

Testimony of the Joint Ocean Commission Initiative to the U.S. House of Representatives Committee on Appropriations, Subcommittee on Commerce, Justice, Science, and Related Agencies

March 31, 2014

Chairman Wolf, Ranking Member Fattah, and other distinguished Members of the Subcommittee on Commerce, Justice, Science, and Related Agencies, we thank you for the opportunity to submit written testimony regarding the Fiscal Year (FY) 2015 Commerce, Justice, Science, and Related Agencies appropriations bill.

The Joint Ocean Commission Initiative, a collaborative, bipartisan effort to catalyze ocean policy reform, urges incremental but significant increases for programs necessary to understand, protect, and restore our oceans and coasts, so vital to our nation's economy and security. In particular we ask you to continue the progress made in the President's FY 2015 budget request and provide \$5.6 billion for NOAA to protect those core programs that sustain our oceans, coasts, and fisheries.

We greatly appreciate your strong support of ocean and coastal issues over many years, and we understand the difficult choices made each year regarding scarce resources to address critically important issues under your jurisdiction. Our written testimony covers the following issues: coastal resilience; ocean observations; ocean acidification; STEM consolidation; ocean exploration; science, research, and education; and the Arctic.

Coastal Resilience

The Joint Initiative strongly supports the Regional Coastal Resilience Grant program in NOAA's FY 2015 budget, and we ask that you consider funding this program at \$10 million, a \$5 million increase from the President's FY 2015 proposal. This program can provide competitive funding to support multi-state regional ocean partnerships that coordinate data sharing and decision making across jurisdictions, implement innovative solutions to shared priorities, and effectively engage ocean and coastal stakeholders.

These partnerships are increasingly critical as states and communities confront challenges such as ocean acidification, sea level rise, competing demands for ocean uses, burgeoning populations along our coasts, and increasing threats from extreme weather events. The pressures facing our coastal communities and ecosystems demand

concerted efforts to increase their resilience. This means boosting their ability to anticipate risk, limit impact, rapidly recover, and adapt to changing conditions.

Resilient coastal communities are not only able to minimize loss and negative impacts to life, property, and the coastal ecosystem, they are also able to quickly return residents to productive activities and restore essential services. This is imperative to facilitating full and timely economic, social, and environmental recovery. Recognizing the importance of regional solutions, Governors have already joined together to share information and coordinate with federal agencies, businesses, nongovernmental organizations, and local governments to better adapt to changes underway in our oceans and on our coasts.

Funding the Regional Coastal Resilience Grant Program at \$10 million will still only address a small fraction of the demand, but it will enable partnerships to more efficiently apply limited resources to ensure the health of our oceans and coasts.

Sustained Ocean Observations

Sustained observations are vitally important to ensure coastal communities have the information necessary to increase overall resiliency. NOAA's Sustained Ocean Observations and Monitoring program funds global observing programs, including floats, drifters, and fixed moorings to provide information essential for accurate forecasting of hurricanes, typhoons, atmospheric rivers and associated flooding, heat waves, and wildfires.

Data and analyses of ocean and atmospheric conditions are increasingly used for drought early warning systems, enhanced tsunami warning systems, and storm surge monitoring. Ocean observations are also imperative for calibrating and validating satellite observations. Maintaining baseline ocean observations in support of weather and regional climate predictions, fisheries management and ecosystem studies, tide and current monitoring, and sea level change is essential.

Funding NOAA's Sustained Ocean Observations and Monitoring program at \$41.3 million will help maintain the continuity of long-term data sets that are essential for ensuring that communities are able to respond and adapt to today's changing world.

Ocean Acidification

The Joint Initiative encourages you, at a minimum, to include the \$8.8 million increase in the President's FY 2015 budget request for Integrated Ocean Acidification, bringing the total funding level to \$15 million.

As oceans become more acidic, there is an urgent need to understand the chemistry, variability, and impact of acidification on the marine environment. Ocean acidification

is happening along every shoreline in the United States. In the Pacific Northwest, it is already killing young oysters by the billions, threatening the shellfish industry. In 2011, the State of Washington convened a Blue Ribbon Panel on Ocean Acidification, which identified gaps in scientific knowledge and recommended management strategies to mitigate immediate threats and improve industry resilience. While shellfish and coral reefs receive most of the attention related to ocean acidification, fisheries, aquaculture, and coastal ecosystems around the nation will be greatly affected.

While ocean acidification is a global problem needing global solutions, funding the Integrated Ocean Acidification program at NOAA at increased levels will allow us to measure and assess the emerging threat of ocean acidification, better understand the complex dynamics causing and exacerbating it, work to determine its impact, and develop mechanisms to address the problem.

