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Report to the U.S. Congress on the National Oceanographic Partnership Program

Fiscal Year 2006

National Ocean Research Leadership Council

August 2007

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I. Executive Summary

Established in Fiscal Year (FY) 1997, the National Oceanographic Partnership Program (NOPP) promotes the goals of assuring national security, advancing economic development, protecting quality of life, and strengthening science education and communication through improved knowledge of the ocean. The National Ocean Research Leadership Council (NORLC), comprising leaders of fifteen Federal agencies, guides NOPP in identifying and carrying out partnerships among Federal agencies, industry, and other members of the ocean sciences community in support of those goals. In FY 2004, NOPP developed a new Ten-Year Strategic Plan with four goals:

- 1. Achieve and Sustain an Integrated Ocean Observing System (IOOS);**
- 2. Promote Lifelong Ocean Education;**
- 3. Modernize Ocean Infrastructure and Enhance Technology Development; and**
- 4. Foster Interagency Partnerships to Increase and Apply Scientific Knowledge.**

The overall fiscal investment in NOPP generally consists of two types of efforts. NOPP-Funded Activities are those that are either solicited or managed by NOPP and involve support from two or more agencies. Overall investment in NOPP-Funded Activities, which totaled \$31 million in FY 2006, has increased significantly since the program's inception. By issuing proposal solicitations from FY 1997 to FY 2006, NOPP has funded 110 projects, including 21 renewal projects. Of the total funds awarded during this period, approximately 59 percent, 25 percent and 16 percent were awarded to academia, government and industry (including non-governmental organizations/others), respectively. Three new projects were funded in FY 2006 focusing on models for coastal sediment transport, understanding and predicting climate using the Argo float system, and analyzing the ocean sciences, technology and operations workforce.

In addition to NOPP-Funded Activities, agencies invest in NOPP-Related Activities, which are funded primarily by a single agency based on plans produced by NOPP entities. Examples include projects related to the development of an Integrated Ocean Observing System (IOOS), which is coordinated through a NOPP interagency office called Ocean.US.

In terms of broader planning efforts, the Interagency Working Group on Facilities, formerly the Federal Oceanographic Facilities Committee (FOFC), completed a draft of an integrated cross-agency research fleet report, which is currently under review. Ocean.US, in collaboration with the Ocean.US Executive Committee (EXCOM), received approval on the *First IOOS Development Plan* from the Interagency Committee on Ocean Science and Resource Management Integration (ICOSRMI).

During the upcoming fiscal year, final steps will be taken to complete the merger of the NOPP ocean governance structure with the structure established in the U.S. Ocean Action Plan (OAP), the Bush Administration's response to the report of the U.S. Commission on Ocean Policy (USCOP). This merger underscores the significant emphasis being placed on strengthening the role ocean science plays in ocean policy development. At its April 2007 meeting, the NORLC merged with the ICOSRMI, the Under/Assistant Secretary-level body established in the OAP. The Ocean Research Advisory Panel has been renamed the Ocean Research and Resources Advisory Panel (ORRAP) in accordance with its expansion of responsibilities and input to the OAP structure. In addition, the main activities of the NOPP Interagency Working Group, FOFC, and EXCOM have been integrated into working groups of the Joint Subcommittee on Ocean Science and Technology (JSOST), which reports to the ICOSRMI. This transition is intended to maintain the progress initiated under NOPP while reducing parallel ocean governance structures.

II. Introduction

THE NOPP OCEAN GOVERNANCE STRUCTURE

The FY 1997 Defense Authorization Act (P.L. 104-201) directed the Secretary of the Navy to establish the National Oceanographic Partnership Program (NOPP, www.nopp.org). Supplemental legislation for appointments to the NOPP oversight body, the National Ocean Research Leadership Council, and to the Ocean Research Advisory Panel is contained in Public Law 105-85, the FY 1998 Defense Authorization Act.

The Secretary of the Navy is charged in Subtitle E of Title II, Division A, P.L. 104-201 to establish a National Oceanographic Partnership Program to:

- 1) promote the national goals of assuring national security, advancing economic development, protecting quality of life, and strengthening science education and communication through improved knowledge of the ocean; and
- 2) coordinate and strengthen oceanographic efforts in support of those goals by:
 - a) identifying and carrying out partnerships among Federal agencies, academia, industry, and other members of the oceanographic scientific community in the areas of data, resources, education, and communication, and
 - b) reporting annually to Congress on the Program.

The following is an excerpt from P.L. 104-201 as it relates to reporting to Congress:

“ANNUAL REPORT— The Council shall submit to Congress a report on the National Oceanographic Partnership Program. The report shall contain the following:

- (1) A description of activities of the program carried out during the fiscal year before the fiscal year in which the report is prepared, together with a list of the members of the Ocean Research Advisory Panel and any working groups in existence during the fiscal year covered.
- (2) A general outline of the activities planned for the program during the fiscal year in which the report is prepared.
- (3) A summary of projects continued from the fiscal year before the fiscal year in which the report is prepared and projects expected to be started during the fiscal year in which the report is prepared and during the following fiscal year.
- (4) A description of the involvement of the program with Federal interagency coordinating entities.
- (5) The amounts requested, in the budget submitted to Congress pursuant to section 1105(a) of title 31, United States Code, for the fiscal year following the fiscal year in which the report is prepared, for the programs, projects, and activities of the program and the estimated expenditures under such programs, projects, and activities during such following fiscal year.”

This report aims to address the elements laid forth in these reporting requirements.

NOPP Organization: The NOPP organizational chart is shown in Figure 1.

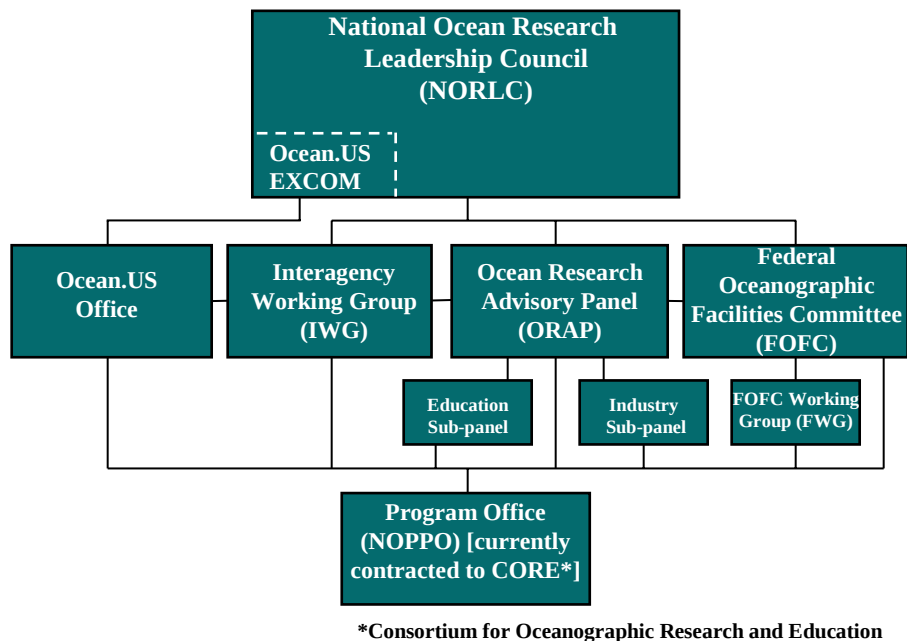


Figure 1. NOPP Organizational Chart.

BODIES ESTABLISHED WITHIN NOPP

Committee membership information can be found in Appendix 1.

The **National Ocean Research Leadership Council (NORLC)** is the decision-making body of NOPP. The Council confirms NOPP activities and funding opportunities and is composed of the heads of fifteen Federal agencies that are involved in conducting or funding ocean research and/or developing ocean research policy. The committee is scheduled to meet twice per year.

The **Ocean Research Advisory Panel (now operating as the Ocean Research and Resources Advisory Panel, ORRAP)** provides advice and scientific guidance to NOPP. It is composed of individuals from the National Academies, ocean industries, state governments, academia, and other organizations/communities as appropriate. The committee meets three times per year.

