

**WRITTEN STATEMENT ON THE
NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION'S FY 2003 BUDGET
BY THE
UNDER SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE
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FOR THE
SENATE COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION

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Thank you, Mr. Chairman, and members of the Committee, for this opportunity to testify on the President's FY 2003 Budget Request for the National Oceanic and Atmospheric Administration (NOAA).

Let me begin by saying that this budget supports and enhances the goals of the President and the Department of Commerce. NOAA has established itself as one of the world's premier scientific and environmental agencies. We are an agency that deals with environmental change. We are an agency whose products form a critical part of the daily decisions made by Americans across the Nation and have economic impacts which affect our Nation's Gross Domestic Product. From our climate predictions that impact farming and financial decisions, to our hydrological products that affect public utilities and energy consumption, NOAA is a critical part of our Nation's economic security.

We are experts in climate, with its cooling and warming trends. We are an agency that manages fluctuating fisheries and marine mammal populations. We observe, forecast and warn the public about the rapidly changing atmosphere and especially severe weather. We monitor currents and tides, and beach erosion. We survey the ocean bottom and provide mariners with products to maintain safe navigation. We operate the Nation's most important constellation of earth-observing satellites. Lastly, we provide all this knowledge and exploration to citizens everywhere, especially to schools and young people across our Nation through our website www.noaa.gov. We provide this as a result of our mission to advance environmental assessment, environmental prediction, and natural resource stewardship for our great Nation.

This budget supports products that are essential for decision makers in every part of our economy. NOAA's budget will continue to fund products that assist in protecting the health and safety of this Nation's citizens from both routine and severe environmental changes. This budget supports our research, science and services from the local weather forecast offices around the Nation to our Fisheries Research Vessels that ensure sustainable stocks of our Nation's fisheries. It provides for technology infusion and critical infrastructure protection to reduce single points of failure for our satellite and weather prediction programs; continues our special partnerships with universities, states, and local governments around the Nation; and invests in education and human resources. This budget also supports our vast infrastructure, which will allow NOAA to continue its mission in years to come.

In a period of strongly competing Presidential priorities for our national defense, and economic security, the President's FY 2003 Budget Request for NOAA is \$3,330.5 million in total budget authority, and represents a decrease of \$45.4 million below the FY 2002 Enacted level. Within this funding level, NOAA proposes essential realignments that allow for a total of \$148.8 million in program increases, and \$129.0 million in base adjustments. NOAA's request highlights critical areas such as People and Infrastructure, Improving Extreme Weather Warnings and Forecasts, Climate Services, Modernization

of NOAA Fisheries, and other key NOAA programs such as Energy, Homeland Security, Ocean Exploration, and Coastal Conservation.

People and Infrastructure: \$129.0 million adjustment - to - base

NOAA's people and infrastructure are at the heart of what NOAA is and does. From our hurricane research center in Miami, FL to NOAA's weather service office in Barrow, AK, these are the underlying and interconnecting threads that hold NOAA and its programs together. Investments in NOAA's scientific and technical workforce as well as NOAA's facilities and equipment is essential for us to carry out our mission into the 21st Century. "People and Infrastructure" is about investing in the future, and about maintaining NOAA's infrastructure that has been built over the last thirty-one years.

Improving Extreme Weather Warnings and Forecasts

Critical to meeting our 21st Century mission is the continuity of NOAA's Satellites and Severe Weather Forecasts. There are few things that the Federal Government does that are as critical as issuing severe storm warnings and protecting the life and safety of Americans. Listed below is NOAA's request for this \$84.3 million endeavor.

Tornado Severe Storm Research: NOAA requests a total of \$1.0 million to develop new technologies for forecasting and detecting tornadoes and other forms of severe weather, and to disseminate this information to emergency managers, the media, and the general public for appropriate action. This new technology has the potential to significantly extend lead times for tornadoes and other forms of severe and hazardous weather. Coupled with advanced decision support systems, tornado lead times may double from 10 to 22 minutes using this technology. The bottom line is that this investment will help save lives.

US Weather Research Program (USWRP): NOAA requests an increase of \$1.0 million for a total of \$3.8 million to transition research and development into operations in order to reach a USWRP goal of improving forecasts of inland heavy precipitation associated with hurricane landfalls. This increase will be used to address the improvement of the forecasts of heavy and frequent, flood-producing rains associated with hurricanes and tropical storms as they move inland.

Weather & Air Quality Research Laboratories: NOAA requests an increase of \$4.2 million for a total of \$48.1 million to recapitalize the laboratories that conduct weather and air quality research, which includes funding for ongoing operational scientific activities to continue operation of the Wind Profiler Network and NOAA's Space Weather Program.

Advanced Hydrological Prediction Service (AHPS): NOAA requests an increase of \$4.7 million for a total of \$6.2 million to accelerate nationwide implementation of improved flood and river forecasts services in the Northeast, Middle Atlantic, and Southeast regions of the U.S., including the states of: New Hampshire, Vermont, Virginia, North Carolina, and South Carolina. As implemented, AHPS will: 1) produce new information with better predictions of river height and flood potential to reduce loss of life and property; 2) deliver high resolution, visually oriented products to provide partners and customers with valuable information for life decisions; 3) refresh aging hydrologic forecasting infrastructure to support rapid infusion of scientific advances; and 4) leverage NOAA's investments in observational systems and atmospheric models to enhance accuracy and resolution of river forecasts.

