WRITTEN STATEMENT OF
JANE LUBCHENCO, Ph.D.
UNDER SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE
AND NOAA ADMINISTRATOR
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

ON THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S
FY 2012 BUDGET REQUEST

BEFORE THE
COMMITTEE ON NATURAL RESOURCES
SUBCOMMITTEE ON FISHERIES, WILDLIFE, OCEANS, AND INSULAR AFFAIRS
U.S. HOUSE OF REPRESENTATIVES

March 31, 2011

Chairman Fleming and members of the committee, before I begin my testimony I would like to thank you for your leadership and the support you have shown the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), one of the Nation's premier environmental science and stewardship agencies. Your continued support for our programs is appreciated as we work to improve the products and services that are vital to supporting America's businesses, communities, and people. I am honored to be here as the Under Secretary of Commerce for Oceans and Atmosphere at NOAA to discuss the President's FY 2012 budget.

Secretary Locke is singularly focused on how the Department of Commerce can help American businesses compete for the jobs of the future. As part of the Commerce Department, NOAA generates value for the Nation by providing the information and services that communities, managers, businesses, and individuals rely on every day to make decisions about their lives and businesses. NOAA touches the lives of every single American; we work 24/7 to keep families safe, property protected, living marine resources vibrant, communities thriving, and businesses strong. NOAA works everywhere, in every state, and from the surface of the sun to the depths of the ocean. Our research informs our many services and science guides our stewardship of the oceans, coasts, and Great Lakes.

The vital role NOAA plays in the protection of life and property has recently been exemplified by NOAA's action in the wake of the earthquake and resulting tsunami in Japan last month. NOAA played a critical role in issuing life saving information to emergency officials and the public in the U.S and around the world**.** I'm sure I echo the sentiments of many when I say that our hearts, thoughts and best wishes are with the people of Japan and the survivors of the cataclysmic earthquake and tsunami that, in a matter of minutes, took the lives of thousands and forever changed the lives of millions. NOAA will continue to provide whatever support we can as those affected recover and rebuild from this tragedy.

The President's FY 2012 budget request promotes innovation and American competitiveness and

lays the foundation for long-term economic growth, while making responsible reductions. In particular, the budget recognizes the central role that science and technology play in stimulating the economy, creating new jobs, and improving the health and security of Americans.

FY 2012 BUDGET REQUEST AND FY 2010 HIGHLIGHTS

Secretary Locke has brought a dedicated focus on efficiency and good management to the Department of Commerce. As part of the Administration's Administrative Efficiency Initiative, an aggressive government-wide effort to curb non-essential administrative spending, NOAA analyzed its administrative costs and reduced non-essential spending by $67.7 million. Beyond administrative savings, NOAA engaged in a rigorous review of its programs and activities and identified additional savings that were achievable. For example, we were able to reduce the cost of operating our current satellite programs, and we restructured our international portfolio of climate research. Further, as a member of the newly established Gulf Coast Ecosystem Restoration Task Force we are working with federal and state agencies to find efficiencies, improve coordination and accountability in restoring Gulf Coast ecosystems.

In short, the FY 2012 budget for NOAA reflects our efforts to focus on program needs, identify efficiencies, and ensure accountability. It sustains core functions and services, and proposes increases for only the most critical programs, projects, or activities necessary to address the growing demand for NOAA's science, services, and stewardship. The FY 2012 request is $5.5 billion, which is a decrease from the FY 2011 request. The FY 2012 request is an increase above FY 2010 enacted due primarily to our requirements to execute the restructured civil polar satellite program. As I will discuss later, this new generation of satellites is needed to replace satellites that will go out of service in the years to come. They are essential for both routine weather forecasts on which the private weather industry depends, and for storm warnings and watches that only the government can issue. The expenditures on satellites are mission critical for NOAA. People's lives and property depend on them. This year 21 people have been rescued because of NOAA satellite tracking, and 91 have been rescued since last October. Beyond weather forecasts, fishermen and recreational boaters count on NOAA satellites to keep them safe in the event of an emergency at sea.

