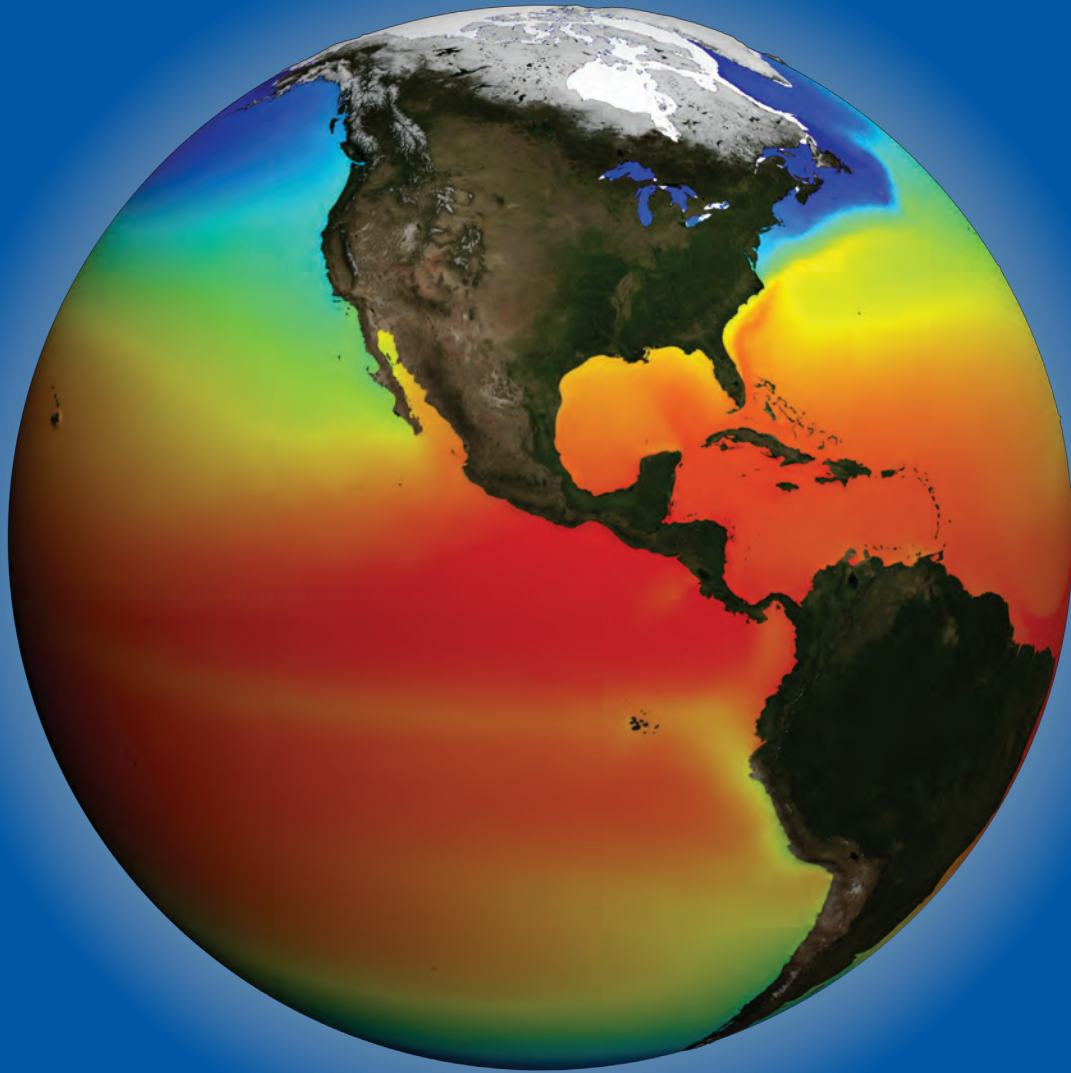


NATIONAL
OCEANIC &
ATMOSPHERIC
ADMINISTRATION

FY 2010 BUDGET SUMMARY

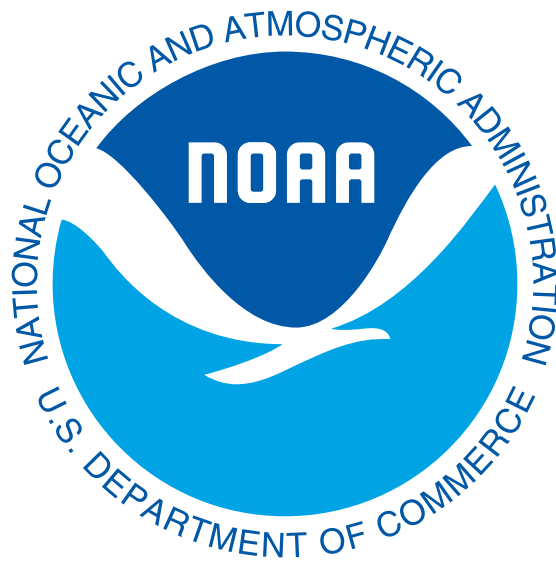


MAY 11, 2009

Front Cover: The National Oceanographic Data Center in partnership with the University of Miami analyzes POES sea surface temperature data for climatological trends (West Hemisphere Projection).

Image created by the NOAA Environmental Visualization Lab.

NOAA PROTECTING LIVES AND LIVELIHOODS



NOAA's VISION

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.

