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U.S. DEPARTMENT OF COMMERCE**

**ON
THE FY 2006 BUDGET REQUEST FOR NOAA**

**BEFORE THE
COMMITTEE ON RESOURCES
SUBCOMMITTEE ON FISH AND OCEANS
U.S. HOUSE OF REPRESENTATIVES**

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Thank you, Mr. Chairman and Members of the Subcommittee, for this opportunity to testify on the President's Fiscal Year (FY) 2006 Budget Request for the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce. First, let me thank you and your staff for your outstanding support of NOAA and the critical programs and services NOAA provides to the Nation.

The FY 2006 Budget Request for NOAA is \$3.6 billion, an increase of six percent or \$205 million over the FY 2005 request. The funds requested for NOAA for FY 2006 will enhance our scientific understanding of the oceans and atmosphere in order to sustain America's environmental health and economic vitality. Before I discuss the details of our FY 2006 Budget, I would like to briefly highlight some of NOAA's notable successes in the past fiscal year.

FY 2004 Accomplishments

Successful Team Approach to Hurricane Season

In May 2004, NOAA forecasters predicted an above average hurricane season and, as we all know, their predictions turned out to be accurate. The record setting four hurricanes that hit Florida this past summer and early fall presented NOAA with the challenge of providing vital information about where the storms would hit and aiding recovery efforts once the storms were over. NOAA received praise from many directions, including letters addressed to me from citizens affected by the storms. NOAA aircraft logged over 475 flight hours, covering more than 100,000 nautical miles of track lines, and deployed over 1,200 dropsondes into storms during the 2004 hurricane season. We also initiated the Storm Surge Quick Look program before the hurricane season to give emergency managers real-time graphical information on potential storm surges.

The National Hurricane Center forecasters had an unprecedented success as a result of the contributions made by several NOAA entities, from the models produced by the Geophysical Fluid Dynamics Laboratory (GFDL) and the Atlantic Oceanographic and Meteorological Laboratory (AOML) to the teams flying the P-3 and G-4 hurricane hunter planes and the offices involved in damage assessments after the storms. NOAA's five-day hurricane forecasts are as good now as three-day forecasts were 10 years ago – and Hurricane Frances and Charley forecasts were even better than that. These improved forecasts saved untold lives during the Florida hurricanes.

Air Quality Forecasting

Air quality forecast capability for next-day ground-level ozone is now operational over the Northeastern United States. During FY 2006, ozone forecasts will be implemented over the entire Eastern United States. By FY 2007, ozone forecasts will be deployed over the continental United States.

Climate Forecast System

In August 2004, NOAA implemented a new fully-coupled Climate Forecast System that represents the interaction between Earth's oceans and the atmosphere. It complements our other models and increases our confidence in depicting physical processes that occur in nature, such as El Nino.

Climate Reference Network

NOAA commissioned the U.S. Climate Reference Network (CRN), which now contains 72 stations across the United States. The Network, in its first full year of operation, is already providing significant data, reducing scientific uncertainty on long-term temperature trends: from 5.0 percent to 3.5 percent for temperature and from 16 percent to less than 10 percent for precipitation.

Fisheries Stock Rebuilding

The 2004 status of stocks showed four stocks were declared fully rebuilt: George's Bank Winter Flounder, Atlantic Black Tip Shark, South Atlantic Yellowtail Snapper, and Gulf of Mexico Yellowtail Snapper.

Fisheries Vessel Monitoring System

NOAA now provides near-real time fishing vessel tracking of more than 2,250 vessels in 14 different fisheries via a satellite-based vessel monitoring program. This is a 36 percent increase over 2003, and the coverage is planned to increase by five fold (8,308 vessels) by 2009. The program provides improved compliance with open and closed seasons, closed areas and international boundaries and management areas.

Coastal Habitat and Wetland Restoration

Collaboration with national and regional agencies and alliances with over 500 community groups resulted in restoration of more than 3,700 acres of habitat in 2004. Since 2001, NOAA has restored 11,000 habitat acres and opened 555 stream miles.

Nautical Charting

The Hydrographic Survey backlog within navigationally significant areas was reduced by 2,070 square nautical miles. By FY 2006, the goal is to reduce the backlog by 3,500 square nautical miles annually.

