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Honorable Thad Cochran
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Honorable Barbara Mikulski
Ranking Member
Committee on Appropriations
United States Senate
Washington, D.C. 20510

Honorable Hal Rogers
Chairman
Honorable Nita Lowey
Ranking Member
Committee on Appropriations
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairmen and Ranking Members:

As the Committee and its Members begin the difficult task of finalizing funding decisions for the various FY 2016 agencies and programs, the National Association of Marine Laboratories (NAML) would like to urge maximum funding for important federal ocean, coastal, and Great Lakes research and education programs.

Specifically NAML supports relevant programs managed by the National Science Foundation (NSF), the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), the Environmental Protection Agency (EPA), the U.S. Geological Survey (USGS), the Bureau of Ocean Energy Management (BOEM), the U.S. Fish and Wildlife Service, the National Institute of Environmental Health Sciences (NIEHS), and the Department of Energy (DOE).

NAML's views are drawn from and strongly support two important and recent reports from the National Academy of Sciences: *Sea Change: 2015-2025 Decadal Survey of Ocean Sciences* (DSOS); and *Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21st Century*.

More than half of the United States population lives in coastal counties that generate 58% ($8.3 trillion) of the Nation's gross domestic product (GPD). In 2011, Americans, on average, ate 15 pounds of fish and shellfish per person – 4.7 billion pounds all together – making the U.S. second in the world in total seafood consumption. Offshore oil production in the U. S. Exclusive Economic Zone accounts for 24% of the total U.S. crude oil production. If American coastal watershed counties collectively comprised a single country, that country would have a GDP higher than that of China. The United States has jurisdiction over 3.4 million square miles of oceans – an expanse greater than the land area of all 50 states combined. This is a dynamic area that offers a mosaic of biologically diverse habitats that provide a wealth of environmental resources and economic opportunities, while at the same exposing human and biological communities to hazards such as damaging tsunamis and hurricanes, industrial accidents and outbreaks of water borne pathogens. The 2010 Gulf of Mexico *Deepwater Horizon* oil spill and Sandy in 2012 are vivid reminders that the depth of our understanding of our oceans and coastal areas, and our ability to protect them, is far from complete. Developing sufficient capabilities to sustain ocean-based economies and protect our coasts and coastal communities from natural and man-made hazards requires a sustained, balanced investment in research, infrastructure, education, and training.

NAML believes the Nation is driven by innovation — advances in ideas, products and processes that transform existing economies, create new industries and jobs, and contribute to our nation's economic health and national security. It is essential that the nation reaffirms and revitalizes the unique partnership that exists between the Federal Government, the states, business and the nation's research and education enterprise. **Investing in the nation's research enterprise** has contributed significantly to our long-term prosperity and technological pre-eminence through research spanning a landscape of disciplines, from the earth and geosciences, physics to geology, chemistry to biology, engineering to social sciences, and observing to modeling. NAML urges the conferees to strongly support the federal investment in all fields

of science and engineering – particularly the earth, geo, and environmental sciences upon which the health of our planet and our citizens depend.

NAML believes that **research and education programs at the major federal science agencies with ocean and coastal responsibilities should be viewed as priority investments** in the future health and well being of the Nation. Much attention has been focused justifiably on the need for our Nation to continue its support of premier basic research programs. It is also important to maintain strong support for mission-oriented ocean, coastal and Great Lakes research that includes long term observing programs. Research programs that enhance agency missions and support the extramural community in competitive, merit-based research provide highly cost-effective returns on investment and distribute economic and societal benefits over a broad array of communities. NAML urges the conferees to restore to the maximum extent possible support for both extramural and intramural research, education, and other related programs at the mission agencies, while also continuing to limit, in the case of NOAA, its ability to compete with the private sector for non-federal resources needed for research, education, and conservation programs.

NAML also believes that **enhanced networking infrastructure support is needed to meet growing demands for scientific information** needed for the safe, efficient, and environmentally sustainable use of our ocean, coastal and Great Lakes resources. Historically, most marine laboratories have operated independently of one another. Greater networking among marine laboratories, field stations, and other research centers would leverage resources to facilitate discovery and spark innovation, as well as lead to efficiencies while broadening coverage of key monitoring programs. Networking would also allow institutions to share best practices, protocols, and platforms for data archiving and retrieval. Such networking has the potential to open new arenas of scientific inquiry, education, and outreach. One common element, however, in need of attention is enhanced cyberinfrastructure, which would facilitate data sharing and analysis. Installation of new cyberinfrastructure requires data-management and data-sharing plans and conformity of data with widely used metadata standards. Such infrastructure also requires a long-term funding commitment for repair, upgrades, and technical support.

NAML urges the conferees to **support STEM education** in two specific ways. First, enhance ocean STEM education to ensure that all citizens recognize the reciprocal effects of the oceans, coasts and Great Lakes on their own lives, and the impacts citizens have on these environments. Secondly, to provide formal research and training opportunities at K-12, college, and post-graduate levels to ensure a scientifically savvy, technically qualified, and ethnically diverse workforce capable of solving problems and answering questions related to the protection, restoration and management of coastal and ocean ecosystems, climate variability, and societal needs. An informed and engaged public is essential for the nation to address complex ocean- and coastal-related issues, balance the use and conservation of marine resources, and maximize future benefits from the ocean.

NAML recognizes the constraints the conferees face with respect to scarce public resources and the difficult decisions that come with those constraints. Nevertheless, we hope we can convince you and your colleagues to view research and education – in the oceans, our coasts, and the Great Lakes – as a key investment that will pay important dividends in the future economic health and security of our citizens now and into the future. Thank you for the opportunity to present these views.

Sincerely,

Nancy Rabalais

Nancy Rabalais, President