NOAA's MISSION

To understand and predict changes in Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental needs.

NOAA's CORE VALUES

People, Integrity, Excellence, Teamwork, and Ingenuity
Science, Service, and Stewardship



TO THE READER

I am pleased to present the *Budget Summary* for NOAA, the National Oceanic and Atmospheric Administration, for fiscal year 2010. This summary relates information on NOAA's budget and programs for members of Congress and their staffs, the media, and our constituents and customers. It highlights NOAA's past accomplishments and planned actions intended to ensure that we achieve the outcomes outlined by the Commerce Department and the President.

At NOAA, we believe that science should inform decision making. We have a commitment to make policy and management decisions based on scientific knowledge, and are focused at NOAA on delivering useful services based on that knowledge. With hard work and the best science as our guide, NOAA can spur the creation of new jobs, revive our fisheries and the economies and communities they support, improve weather forecasting and disaster warnings, provide credible information about climate change to the nation, and protect and restore our coastal ecosystems.

NOAA plays a crucial role in the nation's economic stability and growth by providing products and services that impact the daily lives of every one of our citizens. Weather and water extreme events such as droughts, hurricanes and tornadoes cause \$11 billion in damages each year in the United States. With so much at stake, NOAA's role in understanding, observing, forecasting, and warning of environmental events is ever expanding. In addition, NOAA also has a responsibility to keep our coasts and in land waters healthy and productive.

Our coasts, estuaries, and oceans are critical to the economic, social, and ecological vitality and security of our nation. Coastal counties are home to 53% of the population, even though they make up only 17% of the land area. NOAA is working toward using a comprehensive ecosystem-based planning approach to address coastal development and use of our natural resources.

NOAA faces a variety of challenges in fiscal year 2010 and beyond: maintaining continuity of weather and climate observations from satellites, ending overfishing and strengthening coastal economies through improved fisheries management, establishing a national climate service, and ensuring the vitality of coastal communities and coastal ecosystems. It is our responsibility to manage these challenges in light of a changed climate and escalating requests for services. NOAA will continue to serve the nation now and in the future by collecting and synthesizing scientific data and creating meaningful products and information for informed decision making.

Under the new leadership of Commerce Secretary Gary Locke, NOAA will continue to serve as a trusted steward of the oceans and coasts. We join the President in his commitment to bring good science to good government. NOAA appreciates the continued support from members of Congress and our constituents. I am committed to joining Secretary Locke and President Obama in building upon NOAA's impressive track record and in creating an enduring legacy for our children, for the environment, and for our nation.

Dr. Jane Lubchenco
Under Secretary of Commerce for Oceans and Atmosphere
and NOAA Administrator

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TERMINOLOGY

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

“FY 2008 Omnibus:”

Fiscal Year (FY) 2008 Appropriations, not including Farm Bill (PL. 110-234) and Continuing Resolution (PL. 110-329) Supplemental Funds

“FY 2009 Omnibus:”

Fiscal Year (FY) 2009 Appropriations, not including American Recovery & Reinvestment Act (ARRA) Supplemental Funds

“FY 2010 Request:”

Fiscal Year (FY) 2009 Enacted, less Terminations, plus Adjustments-to-Base, and Program Changes

“Program Change:”

The increase/decrease over the FY 2010 base, which is the FY 2009 Omnibus minus Terminations, plus Adjustments-to-Base

“Adjustments-to-Base:”

The estimated FY 2010 Federal Pay raise of 2.0% and the annualized FY2009 pay raise of 3.9%. 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.



INTRODUCTION



One of Healy's cranes lowers a scientist and equipment onto the ice. Photo taken during the 2005 NOAA-sponsored "Hidden Ocean" cruise to study marine life in all realms of the Canada Basin, one of the deepest parts of the Arctic Ocean

