rapid Assessment Method or CRAM), and the Wetland Tracker data management system to record wetland extent and condition information as well as wetland restoration projects. Their California Wetland Portal (www.CaliforniaWetlands.net) makes all of this information available to agency decision makers and the public.

As demonstrated by the Monitoring Council and its theme-specific workgroups, greater efficiency and effectiveness can be achieved through integration of existing programs and coordination efforts. In our recommended Comprehensive Strategy, the Monitoring Council has already identified the need for a California Ocean Portal and an underlying workgroup devoted to the health of California coastal and ocean ecosystems. There is an obvious nexus between

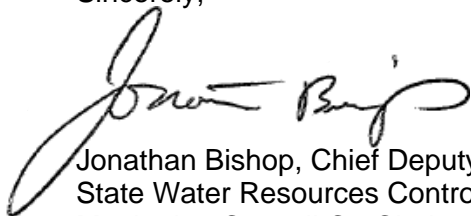
the Ocean Protection Council mandate to coordinate the collection and sharing of scientific data related to ocean and coastal resources and those of the Water Quality Monitoring Council. One of the OPC's key goals is improving the use of scientific and geospatial information in ocean and coastal resource decision making, as defined by AB 2125 (Ruskin, 2010). For these reasons, the Monitoring Council's comprehensive strategy identifies the OPC as the most appropriate organization to initiate and lead the ocean ecosystem portal and workgroup effort.

The benefits to the Ocean Protection Council of integrating the Monitoring Council's recommendations include:

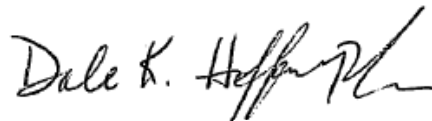
- Deliver answers to decision makers and the public about our water quality and aquatic ecosystems in a manner that is easy to understand
- Highlight and help to prioritize efforts to improve monitoring and assessment programs by revealing where data gaps, ineffective monitoring designs, lack of assessment tools, poor data integration, and other problems hamper statewide assessment and effective decision making
- Provide the opportunity to highlight the important work of the agencies and organizations involved
- Permit broader-based assessments than were previously possible
- Automate the annual reporting efforts of governmental organizations by focusing on meaningful environmental outcomes
- Lower costs through improved coordination of monitoring and assessment, reduced duplication of efforts, and easier access to data and assessment products

To discuss these issues further, please contact Jonathan Bishop at (916) 341-5820 or jsbishop@waterboards.ca.gov or Dale Hoffman-Floerke at (916) 653-8045 or dalehf@water.ca.gov. To schedule additional briefings on the Monitoring Council and its theme-specific workgroups, please contact Monitoring Council Coordinator Jon Marshack at (916) 341-5514 or jmarshack@waterboards.ca.gov.

Sincerely,



Jonathan Bishop, Chief Deputy Director
State Water Resources Control Board
Monitoring Council Co-Chair
Representing Cal/EPA



Dale Hoffman-Floerke, Deputy Director
Department of Water Resources
Monitoring Council Co-Chair
Representing the Natural Resources Agency

Attachment

cc: Members of the California Water Quality Monitoring Council
Matthew Rodriguez, Secretary for Environmental Protection
Amber Mace, Executive Director, California Ocean Protection Council
Skyli McAfee, Executive Director, California Ocean Science Trust
and Science Advisor to the California Ocean Protection Council
Liz Whiteman, Program Director, MPA Monitoring Enterprise

Recommended Additions to the Ocean Protection Council's draft Strategic Action Plan

B. SUSTAINABLE FISHERIES AND MARINE ECOSYSTEMS FOCAL AREA (Page 21)

... The OPC strives to ensure sustainable marine resources by working with state, federal, and tribal organizations in conjunction with the California Water Quality Monitoring Council (Monitoring Council) to improve coordination and provide resources and science based information to inform management decisions.

Action 3.1.2 (Page 23): Work with staff from the Office of Environmental Health Hazard and Assessment (OEHHA), the Department of Public Health (DPH), the DFG, the State Water Resources Control Board (SWRCB), the Bioaccumulation Oversight Group of the California Water Quality Monitoring Council, and others to develop a program that meets the needs of the California sustainable seafood program as well as informs the public about seafood toxicity issues.

ISSUE 5: LEVERAGING INVESTMENTS AND REALIZING BENEFITS OF THE STATE'S MARINE PROTECTED AREAS (Pages 26 and 27)

The OPC is mandated to establish policies to coordinate the collection and sharing of scientific information related to coastal and ocean resources among agencies¹¹. Similarly, the Water Quality Monitoring Council is mandated to make recommendations to coordinate and increase the effectiveness of water quality and associated ecosystem monitoring and assessment and to make the resulting information available to decision makers and the public via the internet. To support adaptive management of MPAs, as required in the MLPA, the OPC invested in data collection to establish baseline conditions in newly implemented regional MPA networks. The OPC also participated in supporting the establishment of a new program—the MPA Monitoring Enterprise within OST—to develop and implement impartial, scientifically rigorous and cost-effective MPA monitoring to inform MPA management decisions.