Weather & Climate Supercomputing: NOAA requests an increase of \$6.2 million for a total of \$21.2 million to continue operations and maintenance of the current National Weather Service (NWS)

supercomputer, and to transition the next generation weather and climate supercomputing system into operations. The NWS supercomputer is the foundation for all NWS weather and climate forecasts. Operational transition of the next generation supercomputer will enable the NWS to improve the resolution and forecast accuracy of the prediction models.

Radiosonde Replacement: NOAA requests an increase of \$2.0 million for a total of \$7.0 million to continue replacing and modernizing the upper air radiosonde network. The radiosonde network provides critical upper air observations which are a vital component of all weather forecast models. The current network is obsolete and nearing collapse, risking widespread loss of data within the next two to three years.

Aviation Weather: NOAA requests a total of \$2.5 million to initiate a 7-year plan to help improve U.S. aviation safety and economic efficiencies by providing state-of-the-art weather observation and forecast products responsive to aviation user needs. Weather accounts for over 70% of all air traffic delays, which results in greater expenditures by both airline customers and the airlines. In addition, an average of 200 general aviation pilot fatalities per year are caused by weather-related accidents across the U.S. This initiative will provide a means for the NWS to improve its aviation weather forecast services through 3 major components which include: 1) increasing the number and quality of aviation weather observations; 2) transitioning successful applied research efforts to operational products; and 3) developing and implementing new training programs for forecasters, pilots, and controllers. This initiative has the goal of a 10% reduction in National Airspace System weather-related air traffic delays, which would save \$600 million annually in potential economic losses, and reduce general aviation weather-related fatalities by 25%, or 50 lives annually.

Huntsville, AL Weather Forecast Office: NOAA requests a total of \$1.4 million to pay for recurring operations and maintenance costs at the new Huntsville, Alabama Weather Forecast Office (WFO). The Huntsville WFO was established in FY 2002 at the University of Alabama at Huntsville. The \$1.4 million requested will provide for NWS employee salaries, facilities rent and maintenance, and operational equipment and supplies to operate and maintain weather forecast and warning services in the Huntsville area.

Polar Orbiting Systems: NOAA requests a net increase of \$64.3 million for Polar Orbiting Systems, which are comprised of NOAA Polar K-N and the National Polar Operational Earth Satellite System. The net increase requested is described as follows:

NOAA Polar K-N: NOAA requests a decrease of \$15.6 million for a total of \$122.9 million for the NOAA Polar K-N. The Polar K-N program is completing major procurement items and therefore does not need to continue the funding levels of previous years.

National Polar-orbiting Operational Environmental Satellite System (NPOESS): NOAA requests an increase of \$79.9 million for a total request of \$237.3 million for the continuation of the tri-agency NPOESS program that will replace the NOAA POES program after completion of the current NOAA K-N series of satellites. This request represents NOAA's share of the converged NOAA/DoD/NASA program. In FY 2003, funds will be required to continue the development and production of the NPOESS instruments, including the Visible Infrared Image Radiometer, the Conical Microwave Imager Sounder, the Cross-track Infrared Sounder, the Ozone, Mapping and Profiler Suite, the Global Positioning System Occultation Sensor, and the Space Environmental Sensing Suite. The continued development of these instruments is critical for their timely and cost effective delivery to replace both the Defense Meteorological Satellite Program (DMSP) and the NOAA POES spacecraft when needed.

Geostationary Operational Environmental Satellite (GOES): NOAA requests a decrease of \$35.1 million for a total request of \$227.4 million to support continued post launch requirements for GOES I-

M; the continued procurement of the GOES-N series satellites, instruments, ground systems, and systems support necessary to maintain continuity of Geostationary operations; and planning and development for the GOES-R series of satellites and instruments. This decrease represents a program change resulting from the successful launch of GOES M, and the continued success of the GOES I-M series.

Earth Observing System Data Archive & Access System Enhancement: NOAA requests a total of \$3.0 million to ensure that NOAA can fully utilize the vast amounts of new satellite-based environmental data becoming available, process and distribute that data in a variety of formats, provide stewardship for the data, and make the data accessible to users in a variety of economic, research, government, and public sectors.

Joint Center for Data Assimilation: NOAA requests an increase of \$2.6 million for a total of \$3.4 million for the Joint Center for Satellite Data Assimilation. NWS, the Office of Atmospheric Research (OAR), and NASA also provide funding as partners in this coordinated national effort to more fully realize the potential of the vast quantities of new satellite data that are becoming available.

Coastal Ocean Remote Sensing: NOAA requests a total of \$6.0 million to develop and deploy a prototype high-resolution imaging sensor to meet long-standing NOAA requirements. This initiative will allow NOAA to work with NASA to develop conceptual design and capabilities of this instrument, which will continuously monitor coastal ocean areas for harmful algae blooms, coral reef deterioration, pollution changes, fisheries management, and navigation. This instrument will provide continuous, high resolution monitoring in unprecedented detail of terrestrial features such as vegetation changes, flooding, wild fires, volcanic eruptions, and ash cloud transport.

Satellite Command & Data Acquisition (CDA) Facility: NOAA requests an increase of \$1.0 million for a total of \$4.6 million to continue the Satellite CDA Infrastructure program. Improved facilities reduce the risk of outages and service disruptions caused by failure of the supporting buildings, facilities, and infrastructure. This program minimizes the risk of spacecraft loss and data loss and allows NOAA to continue supporting worldwide requirements for critical operational satellite data and services.