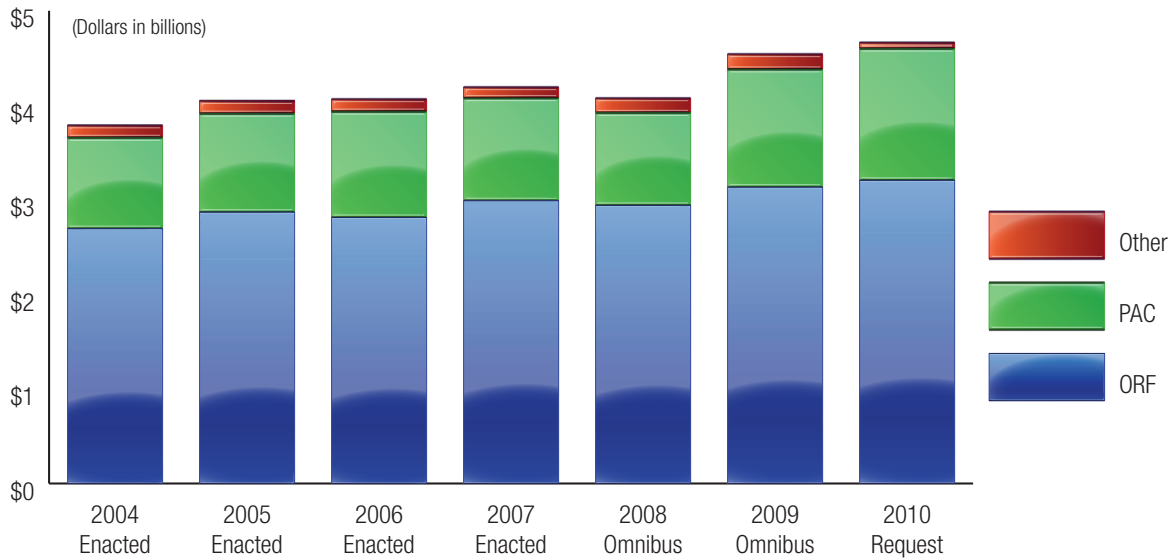
Credit: Jeremy Potter



INTRODUCTION

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
ORF	\$2,941,042	\$3,134,044	\$3,206,137	\$72,093
PAC	979,207	1,245,647	1,393,279	147,632
Other Funds	155,243	161,915	64,760	(97,155)
Financing	(179,578)	(167,736)	(180,426)	(12,690)
Total Discretionary Budget Authority	\$3,895,914	\$4,373,870	\$4,483,750	\$109,880
FTE	11,930	12,100	12,321	221

Budget Trends FY 2004-2010



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction

Other: Other Accounts



INTRODUCTION

For Fiscal Year (FY) 2010, the National Oceanic and Atmospheric Administration (NOAA) requests a total of \$4,483,750,000 an increase of \$109,880,000 or 2.5% over the Omnibus Appropriations Act of 2009. 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 \$52,080,000. 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. Funds are included for the estimated FY 2010 Federal pay raise of 2.0 percent and to annualize the FY 2009 pay raise of 3.9 percent. The increase provides for inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.

PROGRAM CHANGE HIGHLIGHTS BY LINE OFFICE

NATIONAL OCEAN SERVICE

The FY2010 request includes \$4.0 million to begin data collection for a new national datum which will improve elevation and height information, a foundation for improved commerce, economic efficiencies, and to better protect the public from coastal hazards and flooding. The request also provides \$2.7 million to develop a national system of forecasts for Harmful Algal Blooms and a national event response capability. An additional \$2.0 million is provided to establish a Coastal Community Task Force to enhance coastal community economies while protecting and conserving ecologically sensitive areas.



Harmful Algal Bloom



NATIONAL MARINE FISHERIES SERVICE

The FY 2010 request includes \$60.0 million to establish a national grants program in support of recovery of species listed under the Endangered Species Act (ESA). An additional \$16.5 million is provided to fulfill the conservation and fair harvesting-sharing provisions of the Pacific Salmon Treaty. The FY 2010 President’s Budget continues the commitment to end overfishing by 2011 with an additional \$57 million to support the Magnuson-Stevens Reauthorization Act, including implementation of Annual Catch Limits and additional funding for enforcement and observers.

OFFICE OF OCEANIC AND ATMOSPHERIC RESEARCH

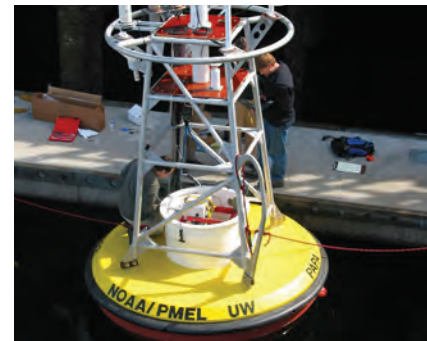
The FY 2010 request provides increases for oceanic and atmospheric research. This includes an additional \$4.0 million to implement long-term monitoring of ocean acidification. An increase of \$6.5 million is provided for climate research including the National Integrated Drought Information System, development of a Climate Model Portal, expansion of the U.S. Climate Reference Network to Alaska, and funding to develop decadal climate predictions.

NATIONAL WEATHER SERVICE

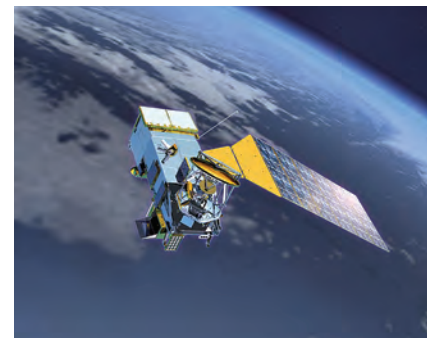
The request provides \$7.0 million for the installation of an additional NEXRAD Radar, which will improve the analysis and prediction of winter storms systems and precipitation estimates. An additional \$6.1 million is provided to improve aviation weather services and support the Next Generation Air Transportation System (NextGen). Funding will begin development of a Weather Information Database, a central repository of weather information, products, and services for aviation users and customers. Studies indicate that improved weather information could save \$6 billion of losses associated with air traffic delays. The request also includes an increase of \$5.3 million for the Advanced Weather Interactive Processing System (AWIPS). This technology improvement will reduce the time required to generate and disseminate warnings leading to potential savings in life and property.

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

Development of NOAA’s satellites systems is a top priority in the FY 2010 request, including an additional \$272 million for the GOES-R series satellites. The series will provide an uninterrupted, continuous flow of environmental and weather data and information. The request also includes an additional \$94.2 million to continue development of the NPOESS system. NPOESS will provide global environmental data such as sea surface temperature, atmospheric profiles temperature and moisture and atmospheric ozone concentrations for use in numerical weather prediction models. Funds will also include \$20 million for Jason-3 to initiate a satellite altimetry mission to provide continuity of precise measurement of sea surface height for ocean, climatology, and ocean weather applications.