...

The OPC will draw upon its coordination strengths to facilitate effective implementation and adaptive management of MPAs among ocean-related agencies utilizing the Monitoring Council's recommendations, as outlined in their Comprehensive Monitoring Program Strategy for California. The OPC has been identified as the lead agency in convening public and private entities to ensure effective implementation of the MPA network. The Monitoring Council has identified the OPC as the organization most appropriate to lead a theme-specific workgroup to improve the coordination and improvement of ocean and coastal ecosystem monitoring, assessment and reporting efforts among governmental and non-governmental organizations and to make the resulting information available to decision makers and the public through a California Ocean internet portal. The OPC's high-level leadership is important for advancing partnerships and developing coordination opportunities as well as for identifying funding for effective MPA management, such as mitigation fees.

Action 5.1.1 (page 27), Metrics (measures of the OPC's actions)

- MPA management is informed by, and stakeholders, scientists, and decision-makers are engaged and informed through the use of communications tools, including a California Ocean internet portal.

Action 5.1.2 (page 27) Facilitate communication and collaboration among partners and determine a long-term funding strategy for MLPA implementation through an ocean ecosystem health workgroup, in coordination with the Monitoring Council.

Action 5.1.3 (pages 27 and 28): Support efforts to increase public awareness of MPAs by participating in leading an ocean ecosystem health working group with the DFG, the State Parks, the State and Regional Water Boards, other appropriate state and federal agencies, OST, appropriate local entities, private foundations, and educators to facilitate development and implementation of a coordinated public education strategy about MPAs, through the development of a California Ocean internet portal.

Metrics

- MPA Public Awareness Ocean Ecosystem Health Working Group established, and education strategy designed and launched with partner support.
- Educational materials (maps, signage, etc.) developed and widely distributed at State Parks, nature centers, etc. in effective MPA regions.
- California Ocean internet portal developed and publicized to bring MPA monitoring, assessment, and educational information to decision makers and the public.

C. LAND-SEA INTERACTION FOCAL AREA (Page 29)

In drafting this strategic plan, we considered many potential issues: legacy toxic contaminants, contaminants of emerging concern, microbial contamination, nutrient pollution, harmful algal blooms (HABs), marine debris, urban runoff, hydromodification, sediment management and coastal erosion. Many of the issues mentioned are the primary responsibility of other agencies such as the SWRCB, the Regional Water Control Boards, the DWR, the Department of Toxic Substances Control (DTSC), and local governments; or they are being addressed by other organizations such as the Southern California Coastal Water Research Project (SCCWRP), the State's Northern, Central and Southern California Ocean Observing Systems, and the Coastal Sediment Management Workgroup (CSMW), and the California Water Quality Monitoring Council and its theme-specific workgroups. In some instances, the OPC has made valuable investments that have furthered our understanding or management of these issues. For example, the OPC, through OST, partnered with NOAA and SCCWRP to initiate the California Harmful Algal Bloom Monitoring and Alert Program (HABMAP), statewide HAB alert network system for researchers and end user committees.

Addressing some of the aforementioned issues will require enormous infrastructure investments, while others require ongoing scientific research or monitoring; all of these investments are beyond the current resources of the OPC. However, by partnering with the Monitoring Council and its workgroups, OPC and OST can leverage their resources to improve monitoring, assessment, and reporting on many of these issues.

ISSUE 6: INTEGRATING WATER POLICY (page 30)

Many aspects of water management in California impact the ocean and its resources. The state needs integrated water policies that consider the connected issues of water supply, runoff, pollution, and ecosystem function. Promoting these policies should be a top priority of the OPC over the next five years. Such integrated policies must, by definition, be developed in partnership with other agencies, especially the DWR, the SWRCB, the coastal Regional Water Quality Control Boards (RWQCB), and DFG. The OPC should support its partner agencies and provide information about ocean and coastal resources through collaboration with the Monitoring Council and its workgroups to help advance integrated water policies in the forthcoming updates of the California Water Plan, SWRCB's Ocean Plan, and the RWQCB's Basin Plans. The OPC has a responsibility to ensure that the State's water policies are consistent with its goals of conserving marine ecosystems.

E. SCIENCE-BASED DECISION-MAKING – CROSS-CUTTING AREA (pages 39 and 40)

Improving the use of scientific information in ocean and coastal resource decision making is one of the OPC's key goals as defined by COPA and AB 2125 Coastal Resources: Marine Spatial Planning Act (Ruskin, 2010). It is also a fundamental approach necessary to achieving all the goals and actions outlined throughout this strategic plan. Improving the efficiency and effectiveness of water quality and aquatic ecosystem monitoring and assessment and the availability of the resulting information to decision maker and the public is the goal of the Monitoring Council, pursuant to SB 1070 (Kehoe, 2006) and the resulting MOU between the California Natural Resources Agency and the California Environmental Protection Agency.

During its first five years, the OPC made enormous investments in data collection, including sea surface current and sea floor mapping, nearshore mapping, and initial baseline monitoring of the marine protected areas. During this time, the OPC also created a framework for integrating science into state decision making through its partnership with OST, its MPA Monitoring Enterprise, and the creation of the OPC-SAT.