Satellite Command and Control: NOAA requests an increase of \$4.4 million for a total of \$34.8 million for satellite command and control. This investment supports the operations of the NOAA satellite systems, the ingesting and processing of satellite data, and the development of new product applications required for continuity of operations. NOAA provides satellite command and control services on a 24 hours per day, 365 days per year schedule.

Two critical components of this initiative are:

Protecting Critical Satellite Control Facilities: NOAA requests \$0.3 million to enhance security at the satellite Command and Data Acquisition ground stations by upgrading and expanding security lighting.

Satellite Command and Data Acquisition Station Operations: NOAA requests \$2.2 million for the operation of the polar Satellite Command and Data Acquisition (CDA) ground station. NOAA will use these funds to obtain the appropriate technical, management, and administrative contractor support to operate and maintain the acquisition and throughput of data from NOAA and DoD polar-orbiting satellites to NOAA's Satellite Operations Control Center, and to National Weather Centers.

Product Processing and Distribution: NOAA requests an increase of \$6.7 million for a total of \$27.7 million to process and analyze data from NOAA, DoD, and other Earth-observing satellites; supply data, interpretations, and consulting services to users; and operate and maintain the Search and Rescue

mission control center. This includes supplying satellite data that makes up approximately 85 percent of the data used in NWS numerical weather prediction models. NOAA will use the requested program increase to support the following two mission critical functions:

Reducing the Risk to Continuity of Critical Operations: NOAA requests a program increase of \$3.1 million to expand on-site maintenance and staffing levels to ensure that all critical functions are performed. This ensures vital and timely information to customers and staff during times of peak workload.

Improved Support for Weather and Hazards: NOAA requests a program increase of \$2.0 million to automate wild fire detection algorithms to speed up the delivery of information to customers, to integrate the information into geographic information systems for detailed location information, and to integrate new fire detection sensors from non-NOAA satellites.

G-IV Instrumentation: NOAA requests a total of \$8.4 million to begin upgrading instrumentation aboard the G-IV aircraft. Improvements in NOAA's Gulfstream IV aircraft's remote-sensing systems will enhance NOAA's hurricane-reconnaissance capability. New technology will use remote sensors to develop 3-dimensional profiles of hurricanes from 45,000 feet down to the surface and would provide forecasters with unprecedented real-time information on size and intensity. In addition, radar-composite maps will provide critical rainfall information that is crucial to forecasters and to the emergency management community for preparedness and evacuations.

Climate Services

NOAA maintains a balanced program of focused research, large-scale observational programs, modeling on seasonal-centennial time scales, and data management. In addition to its responsibilities in weather prediction, NOAA has pioneered in the research and operational prediction of climate variability associated with the El Niño Southern Oscillation (ENSO). With agency and international partners, NOAA has also been a leader in the assessments of climate change, stratospheric ozone depletion, and the global carbon cycle. Our confidence in our recent El Niño prediction is based upon a suite of robust observing systems that are a critical component in any forecast.

The agency-wide Climate Services activity represents a partnership that allows NOAA to facilitate the transition of research observing and data systems, and knowledge into operational systems and products. During recent years, there has been a growing demand from emergency managers, the private sector, the research community, and decision-makers in the United States and international governmental agencies for timely data and information about climate variability, climate change, and trends in extreme weather events. The economic and social need for continuous, reliable climate data and longer-range climate forecasts has been clearly demonstrated. NOAA's Climate Services Initiative responds to these needs. The following efforts will be supported by this initiative:

Climate Change Research Initiative: On February 14, 2002, President Bush announced the Clear Skies and Global Climate Change initiatives. The Clear Skies plan aims to cut power plant emissions of three pollutants (nitrogen oxides, sulfur dioxide, and mercury) by 70 percent. The new Global Climate Change initiative seeks to reduce greenhouse gas intensity by 18% over the next decade. The President's proposal supports vital climate change research and ensures that America's workers and citizens of the developing world are not unfairly penalized. NOAA's expertise will be extremely important in the area of climate research. NOAA, along with NASA, Department of Energy, National Science Foundation, and the Department of Agriculture will implement a multi-agency Climate Change Research Initiative totaling \$40 million. The following sections detail NOAA's \$18.0 million request to address key priorities of the CCRI.

Climate Modeling Center: NOAA requests \$5.0 million to establish a climate modeling center at Princeton, New Jersey. This center will focus on model product generation for research, assessment and policy applications. NOAA has played a central role in climate research, pioneering stratospheric modeling, seasonal forecasting, ocean modeling and data assimilation, and hurricane modeling. This core research capability will be enhanced to enable product generation and policy related research.

Global Climate Atmospheric Observing System: NOAA requests \$4.0 million to work with other countries to reestablish the benchmark upper-air network. NOAA will emphasize data sparse areas, and place new Global Atmosphere Watch stations in priority sites to measure pollutant emissions, aerosols, and ozone, in specific regions.

Global Ocean Observing System: NOAA requests \$4.0 million to work towards the establishment of an ocean observing system that can accurately document climate scale changes in ocean heat, carbon, and sea level changes.

