



NOAA

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

FEBRUARY 9, 2010



FY2011 BUDGET SUMMARY





DEAR READER

It is my pleasure to present to you NOAA's Budget Summary for fiscal year 2011. In this report, you will find details for our programs and missions, and our plans for achieving the complementary goals of the President, Secretary Locke and NOAA.

Despite the tough challenges facing Americans, I am optimistic that together we can build a better world for ourselves, our children and future generations. Using the best science as our foundation, NOAA is poised to enhance its ability to address urgent global issues. With this budget, we will strengthen the scientific basis for environmental decision-making, improve services that protect life and property, restore our oceans and coasts to be healthy, productive and resilient, ensure satellite continuity, and advance NOAA climate science and services.

NOAA has a track record of excellent science and the commitment to base policy and management decisions on scientific knowledge. We believe that the scientific information should be shared widely and communicated clearly to enhance its utility. This budget strengthens the core competencies and associated science, service and stewardship functions of NOAA needed to address high-level strategic priorities. NOAA's mission and priorities support Secretary of Commerce Gary Locke's priorities through innovation in science and technology, services benefitting the economy and ecosystems, and green and blue businesses underscored by a solid foundation of environmental information and stewardship. NOAA's and the Department's missions are strongly reinforcing; in fact the old assertion that we must choose between the economy and the environment is a false dichotomy. A healthy environment and a strong economy go hand in hand.

Current economic conditions, plus mounting scientific evidence and public concern, demand that we attend more urgently to pressing issues of climate change, degradation and depletion of ocean and coastal resources, energy security, and public health and safety. For example, NOAA provides not only improved understanding of the processes contributing to climate change, but assesses the current and potential impacts of climate change on our communities and natural systems. These impacts include extreme events such as hurricanes and flooding as well as the more gradual impacts of sea level rise and changes in sensitive ecosystems like the Arctic. Recreational and commercial activities, representing billions of dollars in economic impact, depend on healthy coastal, ocean and fresh water environments and the services they provide. NOAA is assisting communities with the data, tools, technology, training, and essential services and knowledge needed to make decisions in diverse disciplines and sectors – from the innovative management of our natural resources to the investments we make in public infrastructure.

Indeed, NOAA's long-standing vision is of an informed society that uses a comprehensive understanding of the role of the oceans, coasts, and atmosphere in the global ecosystem to make the best social and economic decisions. In order to realize this vision, we acknowledge our excellent NOAA workforce, the cooperation of numerous partners, and our ongoing support from members of Congress and a wide range of constituents. I am committed to supporting the President and Secretary Locke in leveraging NOAA's impressive track record and resources to make a difference for the American people, and to create a lasting legacy for our children and our environment.

Jane Lubchenco, Ph.D.
Under Secretary of Commerce for Oceans and Atmosphere

TABLE OF CONTENTS

Introduction ————— i

2009 Accomplishments and Performance Results ————— Chapter 1

NOAA Operations, Research, and Facilities by Line Office ————— Chapter 2

National Ocean Service ————— 2-31

National Marine Fisheries Service ————— 2-39

Office of Oceanic and Atmospheric Research ————— 2-49

National Weather Service ————— 2-59

National Environmental Satellite, Data, and Information Service ————— 2-65

Program Support ————— 2-71

NOAA Procurement, Acquisition, and Construction ————— Chapter 3

National Ocean Service ————— 3-85

National Weather Service ————— 3-85

National Environmental Satellite, Data, and Information Service ————— 3-88

Program Support ————— 3-91

Mandatory and Discretionary Funds ————— Chapter 4

Other Discretionary ————— 4-97

Other Mandatory ————— 4-101

NOAA Education ————— Chapter 5

NOAA Research and Development ————— Chapter 6

Special Exhibits ————— Chapter 7

A Note on Terminology ————— 7-141

Summary by Appropriation ————— 7-142

Adjustments to Current Programs ————— 7-144

NOAA Control Table ————— 7-145

TERMINOLOGY

The reader should be aware of the specific meaning of several terms as they are used throughout this budget summary:

“FY 2009 Enacted”

Fiscal Year (FY) 2009 Appropriations (P.L. 111-8), not including American Recovery & Reinvestment Act (ARRA) Supplemental Funds (P.L. 111-5)

“FY 2010 Enacted”

Fiscal Year (FY) 2010 Appropriations (P.L. 111-117)

“Terminations”