The FY 2012 NOAA budget recognizes that environmental and economic sustainability go hand in hand. We learned through the BP Deepwater Horizon oil spill and other events that we cannot have healthy economies without healthy communities and healthy ecosystems and that good science and stewardship is good business. NOAA's 2012 budget makes the investments needed to save lives and livelihoods, to understand these critical connections, and to ensure sustainable communities, economies, and ecosystems.

Now I will turn to the details of the FY 2012 budget request and outline areas of significant investment.

Climate Service

The FY 2012 budget request includes a proposed budget-neutral reorganization that brings together NOAA's existing widely dispersed climate capabilities under a single line office

management structure called the Climate Service. The proposed organization mirrors the structure recommended by the National Academy of Public Administration expert panel that, at Congress' request, completed a study on options for a climate service in NOAA. The principal goal of this budget-neutral reorganization is to better align NOAA's existing assets under a unified leadership to more efficiently and effectively respond to the rapidly increasing public demand for climate services. The Climate Service would provide reliable and authoritative climate data, information, and decision-support services, and to more effectively coordinate with other agencies, partners, and the private sector. And -- important to this committee and to me -- the proposed structure would strengthen the world-class science for which NOAA is justly known. Without continued advances in the science that supports our mission, the utility of services will degrade with time. Hence, the success of this organization requires attention to strengthening our core science capacity, strengthening the service-provision capacity and strengthening the connections between the two.

NOAA is continually improving our scientific and technological capacity to develop and deliver a range of science and services. For example, NOAA's improved maximum precipitation predictions have been used to develop new standards for dam design that are being implemented around the Nation to improve dam safety and reliability. Similarly, through collaboration with the National Association of Home Builders and the Department of Housing and Urban Development, NOAA developed an Air Freezing Index that the home building industry estimates saves $300 million annually in construction costs and the equivalent of 9 million gallons of gasoline.

The budget-neutral realignment of resources within the current NOAA budget would not change staffing levels, would not require employee relocations, physical relocation of programs or labs, any new facilities, and would not increase the size of NOAA's overhead. The Climate Service headquarters would be located in Silver Spring, Maryland.

The NOAA Climate Service, if approved by Congress, would have a budget of $346.2 million. Of this amount, NOAA proposes $3.0 million to support the Regional Climate Centers (RCC) in FY 2012. This funding will maintain support for RCCs as critical NOAA partners in the development and delivery of regional climate services. The RCCs will be aligned with the six NOAA Climate Service Regions and fully integrated as core components of NOAA's regional climate services partnership. Each center will function as a source of expertise in the region, working to identify stakeholder needs and matching these needs with the emerging science and decision support services flowing from the Climate Service's core capabilities. For example, this work could improve products for farmers, who already rely on NOAA climate data, particularly in El Niño/Southern Oscillation years, to make smart decisions about what variety of seed to plant and the amount of fertilizer to use. These types of forecasts can potentially provide a $500-$960 million per year benefit to the U.S. agriculture industry.

National Weather Service (NWS)

NOAA's National Weather Service (NWS) is the Nation's first line of defense against severe weather. NOAA provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, and adjacent waters for the protection of life and property and the

enhancement of the national economy. More sectors of the U.S. economy are recognizing the impacts of weather, water, and climate on their operations and are becoming more sophisticated at using weather-related information to make better decisions. The NWS provides critical information to communities and emergency managers. In 2010, the United States experienced a number of extreme weather events including the historic winter blizzards in the Northeast early in the year, historic flooding in the Midwest and Tennessee, and the third most active Atlantic hurricane season on record. The tragedy of the March 2011 tsunami in Japan, which had far reaching effects including the U.S. West Coast, reinforces the very real threat of severe weather events, and underscores the value of comprehensive warning systems and a prepared public.

The FY 2012 request for NWS is $988 million. The request envisions using cost-cutting and cutting-edge technologies to better support the programs necessary to achieve NOAA's vision of delivering more reliable forecasts, reducing weather-related fatalities, and improving the economic value of weather, water, and climate information.

Weather-related air traffic delays cost the U.S. economy over $41 billion in 2007, according to the Congressional Joint Economic Committee. Two thirds of these delays could be avoided with more accurate and better-integrated weather information for decision-making. To meet the rising demands of the air transportation industry, NOAA is involved in a collaborative partnership with the Federal Aviation Administration (FAA) and other Federal agencies to create the Next Generation Air Transportation System (NextGen). NOAA requests a $26.9 million increase to modernize our aviation weather forecasts and warnings. This funding supports NextGen development activities, allowing for better integration of weather information into decision-making solutions for the FAA – potentially reducing the number of air delays.