Aerosols-Climate Interactions: NOAA requests \$2.0 million to contribute to the interagency National Aerosol-Climate Interactions Program (joint partnership with NASA, DOE, NSF) currently under development. Specifically, NOAA will establish new and augment existing in-situ monitoring sites and conduct focused field campaigns to establish aerosol chemical and radiative properties.

Carbon Monitoring: NOAA requests \$2.0 million to augment carbon monitoring capabilities in North America as well as observations of globally relevant parameters in key under-sampled oceanic and continental regions around the globe.

Regional Integrated Science Assessments Program: NOAA requests \$1.0 million for the Regional Integrated Science Assessments Program (RISA). Working with the National Science Foundation (NSF), NOAA will augment its research capability in assessing climate change impacts vulnerability by utilizing the research on "Decision Making in the Face of Uncertainties" in the framework of the RISA programs, e.g. Pacific Northwest.

Arctic Research: NOAA requests a total of \$2.0 million in support of the Study of Environmental Arctic Change (SEARCH) to improve monitoring of the elements of the Arctic environment. NOAA's SEARCH activities are part of a coordinated interagency and international program, begun in response to evidence of an alarming rate of environmental change occurring in the Arctic. The SEARCH initiative will substantially increase understanding of long-term trends in temperature, precipitation and storminess across the U.S., with potential improvements in forecasting and planning for energy needs, growth seasons, hazardous storm seasons and water resources.

University-National Oceanographic Laboratory System (UNOLS): NOAA requests a total of \$2.5 million to outsource with UNOLS and other sources for ships in the Pacific to support longtime series research for Fisheries Oceanographic Coordination Investigations (FOCI), VENTS, Oregon/Washington Groundfish Habitat and maintenance of the Tsunami moorings in the Gulf of Alaska and Pacific Ocean. The increase will enable NOAA to continue to meet research requirements in the Pacific Ocean, Gulf of Alaska, and Bering Sea utilizing time aboard UNOLS and other vessels.

Climate Monitoring and Ocean Observations: NOAA requests an increase of \$5.4 million for a total of \$54.6 million to recapitalize the laboratories that conduct climate research, which includes \$0.6 million for purchasing equipment and improving the scientific activities that contribute to the long-term observing systems that directly support the President's CCRI initiative. These observing systems are the Global Ocean Observing System (GOOS); the Global Air Sampling Network and a gas network at four baseline observatories, and at Niwot Ridge, CO; and the Tropical Atmosphere Ocean (TAO) array which is the cornerstone of the El Niño/Southern Oscillation (ENSO) Observing System and other ocean

observing systems.

NOAA requests an increase of \$8.3 million for a total of \$36.6 million for the Archive, Access, and Assessment programs working in Climate Services. This continued investment will be used for the following activities:

Regional Climate Services & Assessments: To develop an improved climate data and information delivery service. This will allow NOAA to improve national, regional and state linkages and make national, regional, state, and local weather and climate observing systems and data bases more accessible.

Next Generation Environmental Information: To develop a new generation of World Wide Web accessible climate information and statistics for primary use by the energy sector of our economy. This funding will allow NOAA to overhaul the current methods and procedures for computing climate information such as heating and cooling degree days, heat indices, wind chills, freezing degree days, and other related statistics with the goal of making this information more appropriate and timely for business decision-making and strategic planning purposes.

World Ocean Database: This investment will be used to update the World Ocean Database to include new sources of data and to put in place the analytical and data management infrastructure needed to transition this activity from the current research mode to a sustained, operational service mode.

Extending America's Climate Record: NOAA will use the funds to gather key paleoclimatic records to fill gaps; reconstruct climate records during preinstrumental periods; and produce blended data sets that integrate instrumental, historical, and paleoclimatic data into a holistic climate record.

Solar X-ray Imager Archive: NOAA will use the SXI archive to derive new products to help reduce the effects of extreme space weather events on telecommunications satellites, electrical power services, and health risks to astronauts.

Modernization of NOAA Fisheries

The FY 2003 President's Budget Request for NOAA, invests in core programs needed for our National Marine Fisheries Service (NMFS) to meet its mission to manage fisheries, rebuild stocks, and protect endangered species such as sea turtles and whales. NMFS modernization funds will be allocated to ensure that existing statutory and regulatory requirements are met for fisheries and protected species management programs (including the Magnuson-Stevens Act, National Environmental Protection Act, Endangered Species Act, Marine Mammal Protection Act, and other statutory requirements). This budget request continues NOAA's effort to modernize NOAA's Fisheries. The Modernization of NMFS encompasses a long-term commitment to improve the NMFS structure, processes, and business approaches. In addition to this budget request, the Administration will propose that any reauthorization of the Magnuson Stevens Fisheries Conservation and Management Act include authority for fishing quota systems within regional fisheries, including transferable quotas, where appropriate. This initiative focuses on improving NMFS' science, management, and enforcement programs and begins to rebuild its aging infrastructure. These improvements will result in measurable progress in the biological and economic sustainability of fisheries and protected resources. To continue this modernization program, NOAA's FY 2003 President's Budget Request includes the following program investments in Science, Management, and Enforcement.

Science: \$74.8 Million Increase

Fisheries Research Vessel: NOAA requests an increase of \$45.5 million for a total of \$50.9 million for NOAA's second Fisheries Research Vessel (FRV2). This vessel will replace the 39-year old ALBATROSS IV in the North Atlantic. Costs of maintaining the aging ALBATROSS IV for the five years needed to construct the replacement FRV and to allow side-by-side missions for calibration purposes are escalating. Moreover, replacing the aging fleet is required to provide research platforms capable of meeting increasingly sophisticated data requirements for marine resource management.