SARSAT

As an integral part of worldwide search and rescue, NOAA operates the Search And Rescue Satellite Aided Tracking (SARSAT) system. SARSAT uses NOAA satellites in low-Earth and geostationary orbits to detect and locate aviators, mariners, and land-based users in distress. NOAA-SARSAT is a part of the international COSPAS-SARSAT Program, which includes 36 nations and two independent SAR organizations. Since 1982, over 18,000 persons have been rescued worldwide, 4,917 of which were in the United States, with the help of the SARSAT system. In 2004, 220 persons were rescued with the help of the SARSAT system.

GEOSS

NOAA continues to exercise international leadership in the development of a coordinated, comprehensive, and sustained Global Earth Observation System of Systems (GEOSS), including playing a key role in developing the draft Strategic Plan for the U.S. Integrated Earth Observation System.

With global attention on warning networks and international cooperation, NOAA has an opportunity to help the world better prepare for events such as tsunamis through the development of GEOSS. A robust GEOSS will provide a foundation for the science necessary to deliver accurate forecasts and hazard warnings in an ever-changing environment.

We accomplished the first phase of our goal of developing this system in Brussels this past February. At the Third Earth Observation Summit, nearly 60 countries and the European Commission reached agreement for a 10-year implementation plan for GEOSS. As a co-chair of this international effort, I will continue to exercise leadership in the development of the GEOSS framework.

Critical FSV Modernization

In 2004, NOAA completed construction of the first new Fisheries Survey Vessel (FSV), the OSCAR DYSON. The vessel has successfully completed acoustic trials and recently traveled through the Panama Canal in preparation for beginning service.

Research Plan and Research Vision

In response to recommendations from the Research Review requested by Congress in the Conference Report accompanying the Consolidated Appropriations Act, 2004, the NOAA Research Council developed and published an agency-wide Twenty-Year Research Vision to provide high-level guidance regarding NOAA's future research. NOAA's Strategic Plan requirements for research by mission goal determine the near-term activities and milestones described in the NOAA Five-Year Research Plan, and point the way ahead for the research

agenda for the next two decades. The long- and short-term direction of research conducted by NOAA will be guided by these two planning documents, ensuring that NOAA's research supports our mission goals. The Five-Year Plan focuses on short-term outcomes, such as creating an Earth system model, developing GEOSS, studying ocean phenomena, and improving climate predictions and projections. The Twenty-Year Research Vision is a forward-looking document that anticipates NOAA's future research direction.

Administrative Services Realignment

NOAA is implementing a functional management model for centralized administrative and financial services to establish direct lines of accountability to Headquarters business managers from financial and administrative staff located in NOAA's regional Administrative Support Centers. NOAA believes this new structure will improve both the efficiency and effectiveness of our administrative operations.

Grant Awards

Significant improvements made in the NOAA grants process in FY 2004 have led to more timely awards. Through the development and implementation of Grants On-Line, NOAA became the first agency to receive electronic applications through the Grants.gov portal, and Grants On-Line was selected as a finalist in the 2004 Excellence.Gov awards. In FY 2004, NOAA made on-time grant awards worth \$972 million to 1,501 recipients.

NOAA Strategic Plan and Internal Planning

In FY 2004, NOAA updated its strategic plan. We intend to update this document on an annual basis to ensure that we capture our constituent needs and maintain currency in our planning processes.

Outreach to Developing Nations

NOAA hosted representatives from 31 African nations last month at a workshop to discuss mitigation of natural hazards. This meeting was the first of many future briefings and discussions to share information and capabilities with developing nations, and we are pleased to be making progress in this area.

FY 2006 Budget Request Details

There are several priority areas for NOAA, which are reflected by the distribution of requested budget increases. These areas are: Support Current Services and Infrastructure, Contribute to a Global Earth Observing System, Support the Ocean Commission/U.S. Action Plan, Invest in Ecosystems Management, Expand Climate Services & Observations, Improve Weather Forecasts and Warnings, Facilitate Intermodal Transportation, and finally Support Facilities Maintenance and Construction.

Support Current Services and Infrastructure

Adjustments for inflationary costs are the highest priority budget increase for NOAA in FY 2006. These funds will be used to invest in our workforce and to support NOAA's most

important resource – our people. The increase will fund the estimated FY 2006 Federal pay raise of 2.3 percent, and annualize the FY 2005 pay raise of 3.5 percent. It will also provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration. In addition to inflationary adjustments, we are requesting increases for our central management infrastructure of: \$4.1 million to implement, operate and maintain NOAA enterprise level IT security architecture; \$1.1 million to improve environmental compliance and safety, including training and planning and management processes; \$1.5 million to support business process re-engineering analysis that will increase the quality, timeliness and effectiveness of NOAA's administrative functions, such as finance and real property; and \$1.0 million to develop a seamless, formulation through execution, budget management system across all NOAA programs.

