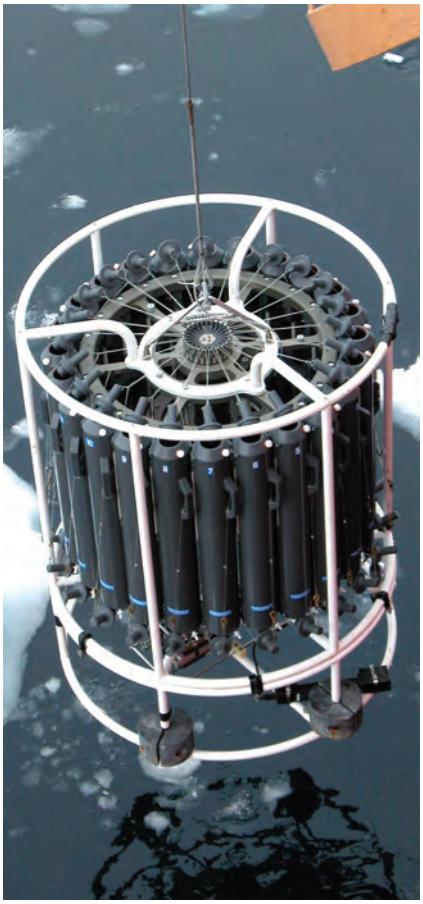
CHAPTER 1

FY 2012 Budget Highlights

NOAA [illegible] Chase of oyster shells into Chesa[illegible] stor[illegible]

BUDGET HIGHLIGHTS

NOAA generates value for the Nation by providing the information and services that communities, managers, businesses, and people rely on daily to make decisions about their lives and occupations. This role has become increasingly critical given the economic, environmental, and societal challenges currently facing the nation. To better meet its mission, NOAA is first proposing a reorganization of its climate research, monitoring and services to consolidate these activities and establish a new Climate Service line office to better serve the public need for reliable, authoritative climate information and efficient service delivery.



A CTD cast and rosette full of water sampling containers are lowered into icy Arctic waters during the NOAA-sponsored 2005 "Hidden Ocean" cruise to study marine life in the Canada Basin, one of the deepest regions of the Arctic Ocean.

Along with this reorganization, NOAA is proposing a variety of activities that support the Administration's economic and environmental priorities, including winning the future through innovation, strengthening research and development, and the National Ocean Policy. This budget request is the result of a rigorous review and prioritization of the agency's programs and activities. Low priority programs or activities have been curtailed or eliminated, core functions and services are sustained, and increases are requested for only the most critical programs, projects, or activities necessary to meet the growing demand for NOAA's services. The additional resources requested in this budget will improve NOAA's prediction of high impact weather and water events; manage ocean and coastal resources; deliver safe, efficient, and environmentally sound transportation; and maintain and expand the technical infrastructure that supports NOAA's mission.

For Fiscal Year FY 2012, NOAA proposes a budget of $5,497.7 million, an increase of $749 million or 15.8 percent over the FY 2010 enacted level. While this is a substantial increase over the FY 2010 enacted level, when critical on-going procurements for the next generation of weather and climate satellites are excluded, the request is only one percent over the FY 2010 enacted level. The requested level adheres to the President's call to improve the efficiency of programs without reducing their effectiveness, demonstrates tough choices and sacrifices, while making critical investments to make America more competitive.

For example, the NOAA budget proposes to terminate or reduce funding for a number of programs including the International Research Institute for Climate

and Society, international partnerships through The Observing System Research and Predictability Experiment (THORPEX), and the Cooperative Observer Program. In addition to making program cuts, NOAA is proposing to reduce its administrative expenses by $67.7 million as part of the President's Administrative Efficiency Initiative. This will be achieved through among other things: the consolidation of activities, use of more efficient acquisition vehicles for commodity purchases, and elimination of unnecessary travel. However, at the requested level, NOAA will still maintain its critical services and address core infrastructure needs as well as key coastal management, fisheries, and climate and weather activities

Within the request, $75.0 million is required for Adjustments to Base (ATBs) to support inflationary costs. Net changes within the Operations, Research, and Facilities (ORF) account represent a decrease of $42.3 million and within the Procurement, Acquisition, and Construction (PAC) account net changes result in an increase of $703.7 million, for a net increase of $646.7 million over the FY 2012 base amount, including NOAA's other accounts.