Modernize Annual Stock Assessments: NOAA requests an increase of \$9.9 million to modernize annual stock assessments. Funding will allow NMFS to conform to new national stock assessment standards of data quality, assessment frequency, and advanced modeling. An increase of \$5.1 million is requested to provide for the recruitment and training of stock assessment biologists and supporting staff to produce annual stock assessments that meet the new standard for Federally managed stocks. This request would also add an increment of 260 Fisheries vessel/charter days at sea toward the balance of 3,000 days identified in the NOAA Fisheries Data Acquisition Plan at a cost of \$2.4 million. The initiative includes \$0.9 million for advanced sampling technologies. This element targets improvements and innovative uses of existing technologies, including the application of new and advanced sampling systems and approaches. Also, included in this request is \$1.5 million to enhance fisheries oceanography studies, principally, the Fisheries and the Environment program (FATE).

Endangered Species Act Sea Turtle Research: NOAA requests an increase of \$2.0 million for a total of \$6.5 million to continue the recovery of highly endangered sea turtles. Of the \$2.0 million increase, \$1.4 million is to provide the necessary research to recover highly endangered marine turtles. This program is designed to help us collect information on biology and habitats and share that information with other range countries. The remaining \$0.6 million is requested to implement management strategies to reverse population declines, implementation of multi-lateral international agreements, and building capacity through domestic and international educational and outreach programs.

Columbia River Biological Opinion (BiOp) Implementation: NOAA requests an increase of \$12.0 million to provide for the research, monitoring, and evaluation (RM&E) necessary to continue implementation of measures included in the Columbia River Biological Opinion. The RM&E program will provide the scientific information necessary to assess whether BiOp performance measures are being achieved at 2003, 2005, and 2008 check-ins. This funding also provides for the research needed to address key uncertainties identified in the BiOp in the areas of estuary and nearshore ocean survival, delayed effects related to dam passage, and the effects of hatchery programs on the productivity of naturally spawning fish.

Recovery of Endangered Large Whales: NOAA requests an increase of \$1.0 million to provide resources to scientifically determine whether two key endangered whales humpbacks and bowheads have recovered and are candidates for delisting. This information will enable NOAA to detect changes in the status of large whales and prevent any longterm irreversible damage to these populations.

Socioeconomics: NOAA requests an increase of \$1.5 million for a total of \$4.0 million to support the on-going development of a multiyear comprehensive social sciences program to support NMFS policy decisions. The approach is 3 tiered, augmenting the integral components of a successful social sciences program that includes staffing (\$0.6 million and 7 FTE); data collection (\$0.5 million); and research activities (\$0.4 million). In combination, the funding will be used to continue addressing shortcomings in economic and social assessments of policy alternatives by improving the economic and social science staff capability, and initiation of data and applied research programs.

National Observer Program: NOAA requests an increase of \$2.9 million for a total of \$17.0 million for the National Observer Program. Funding will be used to expand the collection of high quality fisheries and environmental data from commercial and recreational fishing vessels to assess impacts on

marine resources and fishing communities and to monitor compliance with marine resource laws and regulations. This request will primarily provide for approximately 4,000 observer sea days spread over 11 fisheries, most of which are currently unobserved.

Management: \$6.4 Million Increase

NMFS National Environmental Policy Act (NEPA) Implementation: NOAA requests an increase of \$3.0 million for a total of \$8.0 million to continue striving to enhance its management of the NEPA process. This funding will provide NMFS with the necessary resources to continue to support agencywide NEPA activities and will allow NMFS to strengthen its decision making and documentation process to more fully take advantage of the decision making tools provided by NEPA.

Regional Fishery Management Councils: NOAA requests an increase of \$1.9 million for a total of \$16.0 million for the Regional Fishery Management Councils. This request will provide needed resources for the Councils to respond to increased workload in developing, implementing, and supporting management measures to eliminate overfishing and rebuild overfished stocks; identify and protect essential fish habitats; reduce fisheries' bycatch to the maximum extent practicable; minimize the impacts of fishing regulations on fishing communities; and to implement programs that result from the next reauthorization of the Sustainable Fisheries Act. These results will be achieved through the development of amendments to and creation of new Fishery Management Plans and regulations and corresponding and supporting international management measures to control fishing activities.

Statutory and Regulatory Requirements: NOAA requests an increase of \$1.5 million to provide for thorough, complete, and timely environmental and economic analyses to NOAA customers and for its recovery programs. Funds will support personnel in all NMFS regions, science centers and headquarters to conduct required data gathering, analysis, and document preparation to assess the impacts of human activities that affect protected species. These include the range of Federal actions, including management of marine fisheries. This funding will also support assessments of the environmental and socioeconomic impacts, costs and benefits of implementing conservation programs for protected species.

Enforcement: \$9.7 Million Increase

Enforcement and Surveillance: NOAA requests an increase of \$4.3 million for a total of \$39.3 million to expand and modernize NMFS' fisheries and protected species enforcement programs. These programs include Alaska and west coast groundfish enforcement, protected species enforcement, state and local partnerships, specialized Magnuson-Stevens investigatory functions, community oriented policing and problem solving, and swordfish/Patagonian toothfish import investigations.