Wind shear is hazardous to aviation and critical to hurricane formation and intensity. The Nation's upper air (UA) network enables unmatched ability to detect this wind shear and enables much improved ability to define the jet stream core by providing approximately 78,000 atmospheric profiles (wind, humidity, temperature, pressure and altitude) per year from ground level to up to 60,000 feet. To improve the UA network, NOAA requests a $5 million increase for new GPS radiosondes to provide a 50 percent improvement in wind measurement accuracy and a 6-fold improvement in vertical resolution. With this investment, NOAA will fully fund the purchase of GPS radiosondes for all 102 UA observing stations, ensuring improvements to weather models.

Large maritime data voids exist where no meteorological or oceanographic data are routinely sampled due to poorly maintained buoys. This lack of data makes it difficult for forecasters to make accurate and timely marine warnings and forecasts and to measure the accuracy of their forecasts. NOAA currently operates 101 moored, weather observation buoys and 49 coastal, marine automated network stations. However, over the last eight years, system performance has trended downward to the current low of 67 percent data availability as of February 2011. This trend will continue downward to 65 percent data availability by 2011 without increased support. NOAA requests a $4 million increase to provide operations and maintenance funding for damaged and destroyed buoys and to comply with new international regulations. Funds will also be used to begin reducing the backlog of deferred maintenance by employing charter vessels to supplement the diminishing availability of U.S. Coast Guard ship time for servicing the weather

buoy network.

In FY 2012 NOAA requests a total of $41 million, including $10.2 million from mandatory funds provided by the Deficit Reduction Act of 2005, to support our tsunami warnings and research activities. Within minutes after the March 11th earthquake struck, NOAA issued its first tsunami warning for Japan, Russia, Marcus Islands, and Northern Mariana Islands as part of the coordinated global response to this tragic natural disaster. Shortly thereafter, timely watches, advisories, and warnings were extended to vulnerable coastal areas of Alaska, British Columbia, California, Washington, Oregon, and Hawaii well ahead of the arrival of the first waves. To maintain the effectiveness of these services, NOAA's Tsunami Program will use the FY 2012 funding to continue operations of NOAA's Deep-ocean Assessment and Reporting of Tsunami (DART®) buoy network , maintenance of its 164 sea-level stations, and funding of its two Tsunami Warning Centers (TWC). NOAA will continue to expand community preparedness and finalize the balance of the tsunami hazard mitigation models (to cover all US coastal areas). NOAA will also continue research to improve its tsunami warning and forecast capabilities, and the completion of high resolution models for tsunami inundation forecasts for tsunami threatened local communities.

Although NOAA's Tsunami Warning Centers and DART stations are operated by NWS, NOAA drew from the capabilities of all our line offices to provide a comprehensive response to the March 2011 tsunami. The following are examples of the contributions from other parts of NOAA:

- NOAA's DART stations, a result of research performed at NOAA's Office of Oceanic and Atmospheric Research, detected and tracked the tsunami as it traveled from Japan across the Pacific Basin.
- National Ocean Service tide gauges, which help detect the presence of a tsunami wave, use GOES satellites operated by NOAA's Satellite Service to relay data to the tsunami warning centers.
- NOAA response teams from the National Ocean Service are in California to assist with detection of submerged debris resulting from the tsunami in marine transportation arteries along the coast.

Finally, the underpinning of NOAA's products and services mentioned previously is the model-based guidance of NOAA's operational high performance computing (HPC). HPC provides models and model-based estimates of both current and future states of the Earth's environment, which are a key component of modern weather forecasts. NOAA requests an $11 million increase towards transitioning NOAA's HPC to a new contract, as well as continuing regular improvements to our numerical weather prediction modeling.