Reductions to the enacted level for Congressionally directed projects and/or additional funding provided over the requested amount

“Adjustments-to-Base”

The estimated FY 2011 Federal Pay raise of 1.4% and the annualized FY2010 pay raise of 2.4%. Program totals will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from GSA. In addition, ATBs include unique/technical adjustments to the base program, for example transfers of base resources between budget lines

“FY 2011 Base”

Fiscal year (FY) 2010 Enacted, less Terminations, plus Adjustments-To-Base

“Program Change”

The increase/decrease over the FY 2011 base, which is the FY 2010 Enacted minus Terminations, plus Adjustments-to-Base

“FY 2011 Request”

Fiscal Year (FY) 2010 Enacted, less Terminations, plus Adjustments-to-Base, and Program Changes



INTRODUCTION

Ice Divers Katrin Iken and Elisabeth Calvert descend below the ice through a hole in a melt pond while Shawn Harper teds the safety line



INTRODUCTION

For Fiscal Year (FY) 2011, the National Oceanic and Atmospheric Administration (NOAA) requests a total appropriation of \$5,554,458,000 an increase of \$806,105,000, or 17 percent over the FY 2010 Enacted level. This request reflects NOAA's continuing effort to better serve the American people through advancing mission-critical services. The NOAA staff of dedicated professionals, working with extramural researchers and our international partners are extending our knowledge of climate change; expanding meteorological prediction capabilities; improving coastal resource management; charting more of our seas and coasts; and enhancing environmental stewardship.

Total requested calculated Adjustments to Base (ATBs) are \$54,777,000. These adjustments focus on maintaining and investing in our workforce and supporting NOAA's most important resource – our people. NOAA leverages this most valuable asset by applying our people's knowledge, experience, ingenuity and dedication to the challenges of the 21st century. With this increase, the FY 2011 base level will fund the estimated FY 2011 Federal pay raise of 1.4 percent and annualize the FY 2010 pay raise of 2.4 percent. The base level will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.



NOS protects and manages over 95,000 miles of coastline

NATIONAL OCEAN SERVICE (+\$46M)

Coastal development and human uses of our coasts are occurring without comprehensive planning and without an understanding of the cumulative effects of our actions. The FY 2011 budget proposal includes \$20 million to support regional ocean partnership grants and an additional \$10 million to support the acquisition and protection of coastal lands. An additional \$9.5 million is provided for the development of sensors to support coastal ecosystem science and management. This includes sensors to monitor constituents of ocean acidification, harmful algal blooms, and issues related to Oceans and Human Health. The FY 2011 budget submission proposes a comprehensive \$6.77 million program that will: identify key ocean habitats and human use patterns and conflicts, develop appropriate spatial planning tools that allow the identification and allocation of marine areas to specific uses, and allow NOAA to combine its various resources to engage in interagency



and regional coordination in coastal and marine spatial planning efforts. The request also includes \$2 million to support the interagency development of a national integrated coastal and marine elevation dataset.

NATIONAL MARINE FISHERIES SERVICE (+\$80M)

NOAA is faced with the challenge of ending overfishing and improving fisheries management. In many U.S. fisheries, traditional fisheries management has allowed fishermen to over-harvest. The Nation needs a fishery management system that will sustain fishing economies and incentivize stewardship and conservation. The FY 2011 budget submission seeks an increase of \$80 million to implement transformational changes in how fisheries and ecosystems are managed by the Department of Commerce. Under the reauthorized Magnuson Stevens Fishery Conservation and Management Act of 2006, NOAA must end all overfishing in all domestic fisheries by 2011. Through this budget, NOAA seeks to transform the way fisheries are managed, relying, where appropriate, on systems of catch shares or individual fishing privilege programs, which through competitive market forces allow much more flexibility in business arrangements and a better track record for conservation than do traditional fishery control systems. NOAA proposes an additional \$36.6 million to implement catch share programs for New England and West Coast groundfish, Gulf of Mexico grouper and tilefish, and to continue the expansion of catch shares throughout the United States. The budget also seeks to close the gap in conservation of protected species, including salmon, marine mammals, and sea turtles; and protect and restore key habitats upon which fish, protected species, and ecosystems critically depend. The FY 2011 budget proposes an additional \$3 million for Protected Resources consultations. Also included is \$2.4 million to address gaps in aquaculture research. The budget includes an additional \$20 million to address listed and threatened species through the Species Recovery Grant Program and Community Based Restoration projects that benefit listed and threatened species. An increase of \$15 million over the FY 2010 President's Budget is requested for the Pacific Coastal Salmon Recovery Fund.