The NOPP **Interagency Working Group (IWG)** is the operational Federal body charged with organizing, directing or conducting most NOPP activities. It performs staffing functions assigned by, and on behalf of, the NORLC. Membership reflects that of the NORLC. The committee meets monthly and additionally as needed.

The **Federal Oceanographic Facilities Committee (FOFC)** advises the NORLC on policies, procedures, and plans relating to oceanographic facility use, upgrades, and investments. Membership is composed of Federal oceanographic facilities managers. The committee nominally meets three times per year.

The **FOFC Working Group (FWG)** performs staffing functions assigned by, and on behalf of, the FOFC. Membership reflects that of the FOFC. The committee currently meets as necessary.

The **Ocean.US Office** is the interagency office for integrated and sustained ocean observations, created by the NORLC to plan and coordinate development of an Integrated Ocean Observing System (IOOS) for the U.S. Its goal over the next decade is to integrate existing and planned elements to establish a sustained ocean observing system to meet common research and operational agency needs. The IOOS is the marine-estuarine-Great Lakes component of the U.S. Integrated Earth Observing System (IEOS) and the U.S. contribution to the Global Ocean Observing System (GOOS). The IEOS is the U.S. contribution to the Global Earth Observation System of Systems (GEOSS).

The **Ocean.US Executive Committee (EXCOM)** was established to serve as the oversight body for the Ocean.US Office. Membership was composed of NOPP agencies that were both party to the Ocean.US Memorandum of Agreement (MOA, <http://www.nopp.org/Dev2Go.web?id=205283>) and provided personnel or other resources to the Ocean.US Office.

The **NOPP Office (NOPPO)** was established by NOPP legislation to assist in the management of NOPP and provide daily administrative support. Using competitive procedures, a 5-year contract for the operation of NOPPO was awarded by the Office of Naval Research (ONR) to the Consortium for Oceanographic Research and Education (CORE) on 14 July 1997. The NOPPO contract was re-competed in 2002 and was awarded by ONR to CORE on 5 February 2003.

THE OCEAN ACTION PLAN OCEAN GOVERNANCE STRUCTURE

In September 2004, the U.S. Commission on Ocean Policy (USCOP) completed its report, “An Ocean Blueprint for the 21st Century.” In December 2004, the President submitted to Congress his formal response, the U.S. Ocean Action Plan (OAP), which outlines a new ocean governance structure to:

1. Coordinate the activities of executive departments and agencies regarding ocean-related matters in an integrated and effective manner to advance the environmental, economic, and security interests of present and future generations of Americans; and
2. Facilitate, as appropriate, coordination and consultation regarding ocean-related matters among Federal, State, Tribal, and local governments, the private sector, foreign governments, and international organizations.

Since January 2005, the Administration has worked actively with Federal agencies to establish the new ocean governance structure and link existing groups with new entities. This new structure, to which the NOPP committees and their functions will transition completely during the 2007 fiscal year, is described more fully in a notice posted in the Federal Register on June 29, 2007 (Volume 72, Number 125, p. 35708-35709). Discussions of activities and accomplishments for the NOPP program in FY 2006 reported here use historical NORLC programmatic names. The FY 2007 Report to Congress will reflect both the merger with the OAP governance structure and the central role NOPP is expected to play in the implementation of actions described in the OAP, such as implementing the priorities identified in the recently released report *Charting the Course for Ocean Science in the United States for the Next Decade: An Ocean Research Priorities Plan and Implementation Strategy*. Additional details on OAP activities and committee compositions can be found at the Council on Environmental Quality (CEQ) website at: <http://ocean.ceq.gov/>.

In recent years, the operating tempo of the NOPP committees and activities has increased notably, as measured by an increased frequency of meetings held, decisions made, and reports delivered; expanded breadth and number of funding solicitations issued; and establishment of sub-panels and IWGs on specialized topics. This model of interagency collaboration has proven to be an effective and efficient

method of maximizing and enhancing Federal investments in ocean science, technology and education. The OAP's mandate and governance structure will build on and expand the NOPP model to apply the benefit of partnership efforts to a greater number of agencies and ocean-related issues. The remainder of this report summarizes the NOPP Investment Strategy, the NOPP committees' activities and investments for FY 2006, and ongoing NOPP plans and activities for FY 2007.

III. NOPP Ten-Year Strategic Plan

In August 2004, the NORLC approved a new Ten-Year Strategic Plan for NOPP (www.nopp.org) outlining the NOPP Value Proposition and four NOPP Strategic Goals. The NOPP Value Proposition states: "NOPP adds significant integrative value to the individual oceanographic, ocean science, resource management and ocean education missions of the Federal agencies and their partners, in common pursuit of the wise use of the oceans and maintenance of their health." The Goals, listed below, are based on the original NOPP investment areas as revised to reflect nine years of experience in an evolving political and scientific climate. Agency and ocean science community inputs, Congressional direction, scientific advice of the ORAP, an increased understanding of NOPP's role beyond the missions of the individual agencies, and input from the USCOP are incorporated into these Goals. The Plan was also used to shape the development of the U.S. OAP.

Each of the four Goals has one accompanying "Critical Action" as a specific target for which action-partnerships can be formed and performance metrics can be developed and applied. The Critical Actions are the minimum acceptable progress for this Strategic Plan. The challenge for NOPP is the construction of interagency and inter-sector partnerships and support mechanisms to ensure that the Critical Actions for the Goals are completed within ten years.

The intention of the Strategic Plan is to provide a structure valid for ten years, during which time the NOPP partners can work to pursue, at a minimum, the Critical Actions. More actions will be added, implementation plans will be prepared, and metrics will be developed and tracked for each agreed action. This Strategic Plan will be updated periodically as needed, but it is intended to be generally valid for a decade. Plans to address the Critical Actions and their associated metrics will be documented separately from this Strategic Plan and are intended for annual assessment and update.

The following is an excerpt from the NOPP Ten-Year Strategic Plan:

NOPP GOALS...TO BE ACHIEVED WITHIN TEN YEARS

Goal 1. Achieve and sustain an Integrated Ocean Observing System (IOOS).

Purpose: Provide coastal and global ocean data and products for decision-makers, researchers, and other operational/practical purposes, in support of the four NOPP Strategic Objectives and the seven IOOS Objectives, namely:

- 1) Improve predictions of climate change and variability (weather) and their effects on coastal communities and the nation;
- 2) Improve the safety and efficiency of marine operations;
- 3) More effectively mitigate the effects of natural hazards;
- 4) Improve national and homeland security;
- 5) Reduce public health risks;
- 6) More effectively protect and restore healthy coastal marine ecosystems;
- and 7) Enable the sustained use of marine resources.

Critical Action: Through the interagency Ocean.US office, stabilize and integrate existing ocean observation programs to provide timely and sustained ocean data and data products with minimal gaps, affordable costs, and maximal utility.

Goal 2. Promote lifelong ocean education.

Purpose: Instill in the general public and governmental decision-makers the importance of wise stewardship of the ocean and the coastal zone, through the support of science education and communication.

Critical Action: Facilitate and support the use of ocean examples in the teaching of the National Research Council's National Science Education Standards.

Goal 3. Modernize ocean infrastructure and enhance technology development.

Purpose: Provide access to state-of-the-art tools, training, and facilities for effective and efficient utilization by national ocean programs, in support of the four NOPP Strategic Objectives.

Critical Action: Implement the Federal Oceanographic Facilities Committee (FOFC) fleet plan.

Goal 4. Foster interagency partnerships to increase and apply scientific knowledge.

Purpose: Enable and ensure multi-agency efforts in support of the four NOPP Strategic Objectives where such collaboration enhances efficiency or effectiveness, and/or reduces costs.

Critical Action: Narrow the gap between biological/chemical measurements and physical measurements in support of the science underlying ecosystem-based management.

With consensus agreement, additional goals or investment areas may be added.

IV. Fiscal Year 2006 Activities

Overall fiscal investment in NOPP has increased since its inception in 1997 and can best be described in terms of NOPP-Funded Activities and NOPP-Related Activities. NOPP-Funded Activities are those that are either solicited or managed by NOPP and involve support *from two or more* agencies. NOPP-Related Activities are those that are funded primarily *by a single agency* in response to plans produced by NOPP entities. Both types of activities have grown since NOPP's inception.