Vessel Management System (VMS): NOAA requests an increase of \$5.4 million for a total of \$7.4 million for additional support and continued modernization and expansion of the vessel management system (VMS) program. These resources will create a program which will monitor approximately 1,500 vessels and is readily expandable. VMS technology is an invaluable tool for modern fisheries management. It provides outstanding compliance without intrusive at sea boardings, enhances safety at sea, and provides new tools to managers for real time catch reporting.

Other KEY NOAA Programs

NOAA is constantly pursuing areas where the expertise of our researchers, scientists, and staff can contribute to solving problems. Therefore, NOAA has other key programs that respond to these challenges. They are Energy, Homeland Security, Ocean Exploration, and Coastal Conservation.

Energy

Energy Initiative: NOAA requests a total of \$6.1 million to implement a pilot program that will provide more accurate temperature and precipitation forecasts, and additional river forecast products to help the energy industry improve electrical load forecasting and hydropower facility management. Based on industry estimates, this investment will result in savings of \$10 to \$30 million annually in the pilot region after the second year of the demonstration. Expanding the pilot nationwide could generate savings of over \$1 billion per year.

Energy Permit Rapid Response: NOAA requests a total of \$2.0 million to support the establishment and implementation of a streamlined energy permit review process. This proposal responds to an Executive Order directing Federal agencies to expedite permits and coordinate Federal, state, and local actions needed for energy related project approvals on a national basis and in an environmentally sound manner. The goal of this request is to reduce, by 25%, the time required to adjust the permits of licensed energy projects/facilities. Currently, relicensing of existing facilities takes 6-10 years. It is anticipated that the combination of regular relicensing and permit adjustments to implement the new National Energy Policy will result in thousands of new actions for NOAA nationally.

Energy Management: NOAA requests a total of \$0.6 million for Energy Management. The requested funds will be used to reduce NOAA's facility operating costs through actively pursuing energy commodities at competitive prices, identifying and implementing energy savings opportunities and applying renewable energy technologies and sustainable designs at NOAA-managed facilities. Many of the equipment retrofits that are a part of energy management have enabled facilities to recover their costs in less than five years.

Homeland Security

On September 11, 2001, the Nation experienced an unprecedented attack on the World Trade Center and the Pentagon. NOAA immediately implemented its agency-wide Incident Response Plan, and was able to rapidly deploy critical assets, capabilities, and expertise to support response and recovery efforts. NOAA personnel in weather offices, satellite and remote sensing teams, hazardous materials units, marine transportation and geodesy offices, and fisheries enforcement teams provided a wide range of products and services.

NOAA's response to the September 11 attacks was rapid and focused. However, the attack fundamentally altered the context of NOAA's incident response planning. The threats resulting from attacks on the nation may be different in nature, and larger in scale and scope. Thus, NOAA's Homeland Security efforts are focused on enhancing its response capabilities and improving internal safety and preparedness. NOAA is working quickly to improve its ability to coordinate emergency response, to evaluate its existing capabilities, and to identify products and services that will meet the challenge of new response realities. NOAA's Homeland Security activities are dedicated to advancing the coordinated efforts within the Department of Commerce, the Office of Homeland Security and assisting NOAA's many federal, state, and local partners.

In FY 2003, funding is requested to address the most immediately recognized areas of programmatic vulnerabilities to ensure the continuity of the most critical of NOAA's services and information products in the event of natural or man-made emergencies.

Vessel Lease/Time Charter: NOAA requests an increase of \$9.9 million for a Vessel Lease/Time Charter. In FY 2003, NOAA will continue assisting DOD in mapping and charting key port areas. NOAA will initiate a vessel time charter to expand its hydrographic surveying capacity. While having

the capability to operate throughout America's Exclusive Economic Zone (EEZ), initial emphasis during FY 2003 will be in the Gulf of Mexico. Ninety five percent of America's non-NAFTA economic trade moves through the marine transportation system. Any interruption in the flow of goods through our nation's marine transport system yields immediate and dire impact to the national economy. Four of the top seven port areas are found on the Gulf of Mexico, including: (1) New Orleans and South Louisiana, (2) Houston/Galveston, (3) Port Arthur, TX and Lake Charles, LA; and (4) Corpus Christi, TX. The combination of high traffic, hazardous cargos and vessels operating close to the ocean bottom make waterways and ports particularly vulnerable to terrorist activities including those utilizing low technology mines. Requested funding provides critical survey data to directly enhance safety of mariners, passengers, and the national economy from threats both natural or human in origin.

NESDIS Single Point of Failure: NOAA requests a total increase of \$2.8 million to provide backup capability for all critical satellite products and services. This effort supports the continuity of critical operational satellite products and services during a catastrophic outage. In FY 2003, NOAA will begin the first phase of hardware, software, and telecommunications purchases; and perform initial testing of all capabilities for this backup system. The requested funding also supports installing additional communications links to connect the backup location to the NOAA Science Center in Camp Springs, Maryland.

Satellite Facilities Security: NOAA requests a total of \$2.3 million, an increase of \$0.3 million, to maintain enhanced security at the satellite Command and Data Acquisition ground stations. NOAA requires these funds to enhance the systems that protect these stations, reducing the risk to satellites and ground systems due to breaches in security. These satellite stations represent the backbone of the ground systems that support NOAA spacecraft programs--commanding, controlling, and acquiring data from on orbit satellites with an estimated value of \$4.5 billion.