National Environmental Satellite Service (NESS)

NOAA's satellites provide the data and information for forecasts that are vital to every citizen in our Nation. From safe air, land, and marine transportation to construction and emergency rescue missions, we all use satellite products in our everyday lives. In FY 2010, our satellite program saw a major milestone accomplished with the launch of Geostationary Orbiting Environmental

Satellite (GOES) – 15, the final spacecraft in the latest series. GOES-15 joined three other GOES spacecraft in assisting the Agency's forecasters to more accurately track life-threatening weather from tornadoes, floods, and hurricanes to solar activity that can impact satellite-based electronics, communications, and power industries. In FY 2010, NOAA satellites also provided key support in the rescue of 281 people throughout and near the United States by providing their location to emergency responders.

The proposed reorganization would also affect some programs within the National Environmental Satellite, Data, and Information Service (NESDIS), which would be renamed the National Environmental Satellite Service (NESS), as all three of its Data Centers would be transferred to the Climate Service. The FY 2012 budget request for NESS is $2 billion, which we will invest in multiple satellite acquisition programs for the continuity of critical weather, climate, and oceanographic data. NOAA requests an increase of $687.8M for the Joint Polar Satellite System (JPSS), which is NOAA's responsibility under the former National Polar-orbiting Operational Environmental Satellite System (NPOESS) program. Polar satellites provide critical weather forecasting for the $700 billion maritime commerce sector and provide a value of hundreds of millions of dollars to the fishing industry. The satellites save approximately $200 million each year for the aviation industry in ash forecasting alone and provide drought forecasts worth $6-8 billion to farming, transportation, tourism and energy sectors. Both civilian and military users will use JPSS data and products, which will continue to fulfill NOAA's requirements to provide global environmental data used in numerical weather prediction models for forecasts. On behalf of NOAA, the National Aeronautics and Space Administration (NASA) will serve as the lead acquisition agent for JPSS, which supports the afternoon mission requirements. The Department of Defense will continue the acquisition of early morning orbit assets. NOAA is committed to working with our partners to complete the transition from the NPOESS program and to assure the continuity of Earth observations from space.

The GOES-R series satellites will provide critical weather observations for severe weather events, such as hurricanes, and also provide key enhancements in observational capabilities for climate, oceans and coasts, and the space environment. This program is the next-generation of geostationary satellites and provides mission continuity through 2036. NOAA continues to support the GOES-R program with a re-phasing, taking us from a two-satellite program to a four-satellite program with the addition of two optional satellites (GOES-T&U), while still providing continued satellite engineering development and production activities for GOES-R and GOES-S.

An uninterrupted climate record is critical to understanding global sea level rise, which directly threatens coastal communities and ecosystems through increased exposure and erosion, more intense storm-surge and tidal flooding, and loss of natural habitat due to drowned wetlands. Therefore, NOAA is requesting an additional $33.0 million to continue development of the Jason-3 satellite, which will provide continuity of sea surface height measurements, ensuring an uninterrupted climate record of over 20 years. The Jason-3 mission is a joint U.S. – European funded partnership. NOAA requests an $11.3 million increase to partner with the Taiwan National Space Organization for the launch of 12 satellites to replenish and upgrade the Constellation Observing System for Meteorology, Ionosphere, and Climate (COSMIC) satellite constellation. This program is a cost effective means of obtaining information about temperature and moisture in the atmosphere around the globe, which will improve forecasting accuracy.

In addition, a requested increase of $47.3 million will support, in cooperation with NASA, refurbishing the existing NASA Deep Space Climate Observatory (DSCOVR) satellite and its solar wind sensors and developing a Coronal Mass Ejection Imager. The data and information provided by DSCOVR will support the operations of the Space Weather Prediction Center, which generates accurate and timely 1 to 4 day space weather forecasts and warnings. Space observations of geomagnetic storms are vital to reduce negative effects to power grids, GPS, telecommunications, the health and safety of astronauts, and the viability of satellite systems.

Oceanic and Atmospheric Research (OAR)

The major change as a result of the proposed reorganization to create a Climate Service (described above) is that NOAA would also strategically realign its existing core research line office, the Office of Oceanic and Atmospheric Research (OAR), to strengthen the agency's overall science enterprise and advance the atmospheric and ocean, coastal, and Great Lakes research and applied science goals expressed in the *America COMPETES Reauthorization Act of 2010*. OAR will refocus its work to serve as an innovator and incubator of new science, technologies, and applications, and an integrator of science and technology across all of NOAA.