Ocean Acidification Buoy (PAPA)



*National Polar-orbiting Operational Environmental Satellite System (NPOESS)
(Artist Representation)*



PROGRAM SUPPORT

The FY 2010 request continues NOAA's support for environmental literacy with an increase of \$4.0 million for a national competitive education grant program. This program will fund development of curriculums and environmental educators for formal and informal education. The FY 2010 request includes an increase of \$1.8 million for Corporate Services to support facilities and IT security compliance.



111th NOAA Corps Basic Officer Training Class

OFFICE OF MARINE AND AVIATION OPERATIONS

The NOAA Corps, in addition to operating NOAA's vessels and aircraft, support all NOAA Line Offices and missions. The FY 2010 request includes \$2.2 million to increase the end strength to full authorization of 321 officers. The FY 2010 request includes funding to continue NOAA's Ship Recapitalization Plan with a \$3.0 million increase for the design of a shallow-draft Fisheries Survey Vessel.

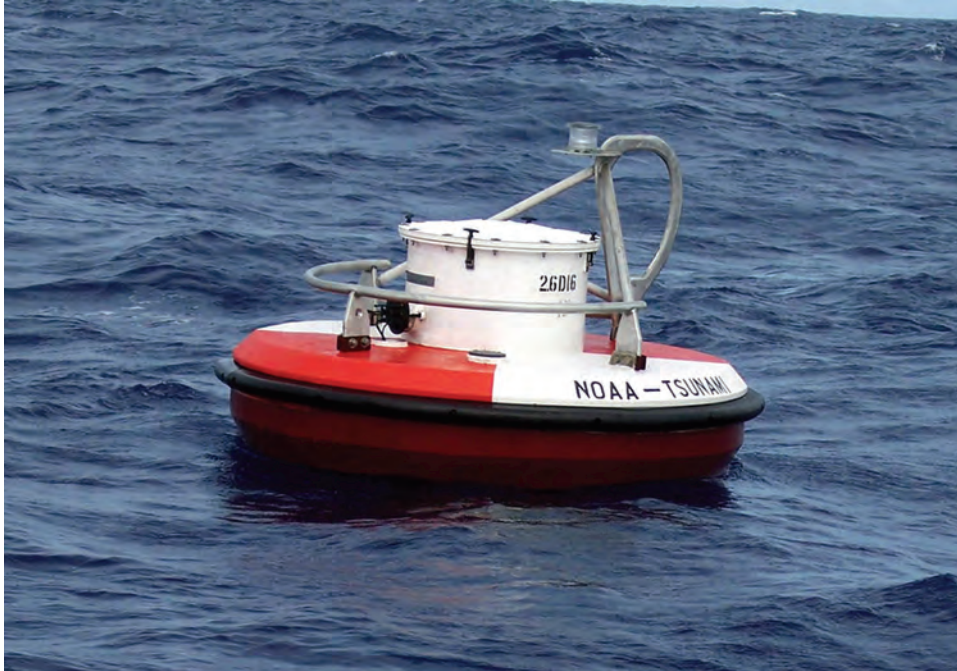


CHAPTER 1 | 2008 NOAA ACCOMPLISHMENTS AND PERFORMANCE RESULTS



NOAA divers work to free an endangered monk seal that is entangled in marine debris; fishing nets that have been lost or discarded

Credit: Raymond Boland



Deep Ocean and Assessment Reporting (DART) buoy

NOAA COMPLETES THE U.S. TSUNAMI DETECTION NETWORK

In response to the December 2004 Indian Ocean Tsunami, NOAA has placed Deep-ocean Assessment and Reporting of Tsunami (DART II) stations at sites in regions with a history of generating destructive tsunamis to ensure early detection of tsunamis and to acquire data critical to real-time forecasts. In March 2008, NOAA deployed the final two tsunami detection buoys in the South Pacific, completing the U.S. tsunami buoy detection network in support of the U.S. tsunami warning system. The experimental array in 2001 was expanded to a full operational network of 39 stations. DART station 52406 represented the 39th and final successful establishment of the planned U.S. DART stations to strengthen the U.S. Tsunami Warning System - meeting full operational capability. Station 32412 (SE Pacific Ocean) completed the process of filling the gap in coverage for seismic events occurring along the west coast of South America. NOAA's DART Network constitutes a critical element of the NOAA Tsunami Program. The Tsunami Program is part of a cooperative effort to save lives and protect property through hazard assessment, warning guidance, mitigation, research capabilities, and international coordination.



Devastation from the Southeastern US Tornado in 2008

In early February 2008 numerous tornados swept across the Southeast United States. These tornado events were anticipated by NWS forecasters several days in advance. NOAA's Storm Prediction Center (SPC) began focusing on the possible affected areas six days prior to the event. The SPC continued emphasizing, refining, and enhancing the threat through the event, ultimately issuing a high risk warning for a large portion of a possible impacted area. The initial lead time allowed the Weather Forecast Office (WFO) to gradually ramp up for severe weather operations and tailor their Hazardous Weather Outlooks (HWO) to include the risk of severe weather and tornadoes as much as four days in advance. Each WFO was in contact with emergency managers and media the morning of the event. All tornado fatalities occurred within the boundaries of Tornado Watches and were preceded by Tornado Warnings. The average SPC Tornado Watch lead time for the first tornado within the watch was 2 hours. The national average lead time for Tornado Warnings for 2007 was 13 minutes; in contrast, the preliminary average lead time for all verified Tornado Warnings from the WFOs evaluated during this event was 18 minutes, with a 17 minute preliminary average lead time for those warnings which covered deadly tornadoes