The FY 2012 budget request for NOAA preserves the Administration's environmental and economic priorities established in the FY 2011 President's Budget. This request sustains NOAA's climate programs, provides increases for fisheries and coastal management, and makes necessary investments in NOAA's core infrastructure of facilities, observing systems, IT systems and personnel needed to support the services planned for FY 2012.

NATIONAL OCEAN SERVICE

Through a diversity of programs, NOS supports resilient coastal communities; promotes sustainable coastal economies; and protects the productivity and diversity of coastal and marine places. NOS activities also serve to support sound decision making for human, ecological, and economic health. The NOS request includes $5.0 million to provide a dedicated source of funding to sustain and maintain Regional IOOS High Frequency radar stations, which map surface current measurements important for oil spill response, search and rescue missions, and marine transportation uses, among others. Also included are $2.9 million for oil spill research, and $1.0 million for integrated ocean and coastal mapping among other investments to support our coasts and ecosystems. An $8.0 million increase will create a National Working Waterfronts grant program to assist fishing-dependent coastal communities. These grants will aid distressed coastal fishing communities by providing resources for planning and other activities that will lead to economic diversification, resource conservation, and economic growth.

Representation of a HF radar system, known as CODAR. The CODAR ocean sensor is used to measure the speed and direction of surface currents.

NATIONAL MARINE FISHERIES SERVICE

NMFS is dedicated to the environmental sustainability of our coastal and ocean resources and the associated economic sustainability of our coastal communities. NMFS conserves, protects, and manages living marine re-

Studies of pelagic ecosystems frequently include surveys of mid-water fauna using large trawl nets. Catches are moved into the ship's laboratory for the demanding tasks of sorting and identification.

sources in a way that ensures their continuation as functioning components of marine ecosystems, affords economic opportunities, and enhances the quality of life for the American public. The NOAA FY 2012 budget submission also seeks to preserve transformational changes in how fisheries and ecosystems are monitored and managed by the Department of Commerce. NOAA is proposing an additional $15.0 million to expand annual stock assessments—the scientific basis for all of our fisheries management decisions. Other program investments to increase our knowledge of the resource, and therefore the effectiveness of catch allocation decisions, include $3.0 million for improved recreational fishing surveys and another $8 million for Species Recovery grants. The request also seeks to close data gaps for protected species conservation, with an additional $2.5 million for critical protected resources stock assessments.

OFFICE OF ATMOSPHERIC RESEARCH

OAR is NOAA's centralized research and development (R&D) line office and the engine of innovation that strengthens the scientific underpinnings necessary to improve NOAA climate, weather, coastal, and ocean services. OAR promotes economic growth through the development of environmental observation technologies; new approaches to extreme weather preparedness; innovative methodologies to sustainably use coastal, marine, and Great Lakes resources; and the application of emerging science techniques, such as in marine biotechnology. NOAA's FY 2012 request includes an investment of $2.0 million to advance weather forecast quality and accuracy to promote wind energy generation in the United States. An increase of $1.5 million is requested to provide the scientific and technical support for operating the NOAA research ship, the *Okeanos Explorer,* as well as support the operation of telepresence technology. The FY 2012 request also includes $6.1 million to sustain capabilities in research, monitoring, and enhanced forecasting capabilities to improve adaptive management strategies for ecosystems impacted by ocean acidification. The President's FY 2012 Budget proposes to transfer the majority of climate research, modeling, and services activities of this office to create the new Climate Service line office.

Dedicated solely to exploration, the ship conducts operations around the globe, mapping the seafloor and characterizing largely unknown areas of the ocean. Interesting seafloor features can be discovered with the deep water multibeam sonar mapping system. Sites are further explored with a Conductivity Temperature and Depth sensor (CTD) and a Remotely Operated Vehicle (ROV). Images and high-definition video from the underwater vehicles can then be sent from the vehicle to the ship to the shore all in real-time. This technology is referred to as "telepresence."

CLIMATE SERVICE

The FY 2012 budget proposes a new Climate Service line office that will allow NOAA to more effectively and efficiently provide reliable and authoritative climate data, information, and decision-support services and to improve coordination with other agencies and partners. Climate change is apparent now across our nation. Trends observed in recent decades include rising temperatures, increasing heavy downpours, rising sea level, longer growing seasons, reductions in snow and ice, and changes in the amounts and timing of river flows. These trends are projected to continue, with larger changes expected if heat-trapping gas emissions are not curtailed. NOAA needs to better understand and characterize the nation's vulnerability to climate change and its adaptive capacity to reduce that vulnerability. Building on the

past two decades of experience, NOAA proposes a $4.7 million increase for Carbon 14 measurements to capture the distribution of fossil fuel emissions across the United States, and a $3.0 million increase to support regional climate services. These investments build on prior year investments to strengthen NOAA's capacity to deliver climate services to the Nation.