NOAA is committed to strengthening and integrating NOAA's science enterprise consistent with the President's call for science and innovation. NOAA's request includes $212 million for OAR to continue strengthening core capabilities, such as improving our understanding of ocean acidification and its impacts, and promoting conservation and use of America's coastal resources through our renowned Sea Grant Program, one of our many direct links to universities, citizens, and communities around the Nation. NOAA will also invest in the future by supporting innovation in weather forecasting science that can inform clean, renewable energy generation, which is related to an MOU with the Department of Energy. In FY 2012, NOAA requests $2 million to support research in targeted wind resource regions across the Nation. Funding will advance weather forecast accuracy and quality to allow for more efficient implementation of wind power usage in the United States.

Another core capability at NOAA is exploration. The NOAA Ship *Okeanos Explorer* is among the most technologically advanced research vessels and platforms for ocean exploration in the United States. In FY 2012, NOAA is requesting an additional $1.5 million to advance the operations of the *Okeanos Explorer* with the operation of telepresence technology, which enables scientists, educators, and others to participate and lead ocean exploration missions from remote shore-based Exploration Command Centers; to operate and upgrade the ship's autonomous and remotely-operated vehicles; provide additional scientific days at sea; and reduce our huge knowledge gap of what lies in the deep ocean.

National Marine Fisheries Service (NMFS)

NMFS conserves, protects, and manages living marine resources to sustain marine ecosystems, afford economic opportunities, and enhance the public's quality of life. Rebuilding our Nation's fisheries is essential to preserving the livelihoods of fishermen and related industries. In 2008, U.S. commercial and saltwater recreational fisheries supported 1.9 million full- and part-time

jobs and generated $163 billion in sales impacts.[1] In FY 2012, NOAA requests $1.001 billion to support fisheries and protected resource management to ensure an optimal balance between conservation objectives and economic opportunities.

NOAA is making important strides to end overfishing, improve fishery management, and put fisheries on a path to sustainability. Working with the Regional Fishery Management Councils, in FY 2010, five fisheries stocks were rebuilt. Based on estimates, rebuilding U.S. fisheries would increase the current dockside value by an estimated $2.2 billion (54 percent) annually from $4.1 billion to $6.3 billion annually. In FY 2012, NOAA will continue to maximize the potential of the Nation's most economically important fish stocks through sound science and management. NOAA will invest $67 million to expand annual stock assessments to continue to ensure Annual Catch Limits (ACL) are based on the best available science. ACLs and accountability measures (AM) are required under the 2007 reauthorization of the *Magnuson-Stevens Fishery Conservation and Management Act* for all non-exempt fish stocks, including overfished stocks, by the end of 2011 to end overfishing. This investment will help verify that NOAA successfully ended overfishing ensuring ACLs are set at the most optimal level possible so that the return for fishermen is maximized while maintaining the health of the resource.

NOAA will invest $3 million to improve the timeliness and quality of catch monitoring in recreational fisheries to ensure recreational fisheries are not unnecessarily restricted due to a lack of data. This is part of a broader effort to work more closely with the recreational fishing community.

In addition to sound science, robust management strategies are vital to sustainable fisheries. In 2010, NOAA released the National Catch Share Policy, and we will continue to support consideration of catch share management by the Councils. Catch share programs, which include limited access privilege programs and individual fishing quotas, dedicate a secure share of fish to individual fishermen, cooperatives, or fishing communities. In the United States, catch shares are currently successfully implemented in 15 fisheries from Alaska to Florida, and local Fisheries Management Councils are in the process of developing them in several additional fisheries. Catch share programs are difficult and sometimes controversial to implement, and we recognize that some in Congress are concerned about them. But they have yielded significant financial and ecological benefits to the fisheries that utilize this system. Both here and in other countries, catch shares help to eliminate overfishing and achieve annual catch limits, improve fishermen's safety and profits, and reduce the negative biological and economic effects of the traditional "race for fish." This budget includes $54 million to support the voluntary establishment of catch share programs by those Councils that want to utilize this tool to achieve the *Magnuson- Stevens Act* requirements. We want to support those Councils that believe that catch shares are the way to better manage their fisheries but need assistance in designing and implementing them.