Contribute to a Global Earth Observing System

The FY 2006 NOAA Budget Request includes \$95 million in net increases to support emerging requirements for NOAA's role in building an integrated earth observing system. Included in these increases are funds for NOAA satellite programs. The Geostationary Operational Environmental Satellites (GOES) total program request for FY 2006 is \$358.1 million, a net increase of \$52.6 million. This includes an increase of \$82.9 million for the next-generation GOES-R series, to ensure launch by October 2012.

The National Polar-orbiting Operational Environmental Satellite (NPOESS) total program request for FY 2006 is \$320.9 million, an increase of \$16.1 million, to ensure the launch of the C-1 satellite in 2010. The Department of Defense request for NPOESS matches the NOAA request, as part of the shared funding arrangement.

The NOAA Request also includes an increase of \$11 million to integrate a LANDSAT sensor onto NPOESS. The U.S. Geological Survey will develop the ground systems for this LANDSAT sensor, and the National Aeronautics and Space Administration has allocated \$300 million to build the instrument. In addition, the Request includes increases to expand the Coastal Global Ocean Observing System (CGOOS) by adding environmental sensors to existing NOAA buoys, including sensors for salinity, sea surface temperature, and currents, and to modernize 189 Cooperative Observer Network sites in the Northeastern United States. Obtaining real-time observations at these sites will improve climate and weather forecasting, including an estimated 1.5 degree improvement in the accuracy of daily temperature forecasts. Some of the modernized sites will include soil moisture sensors to improve drought monitoring and forecasting, as called for in the National Integrated Drought Information System (NIDIS).

The funds for expanding the Tsunami Warning Network are counted among the increases in this category as well. NOAA has committed \$24 million over two fiscal years, \$14.5 million in FY 2005 and \$9.5 million in FY 2006, to expand the existing six-buoy Pacific Tsunami Warning Network. These funds provide for an additional 35 detection buoys by mid-2007: seven in the Atlantic Ocean, Caribbean Basin and Gulf of Mexico, 25 in the Pacific Ocean, and three additional buoys as spares off the coast of Alaska. The program will also procure 38 new sea level monitoring/tide gauge stations, provide 24/7 warning coverage at the Pacific and West

Coast/Alaska Tsunami Warning Centers, upgrade 20 seismometers used to improve tsunami detection, and expand the TsunamiReady program to improve community preparedness.

Support the Ocean Commission/U.S. Action Plan

On December 17, 2004, the President announced the U.S. Ocean Action Plan, in response to the recommendations in the U.S. Commission on Ocean Policy's report, and signed an Executive Order that "...established, as a part of the Council on Environmental Quality and for administrative purposes only, the Committee on Ocean Policy (Committee)." Following the White House announcement, the Commission responded with a preliminary assessment of the Ocean Action Plan, calling it a promising first step toward the implementation of a comprehensive national ocean policy. On December 19, 2004, the U.S. Commission on Ocean Policy officially disbanded, as called for in the Oceans Act of 2000 (P.L. 106-256).

The Commission's report recognized NOAA's role as the lead civilian federal agency with jurisdiction in the oceans. The report made it clear that piecemeal approaches to managing the oceans are a thing of the past, and that it will take a sustained and committed effort to improve government processes and implement an ecosystem approach to management that is focused on making the oceans, coasts and Great Lakes cleaner, healthier and more productive, ensuring that these valuable resources are available for current and future generations to enjoy.

The Committee on Ocean Policy will hold its first meeting early in 2005. It will develop an 18-month work plan to address a number of Ocean Commission recommendations, including further actions on ocean, coastal and Great Lakes issues that address governance principles, filling gaps in legislative authority, and streamlining overlapping authorities. The commitment on the part of the Administration is long-term, and the effort unprecedented. NOAA is pleased to be an integral part of ushering in a new era of ocean policy.