Pacific Northwest Mussel Farm

OFFICE OF OCEANIC AND ATMOSPHERIC RESEARCH (+\$56M)

The observed changes in climate are already causing a wide range of impacts, and these impacts are expected to grow. The FY 2011 budget request includes investments for the core climate services needed to enable the Nation to effectively address the impacts of climate change. NOAA proposes \$10M to provide the leadership, expertise, and capacity necessary to support a collaborative, participatory assessment process that engages scientists, government officials, businesses, and communities in the exploration of climate impacts and effective mitigation and adaptation. This program of shared learning and joint problem solving will serve as the foundation of NOAA's climate services. This will include an ongoing process of vulnerability assessments to help the Nation's governments, businesses, and communities to understand and reduce their current and future vulnerability to climate



Launching of a Conductivity, Temperature, and Depth (CTD) profiler



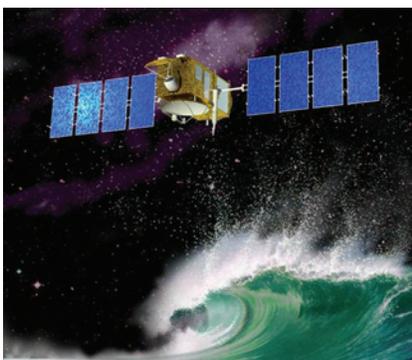
change. The request includes resources for fundamental observations and modeling capabilities to: track the flux of carbon to and from the atmosphere (\$8.0 million), measure key variables in the Arctic (\$3.0 million), the Global Ocean Observing System (\$4.8 million), and earth system modeling (\$7.0 million). An additional \$1.5 million will enable the development of climate services portal. The totality of these investments will provide NOAA with the initial capability to deliver climate services to the Nation. The request also includes an additional \$6.1 million to provide new technologies and ecosystem monitoring systems, better models, and a dedicated research program for ocean acidification. This research and monitoring will allow scientists to better understand and mitigate the impacts of ocean acidification on ecosystems, fisheries, and other marine resources.



*Super cell over York, NE
Photo courtesy Mike Hollingshead*

NATIONAL WEATHER SERVICE (+\$28M)

Concern for public safety drives NOAA to continue to improve the timeliness and accuracy of warnings for all weather-related hazards. NOAA is committed to enhancing timely and accurate weather and climate forecasts through better observations, improved data assimilation, and collaboration with the research community. The FY 2011 budget request seeks an additional \$15.1 million to provide the aviation community with an authoritative and timely source of weather information for decision support. This investment will allow NOAA to make critical investments such as the Weather Information Database to meet the 2013 Initial Operating Capability for the Next Generation Air Transportation System. The FY 2011 request provides an additional \$3.2 million to continue deployment of Dual Polarization for NEXRAD and \$1.6 million to complete the replacement of the NOAA Weather Radio consoles. This investment will lead to improvements in radar coverage and severe weather detection. An increase of \$2.0 million is requested for information technology security improvements for the National Critical Space Weather System.



*Jason 3 satellite
(Artist Representation)*

NATIONAL ENVIRONMENTAL SATELLITE, DATA, & INFORMATION SERVICE (+\$848M)

One of the greatest challenges facing NOAA today is ensuring continuity of satellite operations to provide unbroken coverage of weather forecasts and climate measurements into the future. The FY 2011 budget requests an investment of \$49 million in climate sensors and an additional \$30 million to continue development of the JASON-3 satellite altimetry mission, which will provide data for incorporation into climate models. To maintain satellite continuity for weather forecasting and climate monitoring, an increase of \$679 million is requested for the implementation of the restructured next generation polar satellites (formerly known as NPOESS), as well as \$3.1 million to address IT security for NOAA's satellite systems. The FY 2011 request includes new funding for the Constellation Observing System for Meteorology, Ionosphere, and Climate (COSMIC-2) program (\$3.7 million) and the Deep Space Climate Observatory (DSCOVR) (\$9.5 million). The COSMIC-2 constellation uses Global Positioning System Radio Occultation to collect real-time, global atmospheric temperature and moisture data for improving weather



forecasting. The acquisition of the DSCOVER will provide solar wind data and a Coronal Mass Ejection (CME) imager for continuing geomagnetic storm warnings. These warnings are used by industries that manage transportation systems, power grids, telecommunications, and global positioning systems (GPS). The request also includes support for NESDIS's climate activities. Increases are proposed to compile climate data records from legacy and new satellite systems removing non-climate related observing biases (\$11.0 million) and to improve data center operations to ensure users get data in the format they need (\$2.0 million).

