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U.S. DEPARTMENT OF COMMERCE**

**ON THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S
FY 2010 BUDGET REQUEST**

**BEFORE THE
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
SUBCOMMITTEE OF OCEANS, ATMOSPHERE,
FISHERIES, AND COAST GUARD**

June 11, 2009

Madam Chairwoman and members of the Committee, before I begin my testimony I would like to thank you for your leadership and the generous support you have shown the National Oceanic and Atmospheric Administration. Your continued support for our programs is appreciated as we work to improve our products and services for the American people.

I am honored to be here as the Under Secretary of Commerce for Oceans and Atmosphere and the Administrator of the National Oceanic and Atmospheric Administration (NOAA), one of the nation's premiere science and stewardship agencies and am pleased to speak with you today regarding the President's Fiscal Year (FY) 2010 Budget Request for NOAA.

The FY 2010 President's Budget provides a solid foundation to advance NOAA's mission. The FY 2010 request is \$4.5 billion, which represents a \$110 million or 2.5 percent increase over the FY 2009 omnibus appropriation level. This level reflects our efforts to reallocate resources, maximize efficiencies, ensure accountability, and fund our highest priority programs. This budget supports core mission functions for environmental prediction and stewardship and provides key investments to address the top management challenges for satellite acquisition and fisheries management. It also provides a down payment for climate research, observations, and services; and for coastal services and stewardship.

FY 2010 BUDGET REQUEST HIGHLIGHTS

SATELLITES

One of the greatest challenges that NOAA faces today is ensuring continuity of satellite operations to provide state-of-the art, unbroken coverage that enables weather forecasts and climate measurements. Satellites provide essential information for accurate weather forecasts

and warnings about weather-related disasters such as hurricanes, tornados and floods. In addition, satellite data are increasingly vital to the understanding of climate change and to forecasts of climate-related phenomena such as severe droughts. One of NOAA's primary roles is to provide reliable, consistent data and understanding about weather and climate change and to integrate that information into products that are useful to citizens and policy-makers alike.

With the FY 2010 budget we will invest in multiple satellite acquisition programs for the continuity of critical weather, climate, and oceanographic data. I will highlight each of our three programs in turn.

1. A funding increase of \$272.0 million is requested to continue the development of the Geostationary Operational Environmental Satellite – Series R (GOES-R) program. This increase will provide for the continued development of the satellite instruments, spacecraft, and ground systems. The acquisition of NOAA's GOES-R series in partnership with the National Aeronautics and Space Administration (NASA) is progressing well. The new satellites will carry improved environmental sensors that will enable NOAA's forecasters to enhance the timeliness and accuracy of their severe weather warnings.

2. As this committee is aware, the development of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) continues to face substantial challenges. The NOAA, Air Force and NASA managed program has had a history of cost and schedule overruns and other acquisition problems. Should NPOESS be delayed or fail, NOAA's current climate and weather forecasting abilities will be put in jeopardy. Unfortunately, technical and management problems continue.

The FY 2010 budget request provides an increase of \$94 million to support the NPOESS program. This request represents NOAA's share of the tri-agency program. In December 2008, the Air Force, NOAA and NASA agreed to a revised baseline for the NPOESS program that added resources for on-going technical problems as well as for out-year operations and support costs not previously included in the program's planning. This new baseline increased the program's total life-cycle cost from \$12.5 billion in the FY 2009 President's budget to \$14 billion. The FY 2010 President's budgets for both NOAA and the Air Force fund to this baseline.

Secretary of Commerce Gary Locke and I have made fixing NPOESS one of our highest priorities. A recent independent review of the NPOESS program has identified significant deficiencies in the program structure and its budgeting and cost estimating, indicating the program has a low probability of meeting the performance and satellite coverage requirements for weather and climate monitoring. We are taking these results seriously and are working with both our tri-agency partners and the Administration on a number of options to address the independent review team's findings. In addition, we have added some funding in 2009 to help mitigate cost and schedule in this program. We will continue to consult with you as these options are developed to ensure the continuity of the crucial climate and weather data provided by polar satellites.

3. Sea level rise directly threatens coastal infrastructure through increased erosion, more frequent storm-surge flooding, and loss of habitat through drowned wetlands. NOAA's budget request includes \$20.0 million for the Jason-3 satellite to provide continuity of sea surface height measurements, thus ensuring continuity of a quality climate record of over 20 years. Jason-3 is planned as a truly joint U.S. – European partnership with U.S. and European funding. By sharing costs with the Europeans starting in FY 2010, both sides have a cost effective way to assure continuity of the sea surface height measurement.

FISHERIES

Another challenge facing NOAA is ending overfishing, improving fisheries management and putting fisheries on a path to sustainability and profitability. Continued overfishing threatens the viability of fishermen and fishing-dependent communities. The time has come for a paradigm shift in how we manage our fisheries resources. We now need a fishery management system that will sustain fishing economies and incentivize stewardship and conservation.