NOAA PROVIDES IMPROVED TORNADO LEAD-TIME FOR THE SUPER TUESDAY TORNADO OUTBREAKS (FEBRUARY 5-6, 2008)



Flood waters during the historic 2008 Midwestern US flooding

EARLY WARNINGS PROVIDED FOR HISTORIC 2008 MIDWESTERN FLOODING

Heavy rains triggered widespread flash flooding in Missouri and Iowa in June 2008. NOAA was able to provide early warnings for the flash floods based on the pre-existing conditions of wet soils and unusually heavy winter snows. The March 20th spring outlook by NOAA's Advanced Hydrologic Prediction Service (AHPS) stated that "Major floods striking America's heartland this week offer a preview of the spring seasonal outlook. We expect rains and melting snow to bring more flooding this spring and Americans should be on high alert to flood conditions above-normal flood potential is evident in much of the Mississippi River basin, the Ohio River basin and the lower Missouri River basin..."

The Midwestern Regional Climate Center found that 286 National Weather Service Cooperative Observer Network stations reported precipitation totals for the first half of 2008 that ranked within their top five records for the January – June period. As part of a NOAA research effort to explain climate variations and to improve predictions, climate model experiments have been completed where the actual observed global sea surface temperatures were used to drive the four different simulation models to access precipitation patterns. As a result of these climate model experiments, National Weather Service (NWS) was able to create simulations of global ocean conditions and sea surface temperatures to accurately predict early warnings and mandatory evacuations for wet conditions in the Upper Midwest states.



Western Fire Event

The areal outline product for the Storm Prediction Center (SPC) Day 3 - 8 Fire Weather Outlook became official on May 20, 2008 in a Geographic Information Systems (GIS) compatible format. This tool allows forecasters and the public to view, understand, question, and interpret geographic data in order to make better weather sensitive decisions.

The product gives latitude-longitude couplets that define each of the areas in the associated outlook. These areal outlines in the new products depict the following areas: DTSM – Dry Thunderstorm Area, CRIT – Critical Fire Weather Area, EXTM – Extremely Critical Fire Weather Area. This product, which is a repackaging of existing fire weather areal outlook information in a more readable format, was specifically requested by several fire weather users.

NOAA ISSUES GIS-COMPATIBLE PRODUCTS FOR DAY 4-8 CONVECTIVE OUTLOOKS AND DAY 3-8 FIRE WEATHER OUTLOOKS



NOAA Weather Radio - All Hazards

NOAA DISTRIBUTES 182,000 NOAA WEATHER RADIOS

In FY 2008, NOAA distributed more than 182,000 NOAA Weather Radio-All Hazards to preschools, Head Start programs, K-12 nonpublic schools, nonpublic school central offices, school district offices, and post-secondary schools across the nation. In two earlier phases, the federal government distributed radios to all 97,000 K-12 public schools across the country. The radios are distributed by NOAA with funding from the Department of Homeland Security and assistance from the Departments of Education and Health and Human Services.

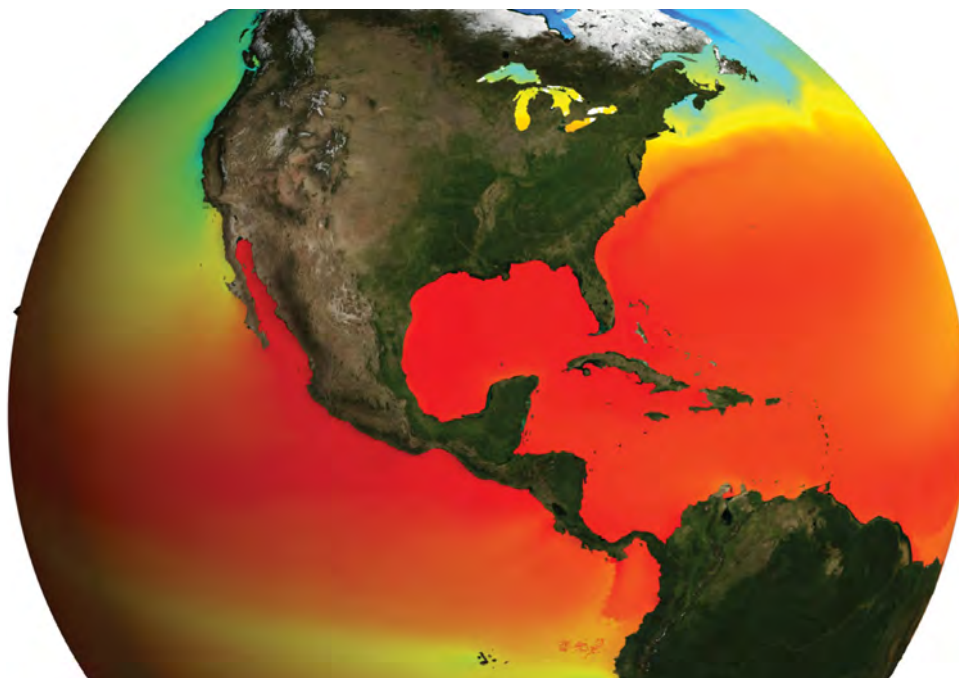
Commonly known as NOAA Weather Radio-All Hazards, these radios provide alerts and safety steps on a wide range of emergencies--from an approaching tornado, a telephone outage disrupting 9-1-1 emergency services, local roads overrun by flash floods, a derailed train posing a hazardous material threat or the urgent need to be on the lookout for an abducted child. The radios sound an alarm to alert school personnel about hazardous weather and other emergencies, even when other means of communication are disabled. The program also encourages school officials, emergency managers, human service providers and Citizen Corps Councils across the country to partner and align their efforts with local emergency plans to build overall community preparedness. By coordinating with their local emergency managers and Citizen Corps Council, schools also can obtain technical and other assistance to improve their school safety plans and other emergency preparedness efforts.