NWS Gateway Critical Infrastructure Protection: NOAA requests a total of \$3.0 million for the National Weather Service Telecommunications Gateway Backup (NWSTG). During FY 03, this funding will enable the NWS to complete the establishment of the NWSTG facility. After scheduled deployment in early FY 04, the continued funding level of \$3.0M will cover recurring costs for NWSTG backup communications, system software licenses, systems operations and maintenance support, facility rent, and cyclical technology refreshment. This will ensure uninterrupted delivery of critical meteorological data necessary for the protection of life and property, and the economic well being of the Nation.

Weather & Climate Supercomputing Backup: NOAA requests a total of \$7.2 million to implement an operational backup system for the NWS weather and climate supercomputer. The NWS weather and climate supercomputer is a critical component of NOAA's mission and is currently a single point of failure as the entire system is located in a single facility. Many of the data, products and services provided by and through the Central Computer System (CCS) directly contribute to the issuance of life saving NWS watches and warnings to the public. The NWS weather and climate supercomputing backup system is a critical part of DOC's Homeland Security Initiative and NOAA's comprehensive business continuity plan, designed to support uninterrupted data and product delivery to NOAA customers. The National Center for Environmental Prediction's (NCEP) CCS is currently the only computer system within NOAA capable of running highly complicated forecasting models in the required operational (regimented) mode. During FY 2003 the NWS will acquire the necessary backup system hardware capability, conduct site selection, and begin installation.

Commercial Remote Sensing Licensing: NOAA requests a total of \$1.2 million for the Commercial Remote Sensing Licensing and Enforcement Program to ensure the timely review and processing of satellite license applications. This NOAA investment will support staff engaged in the review of commercial remote sensing licensing applications. NOAA will also support monitoring and compliance activities, which include the review of licensee quarterly reports, on-site inspections, audits, and license

violation enforcement. The funds requested in FY 2003 will also support implementation of shutter control over commercial systems to ensure that our Nation can respond to commercial remote sensing security issues in national security and foreign policy crisis situations.

Ocean and Coastal Programs

NOAA requests a total of \$14.2 million for Ocean Exploration, this includes a small amount for adjustments - to - base. This program seeks to increase our national understanding of ocean systems and processes through partnerships in nine major voyages of discovery in FY 2003. Ocean Exploration is investment in undersea exploration, research, and technology in both the deep ocean and areas of special concern, such as the U.S. Exclusive Economic Zone (EEZ), and National Marine Sanctuaries (NMS).

NOAA's coastal conservation activities total \$348.5 million, and are central to accomplishing the mission of environmental monitoring, and underscore a commitment to coastal, estuarine, and marine ecosystems. NOAA's activities include Coastal Zone Management; Marine Sanctuaries, Estuarine Research Reserves, and Marine Protected Areas; Coral Reefs, Habitat, and Other Coastal Conservation & Restoration Programs; and Pacific Salmon recovery Fund and Treaty. Many of these programs receive adjustments - to - base, and there is an increase for Cooperative Conservation and Recovery with States. NOAA requests a total of \$1.0 million for Cooperative Conservation and Recovery with States to provide funds to state partners under the Endangered Species Act Section 6 cooperative conservation program. These agreements will provide the means for states and local communities to undertake local initiatives in the management and recovery of ESA-listed and candidate species by providing the legal authority to make the decisions about how best to protect species at risk of extinction. The agreements would provide funding on a matching basis to accomplish conservation activities. Funding provided to the states would support local researchers, non-governmental organizations and volunteers to accomplish monitoring, restoration, science and conservation activities.

Financial Management in NOAA

NOAA will continue to improve its core financial management responsibilities in order to meet the future needs of NOAA and its stakeholders. NOAA has placed a high priority on the proper execution and accounting of its resources. Key budgetary and financial management improvements are centered around three key areas: 1) Improved Funds Control and Execution through Automation; 2) Improved Budget Structure; and 3) Improved Outreach and Communications.

Improved Funds Control and Execution through Automation

Included in the FY 2003 request is \$16.1 million for NOAA's share of the Commerce Administrative Management System (CAMS). CAMS will contribute to improved financial management in a number of significant ways, primarily by accounting for NOAA's expenditures and maintaining NOAA's clean audit opinion. While NOAA has made significant efforts to retain its clean audit opinion for a third consecutive year, it has done so with inefficient manual, error-prone business processes that are labor-intensive. Without significant amounts of overtime and creative manual resource tracking, NOAA's accounting details would be non-existent. CAMS will provide financial managers with on_line, real_time, and accurate financial information and will enable NOAA and DOC to meet statutory obligations under the Federal Managers' Financial Integrity Act (FMFIA) and the Chief Financial Officers Act (CFO Act).