NOPP-FUNDED ACTIVITIES

NOPP-Solicited Projects

NOPP agencies invested approximately \$11.5M in new NOPP-Solicited projects in FY 2006 in response to two solicitations, both issued in September 2005. A Request for Proposals (RFP) solicited proposals contributing to the Argo project, and a Broad Agency Announcement (BAA) called for proposals on the topics of workforce development and sediment transport modeling (see Table 2). In response to the two solicitations, 5 proposals were received that included a combined collaboration with approximately 40 institutions (academia, industry and government). The solicitations employed a peer-review process to determine which proposals would be funded; overall, three projects were approved for funding by the NOPP IWG on behalf of the NORLC. The URL links to the full texts of these solicitations are included in Appendix 2, and summaries of the funded projects are provided in Appendix 3.

BAA Topic (Issuing NOPP Agency; Release Date)	Associated NOPP Goal	Funding Available	Number of Awards Issued
<i>The Argo Project: Global Ocean Observations for Understanding and Prediction of Climate Variability</i> (NOAA; September 2005)	GOAL 3. Modernize ocean infrastructure and enhance technology development	\$9.3M per year for five years	One
<i>Understand, Identify Gaps and Predict Changes in the Workforce for Ocean Sciences, Technology, and Operations</i> (ONR; September 2005)	GOAL 2. Promote lifelong education	\$575K over three years	One
<i>An Open-Source Community Model for Coastal Sediment Transport</i> (ONR; September 2005)	GOAL 4. Collaborate to strengthen U.S. interagency initiatives in research and their connections to operations	\$2.7M over three years	One

Table 2. Summary of NOPP BAA issuance and results for FY 2006.

NOPP-Managed Activities

The National Ocean Sciences Bowl (NOSB[®]) is an academic competition that engages students and high schools in the ocean sciences. Calendar year 2006 marked the ninth year of the NOSB[®], which has grown to encompass 25 sites, 400 high schools, and over 2000 students and their teacher/coaches. Two additional programs created to complement the NOSB – the National Ocean Scholar Program and the Coastal and Ocean Science Training (COAST) internship – are extending the NOSB experience while creating opportunities for students to further their interest in ocean and coastal sciences. NOSB has continued broad outreach initiatives to expand the reach of the program beyond the aspects of an academic competition. NOSB continues to manage a diversity initiative, started in 2005 to encourage ocean science interest in historically underrepresented populations and which is now providing professional development opportunities for coaches and regional coordinators. For additional information on the NOSB and other education projects, visit the NOSB website at www.nosb.org.

NOSB exhibited at the Ocean Sciences meeting in Honolulu, HI, in February 2006 and at the National Science Teachers Association national convention in Anaheim, CA, in March 2006. NOPP and NOSB also hosted a program booth at the Capitol Hill Oceans Week in Washington, DC, in June 2006 and at the Conference on Ocean Literacy in Washington, DC, in June 2006.

NOPP-RELATED ACTIVITIES

In addition to the NOPP-Funded and NOPP-Managed Activities described above, individual agencies invested in NOPP-Related Activities during FY 2006. Significant examples of such investments included several projects related to the development of IOOS.

The National Oceanic and Atmospheric Administration (NOAA) provided approximately \$26.3M in funding through its Coastal Observation Technology System (COTS) to further the development and implementation of IOOS. These COTS project grants, mostly as congressionally-directed awards, are contributing to the development of IOOS on a regional basis and are further described in Appendix 4. As part of an initial demonstration of data sharing and access capabilities of IOOS, COTS partners and recipients of ONR congressionally-directed ocean observing grants (\$2.7M in FY 2005) continued collaborating on the development of a web-accessible data portal (available at www.openioos.org) that provides access to real-time and near real-time sea surface temperature, winds, and other data from satellites and buoys located in coastal waters of the continental U.S.

NATIONAL OCEAN RESEARCH LEADERSHIP COUNCIL

In FY 2006, the NORLC continued the process of transitioning to the OAP governance structure, under which it will conduct business as the ICOSRMI. At its April 2007 meeting, the mandate and membership of the NORLC merged with those of the ICOSRMI. Also at that meeting, the NORLC Executive Committee of ICOSRMI, whose membership is composed of the Secretary of the Navy, the Administrator of NOAA, and the Director of the National Science Foundation (NSF), was established to function as the biennial NORLC leadership selection committee, and to coordinate the mandated responsibilities of the NORLC undertaken by the ICOSRMI. Those responsibilities include submission of the NOPP Annual Report to Congress, approval of NOPP partnership projects, approval of ORAP membership, and assignment of responsibilities to the ORAP.

The minutes of all past NORLC meetings are posted on the NOPP web site at <http://www.nopp.org>.

OCEAN RESEARCH AND RESOURCES ADVISORY PANEL (ORRAP)

The ORRAP met three times in FY 2006: 27-28 October 2005; 17-18 January 2006; and 5-6 June 2006. All three meetings were held in Washington, DC. The ORRAP felt that the additional responsibilities of addressing resource management issues and providing advice and guidance to the ICOSRMI as directed in the OAP necessitated an additional yearly meeting.

The October 2005 meeting was devoted to discussion of ORRAP and OAP activities, focusing on providing the best possible advice on ocean science and resource management issues into the Federal interagency process. The Industry and Education Sub-panel chairs updated the ORRAP on their respective Sub-panel's activities. The ORRAP discussed the possibility of forming an Ocean Observations Sub-panel, and the intention to do so was reaffirmed at the February 2007 ORRAP meeting.

During the January 2006 meeting, the ORRAP discussed its future membership needs in response to its expansion of responsibilities under the OAP. The ORRAP received briefings on the development of an ocean research priorities plan and implementation strategy by the Joint Subcommittee on Ocean Science and Technology (JSOST; The final report entitled *Charting the Course for Ocean Science in the United States for the Next Decade: An Ocean Research Priorities Plan and Implementation Strategy* was released in January 2007), joint ocean education activities of JSOST and the Subcommittee on Integrated Management of Ocean Resources (SIMOR), integration of the IOOS Regional Associations, and the progress and implementation of the OAP.

Much of the June 2006 meeting was dedicated to sessions on translating research into applications. Speakers from private industry, Sea Grant, the Coastal States Organization, academia, and the Office of Naval Research gave presentations on their respective endeavors to convert research into applications for a wide range of users. The ORAP then engaged the speakers in a dialogue on challenges, solutions,

successful models, and lessons learned. Other items on the June agenda included status updates on the National Shoreline Management Study, the JSOST and the SIMOR, the Ocean Biogeographic Information System (OBIS) user needs assessment, the National Water Quality Monitoring Network, the Conference on Ocean Literacy, and NOAA's Oceans and Human Health Initiative.

The ORRAP also played a major role in several key ocean community activities: it reviewed the JSOST's draft research priorities plan and submitted substantive recommendations; it participated in the planning and conduct of the associated workshop held in April 2006; it participated in the planning and conduct of the Conference on Ocean Literacy held in June 2006; and ORRAP officers gave presentations on ORRAP activities and recommendations to the ICOSRMI at the July and December 2006 ICOSRMI meetings. In August 2006 the ORRAP approved formation of a Research to Applications Task Force (RATF) composed of persons with diverse backgrounds and with experience and expertise in translating research to applications.

INTERAGENCY WORKING GROUP

The NOPP IWG met 12 times in FY 2006. During this time, it formally transitioned to the OAP governance structure, wherein its activities and functions were transferred to the JSOST Interagency Working Group on Ocean Partnerships (IWG-OP). The group discussed ways in which the NOPP BAA process could assist in advancing the near-term priorities of the Ocean Research Priorities Plan. It formed a Task Force on Improved Partnership Flexibility and a second to develop an IWG-OP Strategic Plan to define and focus the group's activities. The group developed two solicitations on three different topics (see Table 2), supported the national Conference on Ocean Literacy, and hosted a Town Hall meeting in conjunction with JSOST at the Ocean Sciences meeting in February 2006, focusing on the continuance of NOPP activities as they are transitioned to the OAP governance structure.