Climate Reference Station in Baker, Nevada

In fiscal year 2008 NOAA installed nine stations of the U.S. Climate Reference Network (USCRN), bringing the total number of stations to 114. These stations track temperature and precipitation trends across the Nation. The CRN is helping to pinpoint the shifts in America's changing, often unpredictable, climate. Each CRN station is crucial to obtaining accurate information on current and most likely future, conditions. Each CRN station logs real-time measurements of surface temperature, precipitation, wind speed, and solar radiation. NOAA's geostationary satellites relay the data from these ground-based stations to NOAA's National Climatic Data Center, which posts the observations online. NOAA employees oversaw a decade-long process of network design, site selection, installation, commissioning, operational monitoring and maintenance, and product development. Expanding this new, high-technology climate monitoring network directly supports NOAA's goal to understand climate variability and change to enhance society's ability to plan and respond.

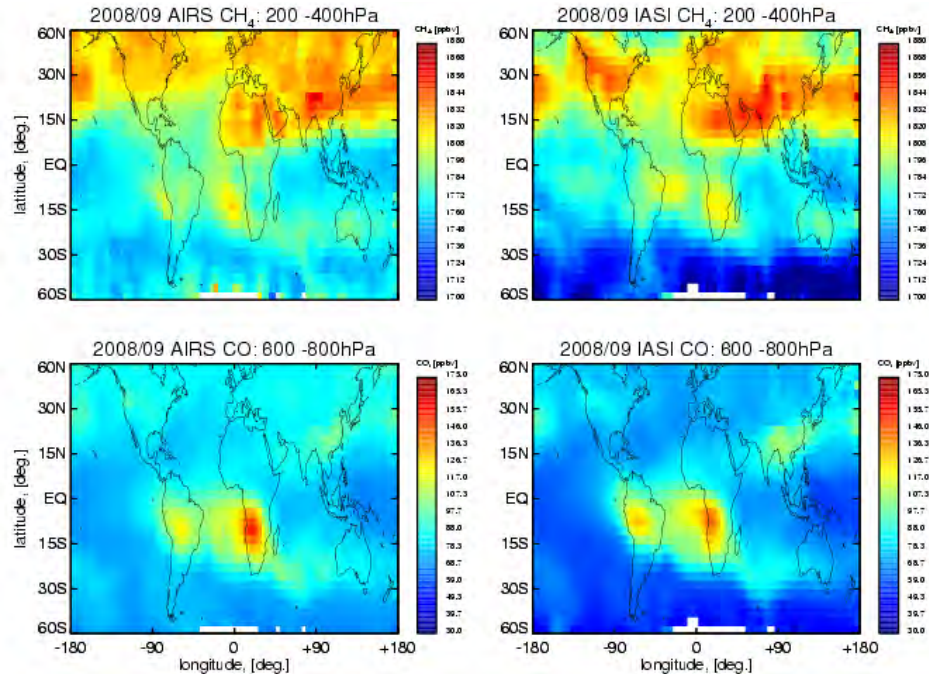
ADVANCED U.S. CLIMATE REFERENCE NETWORK



Sea Surface Temperatures from NOAA's polar-orbiting and geostationary satellites

IMPLEMENTED POES-GOES BLENDED ANALYSIS PRODUCTS

NOAA's Center for Satellite Applications and Research (STAR) scientists and operations personnel, collaborating with domestic and international academic partners, developed and implemented a new class of sea surface temperature (SST) analysis. These new operational ocean remote sensing products blend SST measurements from NOAA's polar-orbiting and geostationary satellites and are available via NOAA CoastWatch. Under development for a number of years, these new products bring improved geographic measurements of the world oceans and better temporal coverage. Better SST measurements throughout the global ocean will improve numerical weather predictions, marine transportation information, and ecosystem management efforts, including coral reef monitoring.



First Operational Greenhouse Gas Products from IASI (right) compared to products from NASA's Atmospheric Infrared Sounder (AIRS, left)

NOAA's Center for Satellite Applications and Research (STAR) developed the first operational greenhouse gas products. These products, which became operational in August 2008, are derived from data taken by the Infrared Atmospheric Sounding Interferometer (IASI) aboard the European Metop-A satellite. With this information NOAA will be able to provide accurate mid-troposphere greenhouse gas concentrations well into the next decade and beyond. Greenhouse gasses are essential to maintaining the temperature of the Earth and in excess can raise temperatures. Measurements include carbon dioxide (CO₂), carbon monoxide (CO), and methane (CH₄). This new operational product responds to the Energy Policy Act of 2005. Increasing atmospheric concentrations of heat-trapping greenhouse gases, leads to increasing severe weather conditions, such as droughts and intense hurricanes. Information on the seasonal and geographic distribution of greenhouse gases will provide scientists, decision makers, and the public critical data on the sources of these gasses and how best to mitigate the risks.