In addition to fisheries, NOAA manages protected resources, such as marine mammals and turtles. This requires balancing conservation objectives and economic opportunities, including commercial fishing activities and energy development. Investments in priority research in recovery actions are required to mitigate harm and maximize economic potential. In FY 2012,

[1] Fisheries Economics of the United States, 2008:
http://www.st.nmfs.noaa.gov/st5/publication/fisheries_economics_2008.html

NOAA will invest an additional $2.5 million dollars to increase NOAA's capacity for protected species stock assessments that provide the foundation of information for decision makers. We will continue supporting the Species Recovery Grants Program with a requested $8.0 million increase to provide grants to states and tribes to conduct priority recovery actions for threatened and endangered species, including restoring habitat, monitoring population trends, developing conservation plans, and educating the public.

Managing fisheries and protected species to their full biological and economic potential requires additional efforts focused on maintaining habitat and ecosystem functioning. NOAA requests $24 million for the Community Based Restoration Program, including a new $5 million effort to address larger restoration projects. NOAA plans to increase fish passage, spawning, and rearing habitat by implementing large-scale ecological restoration in targeted areas such as wetlands. To support the restoration and protection of the Chesapeake Bay, we request a $5 million increase for regional studies in the Bay. NOAA supports the President's Executive Order to restore the Chesapeake Bay by providing enhanced understanding of the relationships between the Bay's living resources and habitat, coordinating protection and restoration of key species and habitats across jurisdictional lines, and supporting a coordinated system of monitoring platforms distributed across the Bay.

National Ocean Service (NOS)

In July 2010, President Obama signed Executive Order Number 13547 that adopted the Final Recommendations of the Interagency Ocean Policy Task Force and established the National Policy for the Stewardship of the Oceans, Coasts, and the Great Lakes – reinforcing the notion that "healthy oceans matter." NOS supports this policy by translating science, tools, and services into action to address coastal threats such as climate change, population growth, port congestion, and contaminants in the environment. A pivotal event in 2010 was the explosion of the BP Deepwater Horizon oil rig on April 20. Within hours, NOAA responded, providing targeted weather forecasts and oil spill trajectory maps and mobilizing personnel and assets to respond to what evolved into the largest oil spill in U.S. history. The Office of Response and Restoration (OR&R) played a critical role in our response and is leading our efforts to assess damage caused by the event. Over half of the U.S. Gross Domestic Product is generated in coastal counties,[2] and it is expected that the Nation's coastal population will grow by more than 11 million by 2015 so NOS' services will become more vital to the coastal environment and economy.[3] Increasing population density, growing economies, and increased vulnerability to damages from hazards such as sea level rise or storms, habitat loss, and other threats makes the task of managing coastal resources more difficult. The President's FY 2012 Budget includes $559.6 million to enable NOAA to continue delivering a dynamic range of nationwide coastal and Great Lakes scientific, technical, and resource management services to meet the vision of being a Nation with safe, healthy, resilient, and productive oceans and coasts.

Human uses of ocean resources (e.g., ocean-based energy, marine aquaculture, commercial and recreational fishery products, shipping and navigation services, and other activities) need to be

[2] Kildow, J. T., C. S. Colgan, and J. Scorse. 2009. *State of the U.S. Ocean and Coastal Economies 2009.* National Ocean Economic Program.
[3] Population Trends Along the Coastal United States: 1980-2008, NOAA 2004.

managed holistically. In FY 2012, NOAA requests $6.8 million to develop an agency-wide capability to conduct and support Coastal and Marine Spatial Planning (CMSP) in U.S. waters. CMSP will help us manage ocean resources in a systematic way by evaluating competing ocean uses, assessing opportunities and potential cumulative impacts, and working with industry, state and local decision makers and other stakeholders, to explicitly make trade-off decisions. CMSP is designed to focus on up front planning. There are no regulations involved. It does not add another layer of government but is designed to be more efficient, effective, and reduce redundancies in decision making. With the new Ocean Policy we are already witnessing efficiencies in our mapping and data collection across the Federal government, with data and information from the Departments of Defense and the Interior, and from Coast Guard, being integrated into a common database, which will be available to the public in the future.