Over the next five years, the OPC does not expect to have the resources to fund large-scale data collection or original research efforts. Instead, the OPC, in conjunction with the Monitoring Council and its workgroups, will focus on advancing the development of the tools and strategies necessary for ensuring that science is effectively incorporated into coastal and ocean management decisions. These efforts will include:

- Improving the management, use, and sharing of scientific and geospatial information, as outlined in AB 2125 and SB 1070
- Facilitating management-driven research to continue to bridge the research conducted by the state's premier academic institutions with the information needs of the state's coast and ocean managers
- Linking past and future Sea Grant research projects to policy and management needs and
- Continuing and expanding the role of the OPC Science Advisory Team to provide objective scientific expertise on OPC issues and scientific strategies.
- Increasing coordination and quality of ocean resource monitoring and assessment by taking a leadership role in an ocean ecosystem workgroup and partnering with other workgroups of the Monitoring Council, as outlined in the Monitoring Council's Comprehensive Monitoring Program Strategy.

ISSUE 12: IMPROVING THE USE AND SHARING OF SCIENTIFIC AND GEOSPATIAL INFORMATION (pages 40 and 41)

With the state's sea surface current, seafloor and shoreline mapping investment and other extensive coastal and marine data collection efforts, California is now relatively data rich. Yet, institutional and technical barriers have prevented California's policy makers and resource managers from incorporating much of this information into decision making. California agencies lack a coordinated statewide system for sharing and accessing geospatial data that limits the ability of its agencies to use coastal and marine geospatial information (Geographic Information System (GIS), maps, and cadastral data). Geospatial information is essential for visualizing and analyzing complex ocean dynamics and potential human uses. Managers need tools for translating data into useful forms. Raw data files are often too large and unwieldy for most managers to use in daily applications; data must be converted into compatible formats in order to enable regulatory and planning analyses. At present, the specific mandates of each

agency/organization result in inconsistent monitoring objectives and methods to collect, assess, and manage the data, making it difficult to integrate data from different studies and sources.

In 2010, the state legislature enacted AB 2125, which requires the OPC and state agencies to cooperate in promoting "state agencies' use and sharing of scientific and geospatial information for coastal- and ocean-relevant decision making." In 2011, the OPC assessed the functional and technical needs of California's public agencies with respect to their abilities to gather, manage, use, and share information and decision-support tools relevant to ecosystem-based management in the coastal and ocean environment. Based on these findings, over the next five years, the OPC will carry out the implementation of AB 2125 and facilitate access to geospatial information and tools to ensure the effective use of scientific and geospatial information in management decisions by agencies and stakeholders. Multi-agency access to California's repository of geospatial data layers will also support efforts to efficiently respond to an oil spill emergency. This need was reinforced by the Gulf oil spill disaster.

The need to improve the efficiency and effectiveness of water quality and associated ecosystem monitoring, assessment, and reporting is also the focus of SB 1070, adopted by the state legislature in 2006. This legislation required the formation of the Monitoring Council to develop recommendations for a Comprehensive Monitoring Program Strategy for California, which were published in December 2010. This Comprehensive Strategy identifies the OPC as the most appropriate organization to lead an inter-agency workgroup focused on ocean and coastal data that will develop a California Ocean portal to deliver this information to decision makers and the public.

The need for improved access to and integration of coastal and marine spatial data is also a primary directive of the Executive Order No. 14547 signed by President Obama (July 2010) that adopted the Final Recommendations of the Interagency Ocean Policy Task Force.¹³ The Executive Order and Final Recommendations call for the development of coastal and marine spatial plans that build upon and improve existing federal, state, tribal, local, and regional decision-making and planning processes. The development of these regional plans will rely heavily on state and regional coastal and marine geospatial data.

Objective 12.1: Implement COPA ~~and~~, AB 2125, and SB 1070 by promoting the use and sharing of scientific and geospatial information for coastal and ocean decision making.

Action 12.1.3 (*Page 42*): In coordination with the CCMGWG, the state's Geographic Information Officer, the Monitoring Council and its theme-specific workgroups, and the CalGIS Council, assess and increase agencies technical expertise and use of geospatial information.

Action 13.1.1 (*Page 43*): Identify priority management information needs in partnership with the OST, the Monitoring Council, and its theme-specific workgroups.

Metrics (measures of the OPC's actions):

- A regularly updated list of priority statewide ocean and coastal information needs developed.
- Cross-cutting information syntheses, in the form of a California Ocean internet portal, that will inform management and policy development identified and supported.

Action 13.1.2 (*Page 43*) Where appropriate and in concert with the Monitoring Council's Comprehensive Monitoring Program Strategy for California, facilitate development of innovative and collaborative data collection partnerships, strategies, protocols, metadata standards, and data delivery formats to maximize the use of collected data.

| Objective 14.2 ([Page 45](#)): Collaborate with OST [and the Monitoring Council](#) to improve institutional support, capacity, and funding for data critical to evaluating management approaches, understanding ocean health, and monitoring climate change impacts.