DEVELOPED FIRST OPERATIONAL SATELLITE GREENHOUSE GAS PRODUCTS



Emergency Position Indicating Radio Beacons (EPIRBs) and Personal Locator Beacons (PLBs), tracking transmitters which aid in the detection and location of boats, aircraft, and people in distress, interface with COSPAS-SARSAT

COSPAS-SARSAT ASSISTED IN RESCUING 308 PEOPLE

In fiscal year (FY) 2008, the international Search and Rescue Satellite-Aided Tracking (SARSAT) System assisted in the rescue of 308 people throughout the United States and its surrounding waters. This high-tech system uses a network of international satellites, including NOAA's geostationary and polar-orbiting satellites, and ground stations to quickly detect and locate distress signals from emergency beacons onboard boats and planes and from hand-held personal locator beacons. NOAA also reached a milestone in 2008 with the 200,000th emergency beacon registered in the National 406 megahertz (MHz) Beacon Registration Database. The 406 MHz Beacon Registration Database allows users to register their beacons with contact information and a description of the vehicle, if applicable. The Search and Rescue (SAR) authorities use this information to expedite rescues as well as cancel false alerts, both of which make the system more efficient. Now in its 27th year, COSPAS-SARSAT has been credited with supporting more than 24,000 rescues worldwide, including 6,045 in the United States and its surrounding waters. In addition, signals from the 406 MHz beacons can be detected instantly, are more accurate, and offer global coverage.



An air gap (bridge clearance) sensor, an integral part of PORTS®, installed on the Gerald Desmond Bridge, in Long Beach, California, helps ships determine proper clearance underneath the bridge

The Physical Oceanographic Real-Time System® (PORTS®) provides economic and safety benefits by supplying mariners with real-time data that can reduce the risk of vessel groundings and increase the amount of cargo moved through a port. In 2008, the National Ocean Service (NOS) installed four new PORTS® in Pascagoula, Mississippi; Gulfport, Mississippi; Sabine-Neches, Texas; and Cherry Point, Oregon for a total of 18 systems nationwide. The data are available online at <http://tidesandcurrents.noaa.gov/ports.html>.

NOS also released three new products using the PORTS® data, including a web site that provides a synopsis of the general conditions of an estuary, port, or harbor in real time; a web site that allows users to customize their PORTS® displays to include plots from any station and data type; and an application that allows PORTS® users with Internet access on their mobile phones to view data products directly on their personal devices.

EXPANDING THE REACH OF PORTS®



NOAA divers work to free an endangered monk seal that is entangled in marine debris; fishing nets that have been lost or discarded

EFFORTS TO COMBAT MARINE DEBRIS

The NOAA Marine Debris Program (MDP) works closely with its partners to identify, reduce, and prevent debris in the marine environment. In 2008, MDP held its first Information Forum to increase information exchange and removal efforts. Data from recent efforts indicates the removal of more than 660 tons of derelict fishing net from reefs and shorelines in the Papahānaumokuākea Marine National Monument (1996-2008) and over 32 tons of derelict fishing net and used monofilament line have been used to create electricity through the Honolulu Derelict Net Recycling Program and port reception bin (2006-2008). Results from a three-year survey showed that densities of ghost crab traps in Chesapeake Bay range from 10-690 traps per square kilometer and approximately 400,000 lost crab traps are located in the Maryland portion of Chesapeake Bay alone.

Also, in 2008, MDP furthered partnerships with the National Fish and Wildlife Foundation and Covanta Energy Corporation to reduce the amount of unused fishing gear in the community and marine environment. The Fishing for Energy Project provides a place for a fishing community to dispose of, at no cost, old or derelict fishing gear recovered while at sea. New Bedford, Massachusetts, was the first port on the Eastern Seaboard to launch the program, with four sites added and plans to expand to the entire East Coast.



MPAs act as safe havens for marine life

The Marine Protected Areas (MPA) Center published the final *Framework for the National System of Marine Protected Areas in the United States of America*, a blueprint for building the National System of MPAs. Created with input from governments and stakeholders, as well as the 30-member MPA Federal Advisory Committee, the Framework outlines collaborative, transparent processes for MPA programs at all levels of government to work together at regional, national and international levels to achieve common conservation objectives. The Framework outlines key components of the national systems, including: a set of overarching national system goals and priority conservation objectives; MPA eligibility criteria; a nomination process for existing MPAs to be included in the national system; and a science-based, public-process for identifying conservation gaps.

MPA CENTER PUBLISHES FRAMEWORK FOR THE NATIONAL SYSTEM OF MARINE PROTECTED AREAS OF THE UNITED STATES OF AMERICA



Chub mackerel loaded on a boat

SIGNIFICANT PROGRESS TOWARDS ELIMINATION OF OVERFISHING

In 2008, overfishing of three commercially valuable stocks ended: Petrale Sole, Bigeye Tuna – Atlantic, and Finetooth Shark – Atlantic. NOAA also made significant progress towards efforts to end overfishing of Gulf of Mexico red snapper and gray triggerfish. Amendment 30A to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico, published on July 3, 2008, sets management measures to constrain harvest to their respective catch levels and adds annual catch limits and accountability measures for each species. It also establishes a gray triggerfish rebuilding plan. In addition, NOAA took important steps to end overfishing of the bottomfish stock complex in the Main Hawaiian Islands. Amendment 14 of the Bottomfish and Seamount Groundfish Fishery Management Plan was finalized and approved, implementing regulations that included the establishment of permits and reporting for non-commercial fishermen, total annual catch management and annual closure and bag limits. Further progress on eliminating overfishing is anticipated from the implementation of annual catch limits (ACL) for all stocks per the provisions of the Magnuson-Stevens Reauthorization Act. The proposed revisions to the guidelines for National Standard 1 (NS1) of the Magnuson-Stevens Fishery Conservation and Management Act, which will guide the establishment of ACLs, were published on June 9, 2008, with a final ruling expected sometime in 2009.