Improved Budget Structure

In the FY 2003 budget, legislation is requested to establish a Business Management Fund (BMF) for corporate centralized services in NOAA. For decades, NOAA has managed its centralized services

through a funding mechanism supported in its current financial management system, FIMA, known as indirect costs. The process by which funds were collected and distributed to support centralized services was convoluted at best, and fraught with inconsistencies. Three years ago, NOAA began a comprehensive effort to review its corporate funding methodologies and work toward moving its headquarters management fund into a business-like environment. A number of improvements have been realized already, including stability in corporate charges for three years in a row, returning unspent corporate costs, and reporting to customers the status of funds mid-year and at year-end. However, to complete this effort of truly realizing a business fund operation, NOAA requires legislation. No current legislation exists for NOAA to operate this fund, particularly after FIMA is replaced by CAMS. Once legislation is secured, NOAA will begin to develop budgetary documentation with the same rigor and reporting as required with appropriated funds. Already underway, in support of this effort is NOAA's initiative to implement Activity Based Costing (ABC) across all of the Office of Finance and Administration's key business lines. ABC studies are being completed to compute costs for services such as human resources, grants, and eventually all other support services. The end result of these studies will be the ability to charge customers a fee for services, based on actual and estimated usage, and by the specific services required. This will replace the flat rate, off-the-top methodology employed today and will allow charges to be tailored to line offices' specific requirements. NOAA is committed to bringing its corporate services up to 21st century standards, and the flexibility of a business management fund is a cornerstone of our plan.

Over the past several years, NOAA has been working to respond to Congressional concerns regarding its budget structure. NOAA, in conjunction with both Congressional and Administration assistance, recently restructured the budget during the FY 02 Appropriations process. However, this effort is just a beginning, and NOAA will continue to work with Congress to ensure that our budget is adapted to Congressional reporting needs and concerns. For example, in the FY 2003 budget, NOAA has added additional specialty tables that will allow Congress to track budgetary initiatives that cross multiple programs and/or NOAA Line Offices, and NOAA has enhanced its base narratives to be more descriptive. Also, in support of flexible budgetary reporting, NOAA is developing a budget database that moves its tracking tables from the current lotus driven environment to a database environment. This will allow for more accurate tracking, quicker response to inquires, and allow for greater flexibility in preparing budgetary charts in response to Congressional and Administrative inquires. In conjunction with OMB, NOAA has developed a simplified tracking table that clearly indicates NOAA's primary mission areas.

Finally, NOAA began an effort to conduct a position and FTE management review. This effort began in FY 2002 and was adopted during the FY 2002 appropriations process. The FY 2002 efforts focused developing an accurate baseline of FTEs based on actual usage. The baseline was completed and has been implemented. In FY 2003, NOAA's efforts will focus on ensuring that the positions associated with this new baseline are aligned properly with program requirements.

Sea Grant

I would also like to explain the Administration's proposal to transfer funding for the Sea Grant College Program to the National Science Foundation (NSF). The Sea Grant program plays an important role in marine and coastal research and is a cost-effective way to address new problems in marine research management. Under the Administration's proposal, the current Sea Grant structure would be replaced with a university-based coastal and ocean program modeled after the NSF centers, with input from researchers, educators and practitioners, through workshops. NSF will retain the Sea Grant College designation for qualified centers. The program will be open to all public and private institutions of higher education through a fully competitive process. NSF also has a lower matching requirement, so state and local funds will be freed up to address outreach and extension needs of local communities. NOAA will have a strong role in setting research objectives for the program. To ensure the program

transfer does not adversely affect current awardees, NSF will transfer funds to NOAA to support the current award commitments through the duration of their grant period.

Several studies of the Sea Grant Program have noted its effectiveness, as well as its problems. In 1994, the National Research Council (NRC) found that NOAA's Sea Grant Program has played a significant role in U.S. marine science, education, and outreach. The review's recommendations included better defining the roles of the National Sea Grant Office, the Sea Grant College programs, and the Sea Grant Review Panel, and streamlining the proposal review and program evaluation processes. Many of the recommendations of the NRC report have been adopted by the program and were also incorporated in the 1998 Amendments to the National Sea Grant College Program Act. In a November 2000 study, entitled "A Mandate to Engage Coastal Users," a committee led by Dr. John Byrne of Oregon State University and the Kellogg Commission indicated Sea Grant has been effective in facilitating the Nation's sustainable development of coastal resources by helping citizens make better informed and wiser decisions. Twenty-two of the 30 state Sea Grant Programs have undergone performance evaluations by teams of outside reviewers and Sea Grant peers. Sixteen were graded "excellent" in achieving significant results. A program was graded "excellent" if it produced significant results, connected Sea Grant with users, and was not found to need improvement in areas such as long-range planning and management. Sea Grant's 1999 Hammer Award-winning program in seafood safety training and the national marina management effort are examples of other successful national programs. Through the years, a number of successful partnerships have been established between NOAA and the National Science Foundation (NSF), such as the Teacher-at-Sea Program, our partnerships with NSF on the U.S. Global Change Research Program and the U.S. Weather Research Program, as well as the Study of Environmental Arctic Change (SEARCH) program. And, NSF supports some applied research programs, such as the Small Business Innovation Research and Technology Transfer programs.

Conclusion

NOAA's Fiscal Year 2003 Budget request invests in people, climate, energy, homeland security, infrastructure, and high priority research, science, and services. This budget maintains NOAA on its course to realize its full potential as this nation's premier environmental science agency. NOAA is also doing its part to exercise fiscal responsibility as stewards of the Nation's trust as well as America's coastal and ocean resources. And, in the same way that NOAA is responsible for assessing the Nation's climate, we are responsible for assessing and improving our management capabilities. NOAA will continue to respond to key customers and stakeholders, and will continue to leverage its programs and investments by developing those associations that most efficiently and economically leverage resources and talent, and that most effectively provide the means for successfully meeting mission requirements. Thank you for the opportunity to present NOAA's fiscal year 2003 budget.