FEDERAL OCEANOGRAPHIC FACILITIES COMMITTEE

During FY 2006, FOFC continued to focus on developing the first update of the fleet report, *Charting the Future for the National Academic Research Fleet: A Long-Range Plan for Renewal*, released in December 2001. The updated report, the *National Oceanographic Fleet Report*, expands the scope of the original plan to incorporate all Federal oceanographic research and survey ships and provides a vision for fleet renewal as called for by the USCOP and the OAP. FOFC, via the FOFC Working Group, has summarized existing inventory, capabilities and future needs for research, survey and specialized oceanographic vessels. Consultation with the University-National Ocean Laboratory System (UNOLS) regarding the portion of the report for the renewal of the academic fleet occurred at several FY 2005 FOFC meetings.

The FOFC met on 20 January 2006. Items of discussion included completion of the fleet report, Federal and academic fleet status reports, and the FOFC transition to the OAP governance structure, under which it will do business as the JSOST Interagency Working Group on Facilities (IWG-F). The report is currently under review by the JSOST and its member agencies.

FEDERAL OCEANOGRAPHIC FACILITIES COMMITTEE WORKING GROUP

The FWG continued to meet as necessary in FY 2006 to identify, categorize, project, and summarize the needs of the existing and future Federal oceanographic fleet for the purpose of assisting the FOFC in developing the updated *National Oceanographic Fleet Status Report*.

OCEAN.US / INTEGRATED OCEAN OBSERVING SYSTEM

During FY 2006, oversight of Ocean.US transitioned from the Ocean.US EXCOM to the JSOST Interagency Working Group on Ocean Observations (IWGOO) under the OAP governance structure. Members of the IWGOO are from many of the agencies and commissions represented on the JSOST, including the ten agencies represented on the former Ocean.US EXCOM.

Ocean.US continued to make significant progress toward its goals. The following summarizes and highlights FY 2006 progress:

1. IOOS Development Plans

A major milestone was achieved with the formal approval of the *First IOOS Development Plan* (http://www.ocean.us/documents/docs/IOOSDevPlan_low-res.pdf) by the ICOSRMI, an event that formally inaugurated implementation of the coastal component of IOOS. The Development Plan was updated with an Addendum completed in the summer of 2006 to include information from the Second Annual IOOS Implementation Conference on coastal inundation, as well as new information on regional governance and performance metrics. The implementation conference focused on requirements for developing an integrated, multi-hazard warning system that will provide data and information needed to improve nowcasts and forecasts of coastal inundation and its impacts on coastal communities, ecosystems and living marine resources. The associated data and information will contribute to addressing the IOOS goals of improving marine operations, reducing public health risks, protecting and restoring ecosystem health, and sustaining living marine resources.

2. Data Management and Communications (DMAC) Plan and Actions

Implementing an integrated DMAC infrastructure is the highest priority for IOOS implementation. The strategy for designing and implementing the IOOS DMAC Subsystem is being closely coordinated with IEOS design and implementation. Coordination is also occurring with related activities in the Federal agencies and regional, national, and international Earth observing systems. Technical discussions were initiated with the National Science Foundation to coordinate its Ocean Observatories Initiative (OOI) cyber infrastructure effort with DMAC by identifying common development work.

3. Engaging the Private Sector

Industry outreach was accomplished on the Gulf Coast and in the Great Lakes regions. A meeting was organized involving NOAA, U.S. Department of Agriculture, U.S. Chamber of Commerce, and industry executives to discuss how observations may be used to improve agribusiness. An IOOS-Industry Exchange Forum was conducted at the Marine Technology Society/Office of Naval Research Buoy Workshop to discuss how to involve U.S. industry in answering the international need for a tsunami warning system.

4. Ocean.US Education Initiative

Two education working groups were created:

An Education Data and Technology Protocols working group has been seated and begun work. Its purpose is to guide development of standards and protocols in support of education (especially for data) within the context of IOOS and the broader ocean observing education effort. The group also functions as the DMAC Education Caucus and is the primary interface between the education community and the

DMAC committees engaged in establishing guidelines and standards for IOOS data and access to that data.

5. Public Health

Ocean.US helped to organize a Public Health Workshop which addressed the range of problems among swimming beach managers and seafood safety officials. The report of the workshop, *Public Health Risks: Coastal Observations for Decision-Making* was published in January 2006.

6. Remote Sensing

A remote sensing workshop sponsored by the National Aeronautics and Space Administration (NASA) and NOAA and organized by Ocean.US brought to the forefront the regional needs for remote sensing products and highlighted the potential “gap” in satellite coverage in the coming years.

7. IOOS Development

To benchmark the current status of U.S. observing systems, Ocean.US conducted a preliminary analysis of the current assets, programs, and investments in ocean observations by all the Federal agencies involved in IOOS. Progress was made toward defining the performance metrics for regional governance structures through the drafting of “certification criteria.” The adoption of such criteria will assure true partnership between the regions and the Federal government.

**Federal Response to Recommendations from the 2nd IOOS Implementation Conference
Washington, D.C., 3-5 May 2005**

Representatives of Federal Agencies that are signatories to the MOA creating the Ocean.US Office (NOAA, Navy, NASA, NSF, EPA, USACE, USGS, MMS, USCG) considered recommendations for implementing a multi-hazard forecasting system for improved mitigation of the impacts of tropical storms, tsunamis and extra-tropical storms in general and for IOOS DMAC and Education in particular. As a body, the declaration below was agreed to.

“We appreciate the work of the participants in the Second Annual IOOS Implementation Conference to formulate a clear set of consensus priorities for FY 05-08 IOOS implementation. We view the priorities in the context of both maintaining current IOOS activities (including observing systems, data systems, and product generating-delivery systems) and improving IOOS capabilities consistent with the Annual IOOS Development Plan, the Strategic Action Plan for the U.S. Integrated Earth Observing System (IEOS), and the U.S. Ocean Action Plan.

(1) We acknowledge the U.S. IOOS as the ocean and coasts contribution to the Global Ocean Observing System (GOOS), the U.S. IEOS and the Global Earth Observing System of Systems (GEOSS).

(2) To facilitate implementation of the priorities given below, we recommend that agencies initiate discussions to establish an IOOS interagency programming mechanism as an important step toward facilitating implementation of the IOOS Development Plan.

(3) We reaffirm our 2004 support for the following priorities articulated in the First Annual IOOS Development Plan:

- *Develop Regional Associations (RAs) and the National Federation of Regional Associations;*
- *Implement the DMAC plan nationally and regionally; and*
- *Implement regional pilot projects.*

(4) We are committed to using the following consensus recommendations from the Second Annual IOOS Implementation Conference to guide the FY05 - FY08, Federal contribution (in terms of both supporting and operating) to IOOS Development, especially as related to coastal inundation resulting from storms, and tsunamis:

- *Implement the DMAC standards process as the first step toward facilitating data exchange and access within and among RAs and participating Federal Agencies;*
- *Support the completion of the ongoing Systems Engineering analysis as critical for the successful implementation of the IOOS; and*
- *Implement the recommendations for establishing an IOOS Education Network as prioritized by conferees at the Second Annual IOOS Implementation Conference through close coordination with the Joint JSOST-SIMOR Education Task Force, once it is established.*

Although participating Federal Agencies may focus on selected priorities and actions given above, the interagency consensus is to accept the priorities as a whole.”

V. Fiscal Year 2007 Activities and Plans

NOPP-FUNDED ACTIVITIES

FY 2007 anticipated agency contributions for NOPP-Funded Activities are indicated in Table 3.

Table 3. Anticipated FY 2007 Agency Contributions to NOPP-Funded Activities by Investment Area. This includes Solicited Projects (projects solicited through NOPP BAAs and RFPs) and Managed Activities.

	N O A A	N A V Y	N S F	N A S A	M M S	D O E	E P A	U S A C E	U S G S	D O S	U S C G	O S T P	O M B	D A R P A	D H S
NOPP-Solicited Projects	X	X	X	X	X		X	X	X						
NOPP-Managed Activities	X	X	X	X	X		X	X	X						
FY 2007 Anticipated Expenditures (\$M)	11.4	6.2	2.2	3.0	1.1	0	*	0.1	0.1	0	0	0	0	0	0

*anticipated expenditures of less than \$100K

NOPP-Solicited Projects

A solicitation was issued in August 2006 for funding in FY 2007. Up to \$18M is expected to be available over three years for projects addressing two topics: *Marine Mammals* and *Coastal Effects of a Diminished-Ice Arctic Ocean*. The two proposal reviews were conducted in March and April 2007, respectively. The URL link to the full solicitation is included in Appendix 2.