STEM Consolidation

The Joint Initiative is deeply alarmed by the major restructuring in the Administration's proposal that would consolidate science, technology, engineering, and mathematics (STEM) programs, including the elimination of funding for ocean education programs in NOAA. We appreciate your thoughtful response to the STEM consolidation proposal noting in your FY 2014 Omnibus Appropriations report that the proposal "failed to sufficiently recognize or support a number of proven, successful programs." We believe NOAA education programs—specifically the NOAA Competitive Education Grants Program, Ocean Exploration and Research education, and Sea Grant STEM education activities including all state Sea Grant Program STEM activities— fall into this category.

By eliminating key ocean education programs at NOAA, we are concerned that ocean science content may be lost in the proposed consolidation, as it is not traditionally viewed as a "core science." In addition, removing education programs from mission-driven agencies such as NOAA, where research is sponsored and conducted, will isolate scientific research and its results from ocean education efforts.

Educating and cultivating current and future ocean stewards is critical, especially given the tremendous growth in careers that require ocean-related education and knowledge. A recent report by the statutorily-created Ocean Research Advisory Panel (ORAP) forecast a need for approximately one million more college graduates than currently estimated in STEM fields over the next decade. This report underscores the need for a STEM literate, and ocean literate, workforce to fill positions in commerce, energy, transportation, energy, food production, national security, and recreation, and tourism.

ORAP also generally agrees with the notion of a Federal education portfolio that is effectively assembled, managed, and leveraged to meet national needs and goals. "To

develop such a portfolio, effective STEM programs should be retained, while others that lack evidence of effectiveness should be eliminated or changed to provide evidence of success.” ORAP is concerned that the proposed consolidation of STEM education programs will lead to further agency “stove piping” and a lack of national coordination.

The Joint Initiative strongly urges you to fund NOAA education programs at increased levels.

Ocean Exploration

The Joint Initiative appreciates your long standing support of ocean exploration at NOAA and requests that you provide \$30 million for the Ocean Exploration program to increase the pace, scope, and efficiency of exploration.

A bipartisan effort since inception, the Ocean Exploration program was strongly endorsed by Congress when created in 2002. The program has greatly contributed to our knowledge of the ocean, including Arctic surveys which enabled the U.S. to argue for an extension of our own Exclusive Economic Zone; baseline characterization of the Deepwater Horizon site in the Gulf before and after the oil spill; discovery of new gas hydrates stretching from Cape Cod to Cape Hatteras, with implications for coastal hazards and ocean acidification; and new fishery habitat maps off the Northeast.

Science, Research, and Education

The Joint Initiative calls attention to the need for consistent and dedicated funding for ocean science, research, and education. We ask you to increase funding for ocean science infrastructure, research, and grant programs at NOAA, National Science Foundation (NSF), and National Aeronautics and Space Administration (NASA) that are working to improve our understanding of critical physical and biological ocean processes. These programs provide local, state, and national decision makers with the information they need to make informed decisions.

In particular, we encourage you to provide \$7.5 billion for the NSF to support core ocean and coastal research and research infrastructure, which are critical to understanding processes that impact the health of the ocean and its role as the “flywheel” that drives global environmental dynamics. Unfortunately, funding challenges within NSF have significantly impacted the Geosciences Directorate and its Division of Ocean Science, thereby seriously eroding funds available to support core research. We also urge \$1.8 billion in funding for the NASA’s Earth Science Division to support critically important ocean and coastal science and education, including ground support and data processing for the multiple Earth observation missions scheduled for launch this year, and key missions currently under development.

Arctic

The Joint Initiative recommends that the FY 2015 appropriations bill make a significant investment toward implementation of the National Strategy for the Arctic Region. This will enable the United States to prepare for taking over chairmanship of the Arctic Council in 2015 and lay the groundwork for sound international management of the region while protecting a sensitive and rapidly changing ecosystem.

The changes occurring in the Arctic are not well understood. The area is seeing an influx of international activity as changes in sea ice coverage and thickness open new shipping routes and provide opportunities for energy exploration. Taking over chairmanship of the Arctic Council is a real opportunity to be an international leader in the Arctic; however, increased funding for federal agencies operating in the Arctic under your jurisdiction, such as NOAA and NSF, is essential if we are to do so. NOAA provides a range of important services essential to our understanding of the Arctic including ocean observation services, weather and sea ice predictions, mapping and charting, and sound management of marine resources.

Concluding Remarks

The Joint Initiative is acutely aware of the challenges you face addressing the funding needs of agencies and programs across the government. However, the Joint Initiative believes a commitment to understanding and protecting our nation’s ocean and coasts is an investment in the future of our country that will provide significant economic, social, ecological, and national security benefits.

Thank you for considering our requests as the Subcommittee begins its FY 2015 appropriations process. The Joint Initiative sincerely appreciates your attention to this matter and stands ready to assist you in advancing positive and lasting changes in the way we manage our nation’s oceans and coasts.

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