PROGRAM SUPPORT/OFFICE OF MARINE AND AVIATION OPERATIONS (+\$54M)

The FY 2011 budget continues the recapitalization of the NOAA's fleet, data acquisition platforms critical to meeting fisheries management mandates. An additional \$4.4 million is requested to complete the construction of FSV 6 and begin design of FSV 5. An increase of \$7.4 million is requested to extend the life of *Miller Freeman* and \$6.2 million to address maintenance of NOAA's fleet.

The FY 2011 request includes \$14 million in increases to complete the IT infrastructure, outfitting, and occupancy for the Main Facility at the new Pacific Regional Center (PRC). An additional \$5 million is requested for Facilities maintenance and repair. An increase of \$8.7 million is provided to address NOAA-wide information technology, including Enterprise IT Security (\$4.7 million) and NOAAnet Single Enterprise Network (\$4.0 million). The request also includes funding to address gaps in NOAA's acquisition and grants programs. This includes additional resources for acquisition management (\$4.35 million), support for the acquisition workforce (\$0.8 million), and a Department-wide Acquisition Internship Program (\$1.1 million).



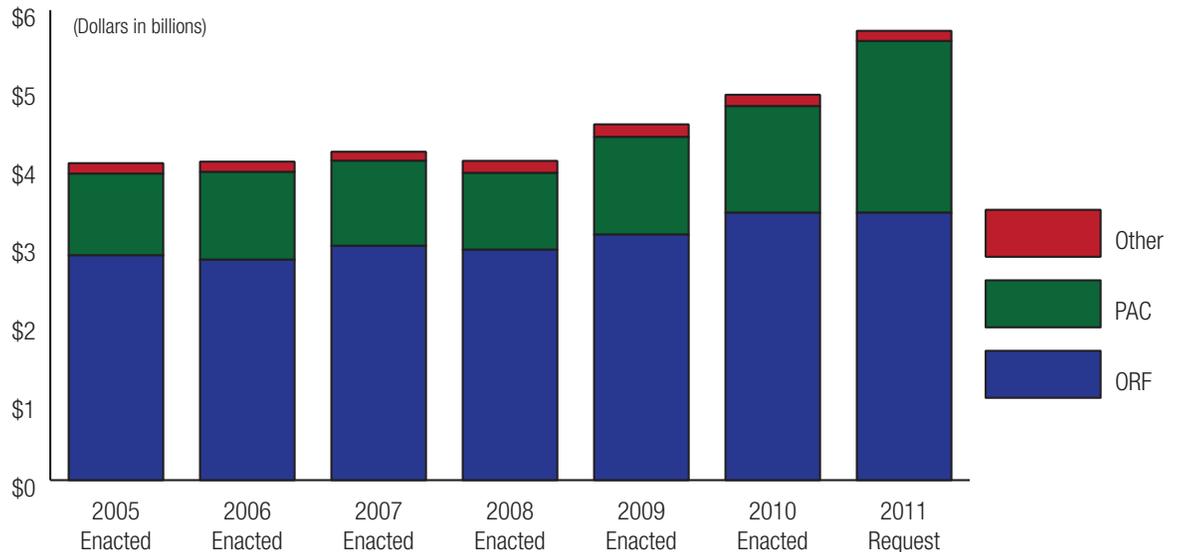
Miller Freeman



INTRODUCTION

(DOLLARS IN THOUSANDS)	FY 2009 ENACTED	FY 2010 ENACTED	FY 2011 REQUEST	INCREASE (DECREASE)
ORF	\$3,134,044	\$3,412,778	\$3,413,681	903
PAC	1,245,647	1,360,353	2,191,091	830,738
Other Funds	163,662	147,180	130,409	(15,627)
Financing	(169,483)	(171,958)	(180,723)	(9,909)
Total Discretionary Budget Authority	\$4,373,870	\$4,748,353	\$5,554,458	\$806,105
FTE	12,101	12,321	12,455	134

Budget Trends FY 2005-2011



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction

Other: Other Accounts