NOPP-Managed Activities

NOPP hosted NOSB and NOPP exhibit booths at the American Geophysical Union (AGU) meeting in San Francisco in December 2006. NOSB is scheduled to present at the National Marine Educators Association (NMEA) in Portland, ME, in July 2007.

The finals of the 2007 NOSB competition were held in Stony Brook, NY, on 28-30 April 2007. This is the tenth year of the program.

In February 2007, a 5-year proposal for NOSB was submitted in response to a funding announcement issued by NOAA, as the lead agency handling NOSB funding. This proposal underwent review in Spring 2007.

NOPP-RELATED ACTIVITIES

The agencies of the IWGOO (formerly Ocean.US EXCOM) will continue to support the activities of the Ocean.US office. NOAA will continue to help build regional observing system capacity by supporting the establishment of IOOS Regional Associations and providing support for COTS projects. These projects are participating in the development of their Regional Associations and are creating observing system capacity that will coalesce into the regional observing system. NOAA will continue working with these entities and other IWGOO agencies to foster greater communication and collaboration in the development of an organizational and data management infrastructure to support IOOS.

NATIONAL OCEAN RESEARCH LEADERSHIP COUNCIL

In April 2007, the NORLC expanded its membership and merged its mandate with that of the ICOSRMI, maintaining and building on the progress made through NOPP while functioning in harmony with the OAP governance structure.

OCEAN RESEARCH AND RESOURCES ADVISORY PANEL

The ORRAP met on 30-31 October 2006 and again on 21-22 February 2007. Translating research to applications remained the central theme at the October 2006 meeting, but with a Federal government focus. Representatives from NOAA, EPA, NASA, USACE, DOI, and Navy gave brief presentations on how research was translated into applications within their respective agencies and then participated in an extended dialogue with the ORRAP on challenges, solutions, successful models, and lessons learned. Part of the discussion centered on metrics for measuring success and how to communicate results, values and success to Congress.

Other major items on the October 2006 agenda were reports on NSF's Ocean Observatories Initiative, the Ocean Research Interactive Observatory Networks (ORION) program, and the ORPPIS.

The ORRAP will continue to focus on translating research into applications. Its Research to Applications Task Force (RATF) is currently drafting a report assessing the strengths and limitations of several existing research to applications models, including lessons learned, and will submit the final document to the ORRAP later this year. The ORRAP will consider the findings of the report when developing research to applications-related recommendations to the ICOSRMI.

The Education and Industry Sub-panels will examine the issue of current and future manpower needs in the ocean sciences, especially in relation to the development and implementation of ocean observing systems and new ocean sensing technologies. Among the other issues the ORRAP will continue to track are oceans and human health, ocean observing systems and coordination among them, implementation of the JSOST's ORPP, and progress on the SIMOR's work plans and outreach and communication activities.

The panel established an Ocean Observations Sub-panel and is in the process of developing the Sub-panel's Charge and membership. The panel elected Dr. Jerry Schubel to replace Dr. Stephen Weisberg as the second Vice-Chair.

INTERAGENCY WORKING GROUP

The NOPP IWG (now operating as IWG-OP) will continue to meet monthly in FY 2007 in support of the NORLC and the NOPP Strategic Goals. Efforts will continue along its strategic planning and

implementation process, specifically in support of the ORPP. The IWG-OP will also work toward improving interagency partnership flexibility. Other activities will focus on ocean education efforts such as the NOSB, generating topics for FY 2007 solicitations, compiling annual research reports, working with OAP committees to advance NOPP activities in conjunction with ORPP research priorities, and developing the next Annual Report to Congress.

FEDERAL OCEANOGRAPHIC FACILITIES COMMITTEE

The FOFC (now operating as IWG-F) has met three times in FY 2007. Major activities included making final revisions to the *National Oceanographic Fleet Report* based on comments submitted by NOPP agencies, potential collaboration with the National Undersea Research Program, and future initiatives. The FOFC will continue to inventory and/or develop a long-term vision for the Federal oceanographic research and operational facilities in the U.S, and direct its focus on future interagency ocean science, technology, and infrastructure priorities.

FEDERAL OCEANOGRAPHIC FACILITIES COMMITTEE WORKING GROUP

The FWG will continue to meet as necessary in support of the IWG-F. Activities will focus on the final stages of completing the *National Oceanographic Fleet Report*.

OCEAN.US / INTEGRATED OCEAN OBSERVING SYSTEM

As the IOOS integration process is begun, the focus turns to the development of an “end-to-end,” enterprise architecture for IOOS. Such a system requires many players from different sectors, and Ocean.US will continue to clarify the roles and responsibilities of the research/academic community, government agencies and private sector.

Work plans have been developed to accomplish the most critical of the Ocean.US objectives in FY 2007. Anticipated FY 2007 highlights include:

- The drafting of an Implementation Plan as a follow-on to the IOOS Development Plan approved in FY 2006.
- Participation with NOAA and the IWGOO in writing an IOOS strategic plan, as requested by Congress.
- Publication of preliminary DMAC certification criteria and completion of an addendum to the 2005 DMAC Plan.
- Negotiations with members of the private sector in an effort to further develop the applications areas of IOOS.
- Participation in the Arctic GOOS, a consortium of GOOS Regional Alliances (GRAs) dedicated to operational oceanography in the Arctic in coordination with the International Polar Year. A plan is being drafted in concert with the participating IOOS regions to detail the role of IOOS in this international effort.
- Collocation with the NOAA Office of Climate Observation and the NOAA IOOS Program Office. This move will help articulate the synergies between Ocean.US, as an interagency office, and the internal NOAA IOOS office.

VI. Fiscal Year 2008 Plans

Agency-specific budget requests for the FY 2008 Administration's Budget have recently been announced; therefore, precise funding levels and associated programmatic issues are not yet firmly established. The NOPP agencies anticipate contributions to NOPP to be comparable to that of FY 2007 and anticipate supporting NOPP's four Strategic Goals.

It is anticipated that the four Goals will be addressed through the JSOST IWGs on Ocean Observations, Ocean Education (jointly with SIMOR), Facilities, and Ocean Partnerships. Topics for FY 2008 BAAs are expected to complement the near-term priorities laid out in the ORPP.

NOAA will continue to utilize COTS funds to support the Ocean.US Office and development of regional observing system capacity.

VII. Interagency Coordination Activities

The central tenet of NOPP is interagency partnership. The most recent activities are described in previous sections of this report. The solicitations funded in FY 2006 focused on IOOS, science and technology development, and science and technology application to resource-related issues. FY 2007 topics focused on marine mammals and an ice-diminished Arctic. In the near term, the primary thrust of NOPP will be to continue in these directions: development and implementation of IOOS, coordinated by the Ocean.US office; an increasing emphasis on partnership solicitations that facilitate the integration of science and technology with resource management; and ocean education.

As the NOPP governance structure continues to transition to the new ocean governance structure of the OAP, the expanded involvement of Federal agencies is expected to provide new opportunities for interagency coordination. It is anticipated that the JSOST Ocean Research Priorities Plan and Implementation Strategy will be a catalyst for partnership activities over the next decade.

VIII. NOPP Investment Profile

NOPP-FUNDED ACTIVITIES

Figure 3 shows the growth of NOPP-Funded Activities from FY 1997-2006, as well as the breakdown by subcategory for solicited projects and managed activities. In FY 2006, the total funding was \$31M.

NOPP-Solicited Projects

NOPP-Solicited Projects are those funded as a direct result of a formal NOPP Broad Agency Announcement (BAA) or Request for Proposals (RFP). The funding level for solicited projects has grown from \$12M in FY 1997 to \$27M in FY 2006 (Figure 3). The cumulative investment from FY 1997-2006 is \$207M. Through 2006, there have been 110 funded projects, including 21 renewal projects. On average, 11 new projects are started each year, with a typical duration of three years.