The Final Recommendations of the Interagency Ocean Policy Task Force include a framework for implementing CMSP across the United States in a manner that respects regional variation of issues and priorities. This initiative will significantly advance the Nation's capability to effectively and transparently match competing human uses to appropriate ocean areas. To further support CMSP and regional ocean governance, NOAA requests $20 million to establish a competitive grants program that will support regional ocean partnerships, such as the Gulf of Mexico Alliance, South Atlantic Governor's Alliance, and the West Coast Governor's Agreement on Ocean Health that are vital for advancing effective ocean management. In addition, a proposed increase of $1 million in our mapping program will significantly improve the accessibility of integrated ocean and coastal mapping data.

The BP Deepwater Horizon oil spill is a stark reminder that spills of national significance can occur despite the many safeguards and improvements that have been put into place since the *Oil Pollution Act of 1990* was enacted. The risk of oil spills remains a concern given increases in marine transportation, pressures to develop domestic areas for drilling offshore, aging infrastructure susceptible to sea level rise and violent storms in U.S. coastal areas, and opening the Arctic to both shipping and oil development. NOAA's OR&R is the lead trustee for the public's coastal natural resources and an international scientific leader for oil spill response, assessment, and restoration. NOAA requests $2.9 million to develop an oil spill research and development program within OR&R to advance response technologies and capabilities, especially in deep water and Arctic environments. With this funding, NOAA will support external grants for essential research to provide useful information, methods, and tools for planners, oil spill responders, and assessment practitioners. Also in support of oil spill response, NOAA requests a $5.0 million increase to implement the U.S. Integrated Ocean Observing System (IOOS®) Surface Current Mapping Plan using high frequency (HF) radar surface current measurements. HF radar provides information vital to oil spill response, national defense, homeland security, search and rescue operations, safe marine transportation, water quality and pollutant tracking, and harmful algal bloom forecasting.

The BP Deepwater Horizon oil spill made it apparent that the economic and social well being of our coastal communities depends on the environmental suitability of our coastal resources. Numerous coastal communities, not only in the Gulf but all along our coasts, are being impacted by the loss of fishing opportunities. In FY 2012, NOAA requests $8 million to create a National Working Waterfronts grant program to assist fishing-dependent coastal communities. These

grants will assist distressed or at-risk fishing communities by providing resources for planning, capacity building, and other activities to support economic diversity, resource conservation, and economic capital growth.

Program Support

To deliver sound science and services, NOAA must continue to invest in its information technology (IT) infrastructure, the maintenance and construction of NOAA facilities, and the specialized aircraft and ships that complete NOAA's environmental and scientific missions. A requested $9.1 million increase will reduce the risk of cyber attacks by enhancing security monitoring and response capabilities and consolidate our IT infrastructure into a single enterprise network. This budget includes an additional $10 million to support major restoration and modernization projects to address critical facility condition deficiencies and to improve safety and operating conditions in support of NOAA's mission. The FY 2012 request ensures that NOAA's fleet of vessels is able to provide reliable, compliant, and high-quality ship support to NOAA programs through several increases. For example, $3.4 million is requested to support environmental compliance costs, including ensuring that NOAA ships are not contributing to water quality degradation. Efforts to extend and maintain the life of the NOAA ships will be supported through an $11.6 million increase for repair periods.

Also critical to the execution of NOAA's mission is our investment in the future. Students in K-12 we support today become our workforce of the future; undergraduate and graduate fellowship recipients provide immediate dividends; and each and every citizen touched by our literacy and outreach efforts become stewards of our natural resources. These down payments help to fulfill the President's commitment to education. The FY 2012 budget includes $20.8 million for NOAA's Office of Education to implement and manage scholarship programs aimed at fostering competitiveness in science, technology, engineering and math by providing quality educational opportunities.

Conclusion

Overall, NOAA's FY 2012 budget request reflects the commitment that Secretary of Commerce Gary Locke and I have made to the President to out-educate, out-build, and out-innovate our competitors in support of robust economic job growth. We have made tough choices to cut lower priorities and identify cost-savings measures. The resources that are requested in this budget are critical to the future success of meeting our needs in climate, fisheries, coasts, and oceans. I look forward to working with you, the Members of this committee, and our constituents to achieve the goals I have laid out here through the implementation of the FY 2012 budget. Thank you for the opportunity to present NOAA's FY 2012 budget request. I am happy to respond to any questions the committee might have.