The reauthorized *Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act)* provides strict regulatory guidelines for ending overfishing. This budget provides \$56.5 million in new increases, for a total of \$98.3 million, to implement the requirements of the revised *Magnuson-Stevens Act* and begin a transition to catch-share fishery management programs. This is the second largest increase in the budget, behind satellite acquisitions, and is a significant investment in improving management of our fisheries. This request includes funding to establish and monitor annual catch limits and accountability measures for stocks subject to overfishing, expand annual stock assessments to improve the science used for setting management measures, increase enforcement and observing of fisheries effort, promote recreational data collection, and expand cooperative research programs.

A highlight of the *Magnuson-Stevens Act* request is \$18.6 million to support transition fisheries around the country to catch share management. This funding level builds upon \$16.7 million provided in FY 2009 and supports improved at-sea monitoring and documentation of catches, increased enforcement coverage, additional resources for cooperative research projects with the fishing industry, and fishermen training for newly required logbooks.

NOAA has an ongoing investment in implementing the Pacific Salmon Treaty with Canada to ensure conservation and fair harvest-sharing of salmon stocks that span the US-Canada border. NOAA requests \$16.5 million to implement the newly revised Chinook salmon provisions. Within this request, \$7.5 million will support projects to assist the recovery of critical Puget Sound salmon stocks listed under the *Endangered Species Act*, including hatchery and habitat projects. An additional \$7.5 million will help mitigate economic consequences of significant catch reductions in the Southeast Alaska fishery. The final \$1.5 million will bolster the coast-wide coded wire tagging program to improve salmon run monitoring in the United States. In addition to NOAA's contribution to this treaty, the Department of State will request a total of \$30 million for Canada Fishery Mitigation — \$15 million in FY 2010 and \$15 million in FY 2011— in fulfillment of United States commitments under the Pacific Salmon Treaty.

In addition, on May 21, 2009, the President submitted an FY 2010 budget amendment that included a transfer of \$50 million of our request for species recovery to the Pacific Coastal Salmon Recovery Fund (PCSRF). The budget amendment also included \$11 million to expand the national program for endangered and threatened species. Both of these programs will support efforts to restore habitat and promote the recovery of at risk stocks, including 28 salmonid stocks which are listed as threatened or endangered under the *Endangered Species Act*.

CLIMATE

Climate change is among the greatest challenges of our time. It will permeate nearly every aspect of our lives. What we choose to do about it now will define us for generations to come. NOAA's long history of climate observations and products provides a strong foundation for the agency's work to synthesize scientific data on climate change and create products and services that can be used by the public to guide important decisions such as where to build roads, the types of crops to grow, and how to protect coastal properties. NOAA's climate information, products, and services also play an important role in the siting and design of the nation's emerging renewable energy infrastructure – wind, solar, and ocean – to help meet the Administration's goal of a clean energy economy. The FY 2010 budget requests an increase of \$41.9 million for a total of \$285.7 million for high priority climate initiatives.

NOAA also has made it a high priority to understand climate-ecosystem interactions, particularly the impacts of ocean acidification on biological productivity and distribution. I'd like to thank this Committee for including legislation on ocean acidification in the omnibus lands act passed earlier this year. Ocean acidification has the potential to drastically affect animals that have calcareous shells; those changes in turn will likely affect other species that depend upon the shelled ones. NOAA's FY 2010 ocean acidification initiative has two components: \$4.0 million for ocean acidification monitoring and \$1.5 million for research on ocean acidification's impacts on living marine resources. With these funds, NOAA will equip open-ocean and coastal moorings with additional sensors to monitor the changes in the pH of the global ocean and will conduct studies on the effects of acidification on living marine resources.

Drought is another serious climate problem facing the United States. There is an urgent need to be able to provide predictions and projections that answer questions such as: Will drought conditions in the U.S. Southwest continue over the next decade?, and How will drought affect farmers? NOAA's FY 2010 budget includes \$4.6 million for the National Integrated Drought Information System to develop drought early warning system pilot projects in three diverse geographic areas: Colorado River Basin, Southeastern U.S., and California. These funds will allow NOAA to develop and implement the next generation Climate Forecast System, which will lead to improved drought forecast products.

The free and open exchange of scientific information, such as NOAA's climate model data and products, is critical to the global effort to understand and predict global climate change. The President's Budget includes \$2.5 million for the National Climate Model Portal, created by NOAA. This online database will provide archive and user access capability for the next generation of climate products that utilize major advancements in model physics and coupling

across the ocean, air and land interfaces. This is an important step in NOAA's ability to provide climate products and services to the scientific community and the public.