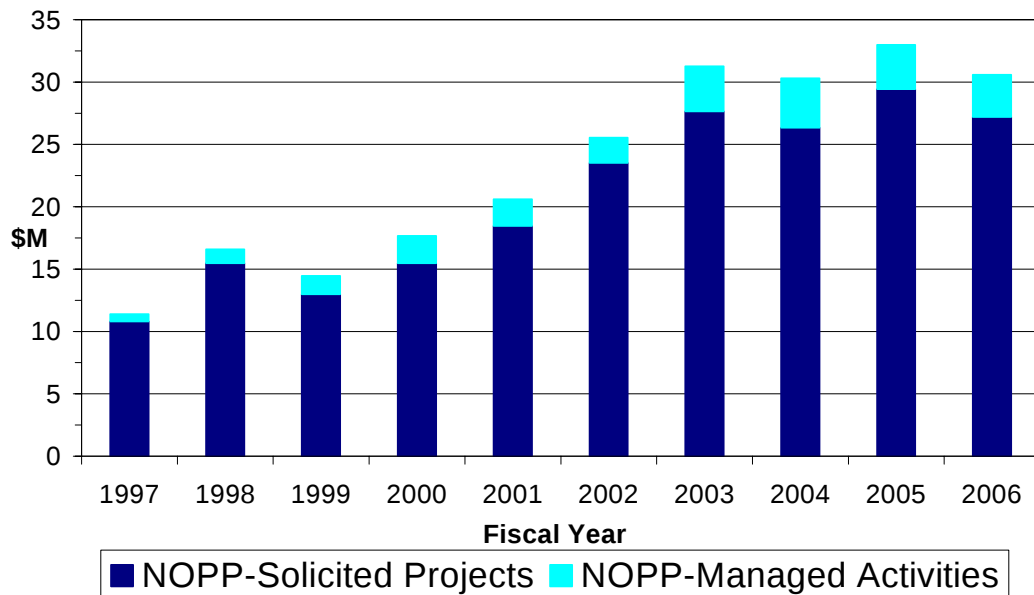


Figure 3. FY 1997-2006 investment in NOPP-Funded Activities, including both NOPP-Solicited Projects and NOPP-Managed Activities. Note that the dollar amounts shown are those spent each year; out-year commitments are not shown.

One of the primary functions of NOPP is to promote partnerships within the Federal government and between the Federal government and other members of the ocean sciences community, including academia, industry and non-governmental organizations. Figure 4 shows the annual distribution of funding for new awards across sectors within the ocean science community. On average, over NOPP's ten years, approximately 59 percent, 25 percent and 16 percent of the funds have been awarded to academic, government and industry (including non-governmental organizations/others) partners, respectively.

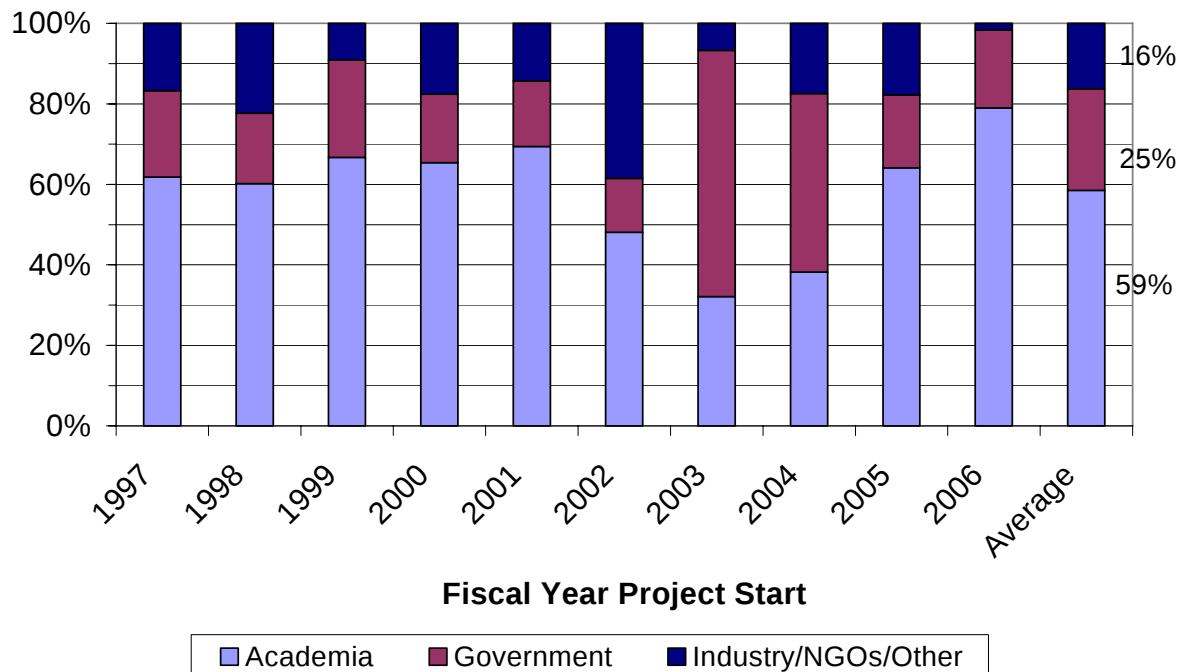


Figure 4. The distribution of annual NOPP funding for new solicited project awards by sector from FY 1997-2006 for academia, government, and industry (includes NGOs/others). The bar on the far right indicates the ten-year sector averages.

NOPP-Managed Activities

Current NOPP-Managed Activities include expenditures for the NOPP Office (see page 6), the Ocean.US office (see page 6), and the NOSB (www.nosb.org). Past projects include the Ocean Information Technology Infrastructure initiative (<http://www.geo-prose.com/oiti/>), the Virtual Ocean Data System (<http://ferret.wrc.noaa.gov/NVODS/servlets/index?page=4>), and the Year of the Ocean Drifters (<http://www.coreocean.org/Dev2Go.web?id=221198>). The funding level for managed activities has grown from \$0.6M in FY 1997 to \$3.4M in FY 2006 (Figure 3). The cumulative expenditure for these activities is \$24M from FY 1997-2006.

NOPP-RELATED ACTIVITIES

In addition to NOPP-Funded Activities, individual agencies invest in NOPP-Related Activities. Examples include new investments in activities overseen by NOPP entities such as Ocean.US and FOFC (now IWG-F). These investments fulfill the broad cross-cutting oceanographic goals and partnerships embraced by NOPP, but they are primarily single-agency expenditures.

Appendix 1. Committee Membership

NATIONAL OCEAN RESEARCH LEADERSHIP COUNCIL (NORLC) ¹

Department of Commerce / NOAA (Chair)	Under Secretary of Commerce for Oceans and Atmosphere
Department of Defense / United States Navy (Vice-Chair)	Secretary of the Navy
National Science Foundation (Vice-Chair)	Director
National Aeronautics and Space Administration	Administrator
Department of Energy	Under Secretary for Energy, Science and Environment
Environmental Protection Agency	Administrator
Office of Science and Technology Policy	Director
Office of Management and Budget	Director
Department of the Interior / United States Geological Survey	Director, USGS
Department of the Interior / Minerals Management Service	Director, MMS
United States Army Corps of Engineers	Deputy Assistant Secretary of the Army (Civil Works) for Policy
Department of State	Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs
Defense Advanced Research Projects Agency	Director
Department of Homeland Security / United States Coast Guard	Commandant, USCG
Department of Homeland Security	Undersecretary for Science and Technology

¹ For more detailed information about the NORLC, visit: <http://www.nopp.org/Dev2Go.web?id=207765>

NORLC Expanded Membership²

Council on Environmental Quality	Associate Director for Ocean and Coastal Policy
Department of Agriculture	Under Secretary of Agriculture for Natural Resources and Environment
Joint Chiefs of Staff	Chairman
Department of Health and Human Services	Director, National Institutes of Environmental Health Sciences
Department of the Interior	Assistant Deputy Secretary
Department of Justice	Principal Deputy Attorney General, Environment and Natural Resources Division
Department of Labor	Deputy Assistant Secretary for Policy
Department of Transportation	Assistant Secretary of Transportation Policy
Office of the Vice President	Deputy Assistant Secretary to the Vice President for Domestic Policy
Domestic Policy Council	Deputy Assistant to the President for Domestic Policy
National Economic Council	Deputy Assistant to the President for Economic Policy and Deputy Director
National Security Council	Special Assistant to the President and Senior Director for International Trade, Energy and the Environment
Homeland Security Council	Deputy Assistant to the President for Homeland Security and Executive Secretary
Joint Subcommittee on Ocean Science and Technology	Co-Chairs
Subcommittee on Integrated Management of Ocean Resources	Co-Chairs
Subcommittee on Oceans Policy of the National Security Council's Global Environment Policy Coordinating Committee	Chair