The FY 2006 Budget Request includes significant resources for NOAA's ocean and coastal programs and fisheries and protected species activities in support of the President's U.S. Ocean Action Plan. More than \$1 billion is requested for these programs, including \$61.2 million to address state and regional ecosystem research priorities at the National Sea Grant College Program, \$22.7 million in support of NOAA's Ocean Exploration Program, \$32.5 million to begin construction of a fourth Fisheries Survey Vessel (FSV-4), and \$25.4 million for fisheries stock assessments. The Budget also proposes reforms to the Pacific Coastal Salmon Recovery Fund to help ensure that funds are allocated to high priority activities, and to require matching contributions from State and local recipients of grants.

Invest in Ecosystems Management

The FY 2006 Request contains investments in several programs aimed at restoring the Nation's marine resources while providing important economic opportunities. As noted above, we are requesting \$32.5 million for the fourth Fisheries Survey Vessel. FSV-4 will deploy state-of-the-art acoustic technologies, combined with a very quiet radiated-noise signature, to enhance the effectiveness and efficiency of at-sea resource surveys. FSV-4 is scheduled to support both the Northwest and Southwest Fisheries Science Centers responsible for managing Pacific Whiting,

which is the largest West Coast fishery and generates nearly \$30 million annually. We are requesting increases of \$19.6 million for actions aimed at protecting Pacific Salmon stocks, of which \$11.1 million is for the Columbia River Biological Opinion and \$8.5 million is for Recovery Planning & Research (including Section 7 consultations, salmon status reviews, critical habitat designation, and recovery planning), and \$4.6 million to expand fisheries stock assessments and improve data collection that will help address longstanding shortfalls in fisheries science, fishery monitoring, and fishery data management capabilities.

The Request includes a \$5.5 million increase for Economic and Social Science Research to expand NOAA's capability to estimate the economic impact of fishing on local state and national economies, as well as assess the human impacts from and responses to fisheries management decisions. The National Academy of Sciences has recommended additional investments in this area. To improve fisheries enforcement, an increase of \$6.3 million is requested to support expanded use of Vessel Monitoring Systems for monitoring and enforcement of closed areas for the protection of endangered species, critical habitat, and rebuilding and maintenance of sustainable fisheries. The total FY 2006 program request is \$9.3 million, of which \$4.8 million is to maintain current services and \$4.5 million is to fund vessel monitoring systems for an additional 2000 vessels. Finally, an increase of \$1.5 million is requested for the NOAA Coral Reef Program to work with states and territories to address threats to the Nation's coral reefs through the implementation of local action strategies. This will be complemented by funding through the Department of the Interior, our co-chair on the U.S. Coral Reef Task Force.

Expand Climate Services & Observations

Among our important climate programs, we are requesting an increase of \$3.2 million to enhance the Tropical Atmosphere Ocean (TAO) array of buoys and the Pilot Research Moored Array of buoys in the Tropical Atlantic (PIRATA). This funding will expand the TAO array into the Indian Ocean, add more PIRATA buoys and support the technological development of the next generation of moored buoys. This expansion will enhance NOAA's capability to accurately document the state of ocean climactic conditions and improve our seasonal forecasting capability. The FY 2006 Budget also transfers the current TAO Array from the Office of Oceanic and Atmospheric Research to the National Weather Service (NWS), reflecting our goal of transitioning research into operations.

Other increases in the FY 2006 Budget that support the President's Climate Change Science Program Strategic Plan include: \$3.5 million for the Global Ocean Observing System to continue building and maintaining a system that will accurately document climate-scale changes in ocean heat, carbon, and sea level, by funding 200 drifting buoys; \$2.0 million for developing new Climate Reanalysis Data sets that will enable us to explain more adequately the causes for observed climate variability and change; \$2.1 million for expanded research to quantify how aerosols influence climate change by their interactions with clouds; and \$0.8 million for Regional Integrated Sciences and Assessments (RISA), to perform research on regionally specific issues that will allow NOAA to tailor products for specific local decision-makers.

Improve Weather Forecasts and Warnings

The Budget includes funding to sustain and expand NOAA Weather Radio (NWR) by adding 17 new broadcasting stations in severe weather areas. Funds would also be used to improve network reliability by refurbishing 64 of the 400 stations that were originally established in the 1970s. NOAA is working with the Department of Homeland Security to make NWR a national all-hazards warning network. The total NWR network consists of 900 broadcasting stations that reach 97% of the Nation's population. A total of \$3.0 million is requested to improve weather forecast guidance. This includes \$1.0 million for data assimilation improvements and \$2.0 million for Information Technology (IT) for the NOAA Center for Environmental Prediction (NCEP). Current resources are insufficient to fully utilize current and future radar and satellite data, especially for finer resolution forecast applications. This investment has the potential to provide breakthroughs in storm track prediction performance, increase the realism of all parts of the system, and improve forecast accuracy across the board. Outcomes include improved winter storm warnings, precipitation forecasts, and lead-times for flash flood and Red Flag warnings.