COASTS

Fifty percent of Americans live in coastal areas and sixty percent of the country's Gross Domestic Product (GDP) is generated in coastal communities. Coastal populations (estimated at over 160 million in 2008) are expected to grow, and risks to life, property, businesses and coastal habitats will only increase. NOAA's FY 2010 budget provides key investments to promote sustainable and safe use of coastal areas.

The budget requests \$2.0 million for NOAA to establish a Coastal Communities Task Force comprised of key public, private, non-governmental, and university community representatives. This task force will chart a new course of effective, meaningful action for management and stewardship of the nation's valuable coasts.

Harmful Algal Blooms (HAB) are one of the most scientifically complex and economically significant coastal issues facing the nation. The toxins can cause human illness and death, close waters to recreation or seafood harvesting, severely impact tourist economies, alter habitats, and adversely impact fish, endangered species, and other marine organisms. NOAA is requesting an increase of \$2.7 million to implement a national system of operational HAB forecasts and a national HAB event response capacity. This system will be implemented region by region.

Industry, decision-makers, and the public are demanding more accurate maps and charts to benefit the economy, predict coastal hazards, and manage coastal habitats. Precise elevation measurements are needed, especially in coastal areas and watersheds where a small height difference can dictate the need for additional insurance because of location within a flood zone. The budget request includes \$4.0 million for NOAA to begin a multi-year effort to produce a new national vertical datum by 2020 that will improve elevations and height information used in a variety of critical applications including monitoring sea level rise and coastal subsidence, developing flood evacuation maps, and ensuring safe and efficient marine transportation.

WEATHER

The United States is the most severe weather prone nation on Earth. We experience more than \$11 billion in damages due to severe weather incidents each year. Weather and climate sensitive industries, both directly and indirectly, account for about one-third of the Nation's GDP ranging from finance, insurance and real estate to services, trade and manufacturing¹. Accurate weather warnings and forecasts are critical to protect lives and property and our FY 2010 request fills critical gaps in NOAA's ability to observe and forecast weather events.

Hurricanes are responsible for loss of life and billions of dollars in property damage annually. The United States has seen an increase in both intensity and frequency with recent storms. To improve hurricane track and intensity forecast accuracy by 20 percent within 5 years, NOAA is

¹ Dutton, John A., *Opportunities and priorities in a new era for weather and climate services*, Bulletin of the American Meteorological Society, September 2002, volume 83, no. 9, pp 1303-1311.

requesting an additional \$13.0 million for a total of \$17.0 million for its hurricane forecast improvement plan. The additional funds will allow NOAA to translate critical research into operations, improve processing of key observations, and enhance model accuracy. Funds will also be dedicated towards additional computing capacity to improve the resolution and accuracy of both global and regional weather forecasts. This effort is critical to ensuring evacuation notices are accurate and false alarms are avoided.

NOAA is actively involved in the multi-agency effort to create the Next Generation Air Transportation System (NextGen). Federal Aviation Administration records indicate that on average, weather is a factor in 70 percent of flight delays, contributing to losses of over \$4 billion annually. These delays will only increase as demand for air transportation is expected to triple by 2025. As passengers on these flights, we want the pilots and commercial airliners to have advance warnings and access to the most accurate information concerning severe weather, thus mitigating delays. Many of the delays can be avoided with enhanced weather information and forecasts. NOAA has requested \$6.1 million to implement this effort through improved aviation model and aviation weather forecasts.

The Budget also includes increases for upgrades and technology refresh of weather prediction systems.

PROGRAM SUPPORT

Education and outreach are critical for promoting environmental literacy. The FY 2010 President's Budget includes \$5.0 million for a competitive national environmental literacy program to promote excellence in informal and formal education related to ocean, coastal, Great Lakes, weather, and climate sciences. This request will allow for 10 to 14 competitive awards to be issued per year and directly addresses the educational mandate this Committee helped establish in the *America COMPETES Act*.

The NOAA Corps officers play an essential role in NOAA, serving across all line offices. They serve at sea aboard NOAA's research and survey fleet, in flight aboard research aircraft that probe everything from hurricanes to snow cover, and ashore in NOAA's labs and offices throughout the United States. The NOAA request of \$2.2 million will increase the number of officers by 22 from 299 to 321 as authorized by law. An expanded NOAA Corps will lower officer attrition rates by avoiding particularly long and arduous at-sea assignments.

CONCLUSION

Overall, NOAA's FY 2010 Budget Request is a good budget for NOAA and provides a solid foundation for our future needs. The overall increase reflects the growing need for NOAA's infrastructure and services. I look forward to working with you, the members of this Committee, to achieving the goals I've laid out here through the implementation of the FY 2010 budget.

Thank you for the opportunity to present NOAA's FY 2010 Budget Request. I am happy to respond to any questions the Committee may have.