State climate offices provide climate services at the state and local level in partnership with NOAA and other federal agencies, including the Regional Climate Centers (RCC), Regionally Integrated Sciences and Assessments (RISA) program, the National Climatic Data Center (NCDC), the National Weather Service (NWS), and the USDA's Natural Resource Conservation Service (NRCS).

NATIONAL WEATHER SERVICE

The National Weather Service (NWS) is the Nation's first line of defense against severe weather, providing weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters, and ocean areas for the protection of life and property and the enhancement of the national economy. A weather-ready nation is a society that is able to prepare for and respond to environmental events that affect safety, health, the environment, economy, and homeland security. NOAA's capacity to provide relevant information can help create a society that is more adaptive to its environment; experiences fewer service disruptions, displacement of people, and injuries; and operates a more efficient economy. In FY 2012, NOAA proposes several increases to help ensure that our weather research and forecasting abilities stay strong and move into the future. With an increase of $5.0 million to fully fund the purchase of Global Positioning System (GPS) radiosondes for all 102 NOAA/NWS upper air observing stations, NOAA will improve weather models. An $11.0 million increase is dedicated to transitioning NOAA's operational high performance computing to a new contract, as well as continuing regular improvements to our numerical weather prediction modeling. Finally, NOAA will be investing an additional $26.9 million to fund the third year of planned Next Generation Air Transportation (NextGen) development activities, allowing for better integration of weather information into decision-making solutions for the Federal Aviation Administration – potentially reducing the number of air delays for travelers.

Weather accounts for 70% of all traffic delays within the National Airspace System. The FAA has determined that two thirds of these delays are preventable with better weather information. Better weather information doesn't just mean better forecasts…it means better assimilation of weather into the FAA decision makers. For example, better access to weather information for better forecasts and consistency.

NATIONAL ENVIRONMENTAL SATELLITE SERVICE

The National Environmental Satellite Service (NESS) is responsible for the procurement, launch, and operation of the Nation's civil polar-orbiting and geostationary operational environmental satellites.* 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. NOAA and NASA have established a successful partnership to replace and update the existing GOES series of satellites. The new satellites in this series will carry improved environmental instrument suites providing more timely and accurate weather forecasts and improved observation of meteorological events that directly affect public safety, protection of property, and economic development. NOAA continues to work on the transition of

NOAA-N Prime provides a polar-orbiting platform to support environmental monitoring instruments for imaging and measuring the Earth's atmosphere, its surface and cloud cover, including Earth radiation, atmospheric ozone, aerosol distribution, sea surface temperature, and vertical temperature and water profiles in the troposphere and stratosphere. The satellite assists in measuring proton and electron fluxes at orbit altitude, collecting data from remote platforms and is crucial to the Search and Rescue Satellite-Aided Tracking system.

* The FY 2012 request proposes to rename the National Environmental Satellite, Data, and Information Service (NESDIS) to the National Environmental Satellite Service (NESS), which reflects the proposed transfer of data and information management archive activities to the new Climate Service line office.

the Joint Polar Satellite System (JPSS) and requests an increase of $687.8 million to minimize the probability of a gap in polar satellite coverage. The request also includes increases for the Deep Space Climate Observatory (DSCOVR) of $47.3 million, the Constellation Observing System for Meteorology, Ionosphere and Climate (COSMIC-2) of $11.3 million, Jason-3 of $33.0 million, and the restoration of climate sensors of $30.4 million.

Ka'imimoana, *Hawaiian for Ocean Seeker, is the only ship of the National Oceanic and Atmospheric Administration (NOAA) dedicated solely to climate research, through its support of NOAA's Tropical Atmosphere-Ocean (TAO) Project. This project is designed to improve our understanding of the role of the tropical ocean in modifying the world's climate.*

OFFICE OF MARINE AND AVIATION OPERATIONS

NOAA's Office of Marine and Aviation Operations (OMAO) operates a wide variety of specialized aircraft and ships to complete NOAA's environmental and scientific missions. The FY 2012 request ensures that NOAA's fleet of vessels is able to provide reliable, compliant, and high-quality ship services to NOAA programs in support of at-sea data collection requirements. An additional $3.4 million is requested to support environmental compliance costs for NOAA's vessels. In order to extend and maintain the life of the NOAA ships, *Ka'imimoana* and *Miller Freeman,* NOAA is requesting an increase of $11.6 million.