We are also proposing a new Water Resources Forecast initiative for FY 2006, which is part of the NOAA contribution to the National Integrated Drought Information System (NIDIS). Through this capability, NOAA will provide America with economically valuable water and soil condition forecasts, including a national digital database incorporating assimilation of all available hydro-meteorological data and observations for a community hydrologic prediction system (CHPS) necessary to advance water prediction science. This will allow NOAA's research and development enterprise and operational service delivery infrastructure to be integrated and leveraged with other federal water agency activities to form the basis of a national water information system.

Funds requested to sustain NEXRAD Radar Operations will allow the NWS to implement planned retrofits to WSR-88D communications lines at eight sites where deteriorating lines make communications unreliable, creating a moderate to high risk of communications failure and lost radar data. NWS will be able to perform planned radar radome and tower maintenance, eliminating the risk of catastrophic radar failure due to lack of structural integrity.

The increase requested to sustain weather and hurricane research will restore funding to the U.S. Weather Research Program (USWRP) and The Hemispheric Observing System Research and Predictability Experiment (THORPEX), at the level requested in FY 2005. Key activities directed to hurricane forecasting and research include development, testing, and transition to operations of the hurricane weather research and forecasting (HWRF) community model that promises to significantly improve predictions of the intensity and precipitation of hurricanes at landfall.

Facilitate Intermodal Transportation

Among our Commerce and Transportation programs, we are requesting \$2 million for the National Vertical Datum Transformation Tool database, or VDatum, to modernize NOAA's shoreline measurement and hydrographic surveying for navigation safety as well as enable sharing of geospatial data among federal, state, and local governments and academia. The

increase will enable NOAA to transition VDatum from successful demonstration projects in areas such as Tampa Bay, Delaware Bay and South East Louisiana to a national scale. The Budget also includes \$1.9 million to continue NOAA's efforts to provide Electronic Navigational Charts (ENCs) covering all U.S. Waters by 2008. This funding will allow NOAA to add an additional 145 ENCs to the available suite for a total of 670 available ENCs by the end of FY 2006. In addition, we propose \$1.5 million for the National Current Program to ensure that NOAA's Annual Tidal Current Table predictions are accurate. Accurate knowledge of tidal currents is essential for safe and efficient navigation, helping vessels avoid collisions, and improving transit efficiency through U.S Ports. These funds will allow us to update tidal charts at 70 stations per year versus the current rate of 10 per year. Finally, the FY 2006 Request contains an increase of \$1.1 million for Aviation Weather to continue a 10-year plan to improve U.S. aviation safety and provide economic efficiencies through state-of-the-art aviation weather observation and forecast products, and to fund the installation of water vapor sensors on 50 aircraft.

Support Facilities Maintenance & Construction

The FY 2006 Budget Request includes an increase of \$6.2 million for the NOAA Center for Weather and Climate Prediction, for a total of \$8.5 million, to continue construction on this facility that will bring NOAA scientists and academic researchers together in collaboration to enhance weather forecasts. A site for this new facility has been identified near the University of Maryland, and building occupancy is scheduled for February, 2008. In addition, we are requesting \$3.9 million for NOAA Facility Management and Construction to complete critical repairs and maintenance at field facilities, and invest in improved staff support and planning processes. This activity is a priority effort for NOAA, reflecting the growing need to sustain and improve our facilities. The Request also includes an increase of \$2.3 million, for a total of \$7.3 million, for Marine Sanctuaries Construction to continue ongoing construction efforts, including visitor centers and collaborative education projects.

Conclusion

NOAA's FY 2006 Budget Request invests in our priority areas, and reflects NOAA's vision, mission, and core values. The work NOAA did in 2004 benefits every U.S. citizen. We will build on that success throughout Fiscal Year 2005 and beyond. We are dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events, and providing environmental stewardship of our Nation's coastal and marine resources.

That concludes my statement, Mr. Chairman. Thank you for the opportunity to present NOAA's FY 2006 Budget Request. I would be happy to respond to any questions.