² At its 27 April 2007 meeting, the NORLC expanded its membership and merged with the ICOSRMI. It now functions under the ICOSRMI name, to be consistent with the OAP. Co-Chairs are OSTP and CEQ. Further OAP details and membership lists can be found at the following CEQ website: <http://ocean.ceq.gov>

OCEAN RESEARCH AND RESOURCES ADVISORY PANEL (ORRAP)

Note: This group was renamed from the Ocean Research Advisory Panel (see page 3)

Earth2Ocean, Inc.	Dr. Ellen Prager (Chair)
Southern California Coastal Water Research Project	Dr. Stephen Weisberg (Vice-Chair)
Hernandez and Company	Ms. Debra Hernandez (Vice-Chair)
Alfred P. Sloan Foundation	Mr. Jesse Ausubel
University of South Florida	Dr. Peter Betzer
Harris Maritime Communication Services, Inc.	Dr. Andrew Clark
University of Miami	Dr. Robert Cowen
Savannah State University	Dr. Matthew Gilligan
Chair, Ocean Studies Board, NAS	Dr. Shirley Pomponi
Scripps Institution of Oceanography	Dr. Richard Seymour
University of Hawaii	Dr. Celia Smith
Science Applications International Corporation	Mr. Raymond Toll

New Members as of 1 July 2007³

Aquarium of the Pacific	Dr. Jerry Schubel
Louisiana State University	Dr. James Coleman
Maine Department of Marine Resources	Mr. George Lapointe
Alaska Ocean Observing System	Ms. Molly McCammon
Ohio State University	Dr. Jeffrey Reutter
Environmental Protection Agency	Mr. Robert Wayland (ret.)

For more detailed information, visit: <http://www.nopp.org/Dev2Go.web?id=207773>

³ As of 1 July 2007, seven members (Prager, Weisberg, Ausubel, Clark, Gilligan, Seymour, Toll) rotated off the ORRAP as six new members began their terms. In addition, Jerry Schubel was named the new Chair.

INTERAGENCY WORKING GROUP (IWG)

**National Oceanic and Atmospheric Administration
(Chair)**

United States Navy (Vice-Chair)

National Science Foundation (Vice-Chair)

National Aeronautics and Space Administration

Department of Energy

Environmental Protection Agency

United States Coast Guard

United States Geological Survey

United States Army Corps of Engineers

Minerals Management Service

Office of Management and Budget

Department of State

Office of Science and Technology Policy

Defense Advanced Research Projects Agency

Department of Homeland Security

Ex Officio Members:

Chair, Ocean.US EXCOM

Chair, FOFC

Director, Ocean.US

For more detailed information, visit:

<http://www.nopp.org/Dev2Go.web?id=207767>

FEDERAL OCEANOGRAPHIC FACILITIES COMMITTEE (FOFC)

Oceanographer of the Navy (Chair)

National Science Foundation

Office of Naval Research

National Oceanic and Atmospheric Administration

United States Coast Guard

Environmental Protection Agency

Minerals Management Service

Department of State

United States Army Corps of Engineers

Department of Energy

United States Geological Survey

National Aeronautics and Space Administration

DARPA Advanced Technology Office

For more detailed information, visit:

<http://www.nopp.org/Dev2Go.web?id=207766>

FOFC WORKING GROUP (FWG)

**National Oceanic and Atmospheric Administration
(Chair)**

United States Coast Guard

National Aeronautics and Space Administration

Oceanographer of the Navy

National Science Foundation

Office of Naval Research

Ocean.US

Environmental Protection Agency

Oceanographer of the Navy

National Oceanic and Atmospheric Administration

National Science Foundation

Department of State

OCEAN.US EXECUTIVE COMMITTEE (EXCOM)

**National Aeronautics and Space Administration
(Chair)**

United States Coast Guard

United States Army Corps of Engineers

United States Geological Survey

Minerals Management Service

Environmental Protection Agency

National Oceanic and Atmospheric Administration

Oceanographer of the Navy

National Science Foundation

Department of Energy

For more detailed information, visit:

<http://www.nopp.org/Dev2Go.web?id=260662>

Appendix 2. National Oceanographic Partnership Program Broad Agency Announcements (BAA)

FY 2006 NOAA REQUEST FOR PROPOSALS #OAR-ORS-2006-2000414

Topic:

- **The Argo Project: Global Ocean Observations for Understanding and Prediction of Climate Variability**

Full RFP text can be found at:

<http://www.nopp.org/iDuneDownload.dll?GetFile?AppId=141&FileID=315320&Anchor=&ext=.pdf>

FY 2006 ONR BROAD AGENCY ANNOUNCEMENT (BAA) #05-026

Topics:

- **Understand, identify gaps and predict changes in the workforce for ocean sciences, technology, and operations**
- **An Open-Source Community Model for Coastal Sediment Transport**

Full BAA text can be found at: http://www.onr.navy.mil/02/baa/docs/baa_05_026.pdf

FY 2007 ONR BROAD AGENCY ANNOUNCEMENT (BAA) #06-029

Topics:

- **Coastal Effects of a Diminished-Ice Arctic Ocean**
- **Marine Mammals**

Full BAA text can be found at: http://www.onr.navy.mil/02/baa/docs/baa_06_029.pdf

Appendix 3. NOPP-Funded Projects Initiated in FY 2006

THE ARGO PROJECT: GLOBAL OCEAN OBSERVATIONS FOR UNDERSTANDING AND PREDICTION OF CLIMATE VARIABILITY

“The Argo Project: Global Ocean Observations for Understanding and Prediction of Climate Variability”

Lead PI: Dr. Dean Roemmich, Scripps Institution of Oceanography

Funding Requested: \$53,003,970

A project summary can be found at: <http://www.nopp.org/Dev2Go.web?id=303394&rnd=13142>

UNDERSTAND, IDENTIFY GAPS, AND PREDICT CHANGES IN THE WORKFORCE FOR OCEAN SCIENCES, TECHNOLOGY, AND OPERATIONS

“Understanding and Predicting Changes in the Workforce for Ocean Sciences, Technology and Operations”

Lead PI: Dr. Deidre Sullivan, Marine Advanced Technology Education Center

Funding Requested: \$575,000

A project summary can be found at: <http://www.nopp.org/Dev2Go.web?id=303401#SULLIVAN>

AN OPEN-SOURCE COMMUNITY MODEL FOR COASTAL SEDIMENT TRANSPORT

“Community Sediment Transport Model”

Lead PI: Dr. W. Rockwell Geyer, Woods Hole Oceanographic Institution

Funding Requested: \$2,692,297

A project summary can be found at: <http://www.nopp.org/Dev2Go.web?id=303394&rnd=15477>

Appendix 4. FY 2006 Coastal Observation Technology System Projects

The Coastal Observation Technology System (COTS) project grants currently funded by NOAA are designed to further the development of integrated coastal ocean observing systems on a regional basis. The overarching goal of COTS projects is to develop regional capacity for coastal/ocean observations by creating infrastructure (e.g., sensors, data management systems) and methodologies to collect, share, and integrate environmental data and create useful information products. These projects, all congressionally directed, are creating the initial observing system capacity that will form the nucleus of the regional observing systems (RCOOS). In FY06, NOAA funded 15 COTS projects for a total amount of approximately \$26.3M. Twelve of these were continuing from FY05, two received continued funding after a gap in FY05, and one was a new award. These projects address a range of topics and approaches related to IOOS, including sensor technologies, coastal inundation, coastal ecosystem dynamics, harmful algal blooms, maritime navigation, sediment resources, fisheries, and the use of IOOS information in education. In addition, these projects have assumed a key role in developing standards and protocols for IOOS data management and sharing.

NOAA also supports the Ocean.US office and is working with the COTS partners and other Federal agencies to ensure that projects conform to the vision and implementation requirements of an integrated ocean observing system. Additionally, NOAA is engaged with the private and academic sectors to determine the economic value of enhanced ocean observations and to define relationships and respective roles to ensure that Federal resources are focused on providing essential core functions.