PROGRAM SUPPORT

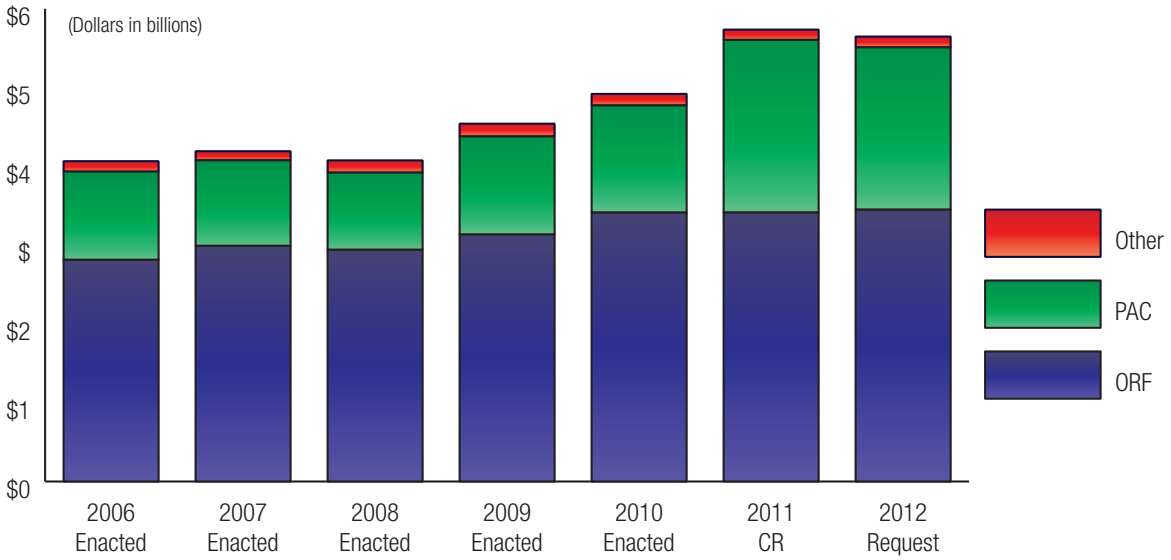
NOAA Program Support provides the planning, administrative, financial, procurement, information technology, human resources, and infrastructure services that are essential to the safe and successful performance of NOAA's mission. The FY 2012 budget request includes $0.9 million to support project management costs at the new Main Facility of the Pacific Regional Center. An additional $10.0 million is requested for facilities restoration and modernization. Targeted investments have been made towards NOAA's IT infrastructure. An increase of $5.1 million has been requested to enhance NOAA's enterprise IT security, fortifying critical IT support of NOAA's mission by reducing potential risks against data integrity and network failures. To support NOAA's corporate services, NOAA is requesting an increase of $5.0 million to migrate the current Commerce Business System to the new standard operating system of the Department of Commerce. An additional $6.3 million is requested to support acquisition and grants services for NOAA.

NOAA's Pacific Region Center (PRC) Laboratory and Office Complex on historic Ford Island, Pearl Harbor, Hawaii. The 345,000 square foot facility will consolidate NOAA's many Honolulu-area offices and labs into a single, efficient campus facility with pier facilities for NOAA's Hawaii-based research and fisheries enforcement vessels and small boats. Facilities will include office space, wet laboratories, marine animal tanks, and administration and support space for NOAA's research, conservation management and enforcement programs. 3D Rendering Provided by Ferraro Choi And Associates, Ltd.

FY 2012 BUDGET HIGHLIGHTS

(DOLLARS IN THOUSANDS)	FY 2010 ENACTED	FY 2011 CR	FY 2012 REQUEST	INCREASE (DECREASE)
ORF	$3,412,778	$3,376,721	$3,449,807	$37,029
PAC	1,360,353	1,360,353	2,059,777	699,424
Other Funds	147,180	207,837	137,497	(18,683)
Financing	(171,958)	(196,558)	(149,411)	(31,547)
Total Discretionary Appropriation	**$4,748,353**	**$4,748,353**	**$5,497,670**	**$749,317**
FTE	**12,321**	**12,321**	**12,459**	**138**

Budget Trends FY 2006-2012



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction

Other: Other Accounts