Prior to FY05 reports, funding for Regional Association development (coordination) grants were included in our discussion of COTS projects because the funding was derived from the “COTS line” in the NOAA appropriation. In FY05, the funding source for these projects changed and it may no longer be appropriate to classify them as COTS projects. In FY03, NOAA funded six competitively selected projects to begin engaging IOOS stakeholders and developing organizational/governance structures (e.g., business plans) for IOOS regional associations as components of the IOOS. Two more were added in FY04, and in FY05, funding was provided to 11 regions, the total presently envisioned in the IOOS Development plan. Funding was increased in FY05 to a total of approximately \$3.5M and to \$3.9 M in FY06 and is based on demonstrated need for each region.

The regional organization component is establishing the necessary coordination framework for the various groups working within and across regions. NOAA’s Coastal Services Center is the lead NOAA office for COTS and Regional Association projects and works closely with Ocean.US to ensure effective communication across projects. The contribution from Ocean.US in this report provides additional information related to the IOOS Regional Associations.

****Summaries of all COTS projects can be found at: <http://www.nopp.org/Dev2Go.web?id=205279>**

Acronyms and Abbreviations

AAALAC	Association for Assessment and Accreditation of Laboratory Animal Care
ACT	Alliance for Coastal Technologies
AER	Atmospheric and Environmental Research, Inc.
AGU	American Geophysical Union
AOOS	Alaska Ocean Observing System
AOR	Authorized Organization Representative
AUV	Autonomous Underwater Vehicle
BAA	Broad Agency Announcement
Caro-COOPS	Carolinas Coastal Ocean Observing and Prediction System
CBL	Chesapeake Biological Laboratory
CCR	Central Contractor Registry
CeNCOOS	Central and Northern California Ocean Observing System
CenGOOS	Central Gulf of Mexico Ocean Observing System
CEQ	Council on Environmental Quality
CFDA	Catalog of Federal Domestic Assistance
CICEET	Cooperative Institute for Coastal and Estuarine Environmental Technology
CICORE	California Center for Integrative Coastal Ocean Research
CIMT	Center for Integrated Marine Technologies
CIT	Center for Innovative Technology
CLIVAR	CLimate VARIability and Predictability Program
COAST	Coastal and Ocean Science Training
COBY	Coastal Bio-Optical Buoy
CoML	Census of Marine Life
COOA	Coastal Ocean Observing and Analysis
COP	Committee on Ocean Policy
CORE	Consortium for Oceanographic Research and Education
CORMP	Coastal Ocean Research and Monitoring Program
COSEE	Centers for Ocean Science Excellence in Education
COTS	Coastal Observation Technology System
CSC	Coastal Services Center
CSU	California State University
CTD	Conductivity-Temperature-Depth
DARPA	Defense Advanced Research Projects Agency
DEQ	Department of Environmental Quality
DFARS	Defense Federal Acquisition Regulation Supplement
DHHS	Department of Health and Human Services
DHS	Department of Homeland Security
DMAC	Data Management and Communications
DMS	Department of Marine Science
DoC	Department of Commerce
DoD	Department of Defense
DODGARS	Department of Defense Grant and Agreement Regulations
DoE	Department of Energy

DoI	Department of Interior
DoN	Department of the Navy
DoS	Department of State
DUNS	Data Universal Numbering System
EPA	Environmental Protection Agency
ETL	Environmental Technology Laboratory
EXCOM	Ocean.US Executive Committee
FAR	Federal Acquisition Regulation
FGDC	Federal Geographic Data Committee
FOFC	Federal Oceanographic Facilities Committee
FR	Federal Register
FWG	FOFC Working Group
FY	Fiscal Year
G&A	General and Administrative
GCOOS	Gulf of Mexico Coastal Ocean Observing System
GCOOS-RA	Gulf of Mexico Coastal Ocean Observing System Regional Association
GCOS	Global Climate Observing System
GEOSS	Global Earth Observation System of Systems
GFE	Government Furnished Equipment
GODAE	Global Ocean Data Assimilation Experiment
GOM	Gulf of Maine
GoMMaP	Gulf of Maine Mapping Portal
GoMOOS	Gulf of Maine Ocean Observing System
GOOS	Global Ocean Observing System
GRA	GOOS Regional Alliance
GTS	Global Telecommunications System
HAB	Harmful Algal Bloom
HF	High Frequency
HPCMP	High Performance Computing Modernization Program
IACUC	Institutional Animal Care and Use Committees
ICOSRMI	Interagency Committee on Ocean Science and Resource Management Integration
IEOS	Integrated Earth Observing System
IOOS	Integrated Ocean Observing System
IPY	International Polar Year
IRB	Institutional Review Board
IWG	Interagency Working Group
IWG-F	Interagency Working Group on Facilities
IWGOO	Interagency Working Group on Ocean Observations
IWG-OP	Interagency Working Group on Ocean Partnerships
JSOST	Joint Subcommittee on Ocean Science and Technology
KSS	Knowledge and Skill Sets
LIDAR	LIght Detection and Ranging
LIS	Long Island Sound
LISICOS	Long Island Sound Integrated Coastal Observing System
MAB	Mid-Atlantic Bight

MACORA	Mid-Atlantic Coastal Ocean Regional Association
MMS	Minerals Management Service
MOA	Memorandum of Agreement
NANOOS	Northwest Association of Networked Ocean Observing Systems
NASA	National Aeronautics and Space Administration
NDBC	National Data Buoy Center
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NIH	National Institutes of Health
NMEA	National Marine Educators Association
NOAA	National Oceanic and Atmospheric Administration
NOPP	National Oceanographic Partnership Program
NOPPO	National Oceanographic Partnership Program Office
NORLC	National Ocean Research Leadership Council
NOS	National Ocean Service
NOSB	National Ocean Sciences Bowl
NRL	Naval Research Laboratory
NSF	National Science Foundation
NSTC	National Science and Technology Council
OAP	Ocean Action Plan
OAR	Office of Atmospheric Research
OASIS	Ocean-Atmosphere Sensor Integration System
OBIS	Ocean Biogeographic Information System
Oceans Sub-PCC	Subcommittee on Oceans Policy
OHRP	Office of Human Research Protections
OMB	Office of Management and Budget
ONR	Office of Naval Research
OOI	Ocean Observatories Initiative
OOS	Ocean Observing System
ORAP	Ocean Research Advisory Panel
OrCOOS	Oregon Coastal Ocean Observing System
ORPP	Ocean Research Priorities Plan
ORPPIS	Ocean Research Priorities Plan and Implementation Strategy
ORRAP	Ocean Research and Resources Advisory Panel
ORION	Ocean Research Interactive Observatory Networks
OSTO	Ocean Science, Technology and Operations
OSTP	Office of Science and Technology Policy
OSU	Oregon State University
PCC	Policy Coordinating Committee
PFEL	Pacific Fisheries Environmental Laboratory
PI	Principal Investigator
POC	Point of Contact
PWS	Prince William Sound
QA/QC	Quality Assurance/Quality Control
RA	Regional Association

RARGOM	Regional Association for Research on the Gulf of Maine
RATF	Research to Applications Task Force
RCOOS	Regional Coastal Ocean Observing System
RFP	Request for Proposals
ROMS	Regional Oceanic Modeling System
ROV	Remotely Operated Vehicle
SBIR	Small Business Innovative Research
SCB	Southern California Bight
SCCOOS	Southern California Coastal Ocean Observing System
SCOOP	SURA Coastal Ocean Observing and Prediction
SEACOOS	SouthEast Coastal Ocean Observing System
SECOORA	Southeast Coastal Ocean Observations Regional Association
SIMOR	Subcommittee on Integrated Management of Ocean Resources
SOW	Statement of Work
Sub-PCC	Global Environment Policy Coordinating Committee Subcommittee on Oceans
SURA	Southeastern Universities Research Association
TOPP	Tagging of Pacific Pelagics
TOV	TeleOperated Vehicle
UCSC	University of California Santa Cruz
UNH	University of New Hampshire
UNOLS	University-National Oceanographic Laboratory System
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USCOP	United States Commission on Ocean Policy
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USN	United States Navy
WFF	Wallops Flight Facility