North Atlantic Right Whale

In October 2008, NMFS published a final rule that would limit ship speed during specific times and areas along the east coast where relatively high right whale and ship densities overlap near a number of ports, at calving/nursery areas in waters off Georgia and Florida, and New England. Evidence indicates that the likelihood of death and serious injury to large whales struck by ships is related to ship speed. NOAA also developed two proposals for submission to the International Maritime Organization (IMO) to reduce the risk of ship strikes to North Atlantic right whales. One would amend the north-south leg of the IMO-adopted traffic separation scheme in the approach to Boston, while a second would establish a seasonal *Area to Be Avoided* in the Great South Channel. The two draft proposals were approved by the IMO Subcommittee on Safety of Navigation in July 2008.

KEY ACTIONS TAKEN TO PROTECT LARGE WHALES

NOAA has also taken action to protect blue whales on the west coast. After a season in which three blue whales washed ashore near Santa Barbara, California due to injuries related to vessel strikes—only five confirmed deaths from ship strikes occurred off the entire California coast from 1980 to 2007—NOAA worked with the U.S. Coast Guard and the California Department of Fish and Game to mitigate ship impact on the whales. Flights over Santa Barbara Channel located where blue whales were feeding. The whales' positions were plotted and sent to the Port of Los Angeles and relayed to all commercial vessel traffic with a request to reduce speed to ten knots when in the area. As a result, there were no other known whale deaths from ship strikes after NOAA's response.



Removal of Smelt Hill dam under Open Rivers Initiative

NOAA RESTORES AND OPENS ACCESS TO VITAL FISH HABITAT

In 2008, NOAA restored, improved and protected 11,254 habitat acres and opened 623 stream miles for migrating fish. The restoration work was carried out through programs such as large-scale, regional restoration projects in Louisiana conducted under the Coastal Wetlands Planning, Protection, and Restoration Act; the Community-based Restoration Program, a novel, grass-roots approach to restoration designed to actively engage communities in on-the-ground restoration of local habitats; and the Damage Assessment, Remediation and Restoration Program, which helps assess damage to habitat after disasters and gives recommendations and provides necessary restoration and compensation. NOAA's habitat restoration, protection and improvement efforts improve water quality and quantity and increase "green armor" in U.S. coastal areas, creating strong, natural coastlines which serve as effective buffers against storm damage. NOAA programs including the Open Rivers Initiative and Hydropower Program open freshwater rivers and streams to migrating fish, allowing them to spawn in healthier habitats, which enhances the overall health of the river systems and improves the local economy.

NOAA's Open Rivers Initiative celebrated an important milestone in July 2008 when NOAA completed the first phase of a two-phase dam removal project to open access to salmon habitat on the main stem of the Rogue River in Jackson County, Oregon. NOAA and its partners removed Gold Hill Dam, which was no longer in use and had become a safety and maintenance concern. In the second phase, the nearby Savage Rapids Dam will be removed in 2009, opening access to 15 miles of high-quality spawning and rearing habitat for salmon. NOAA is also studying the feasibility of removing Gold Ray Dam, located two miles upstream of Gold Hill Dam, and is optimistic that it will be approved. Removal of Gold Ray Dam would provide access to over 300 miles of additional main stem and tributary salmon habitat.



NOAA Ship, *Okeanos Explorer*

NOAA ship *Okeanos Explorer*, “America’s Ship for Ocean Exploration,” was commissioned on August 13, 2008, setting it on a course as the only U.S. ship assigned to systematically explore our largely unknown ocean for the purpose of discovery and the advancement of knowledge. Unlike many other NOAA ocean expeditions, most of the scientists will remain ashore. Via telepresence, live images from the seafloor and other science data will flow over satellite and high-speed Internet pathways to scientists standing watch in any of the five land-based Exploration Command Centers. If a discovery is made at sea, those scientists will add their expertise to missions regardless of the ship’s location. The ship will also stream live seafloor images and interviews with scientists over standard Internet connections in order to bring the excitement of ocean exploration and discoveries into classrooms, newsrooms, and living rooms, helping to raise ocean literacy among stakeholders, and increasing their ability to make informed decisions about important ocean issues.

NEW NOAA SHIP WILL CHANGE HOW WE EXPLORE THE OCEAN



Deployment of Argo_3000 Apex float 3277 WMO# 4901083 by Fisheries and Oceans Canada (Canadian Coast Guard) Seaman Chad Clayton
Photo: Leading Seaman Gary Stevens

NOAA DEPLOYS ITS 3000TH ARGO BUOY

NOAA researchers, including those at NOAA's Joint Institute for Marine Observations (JIMO), met the goal of deploying and maintaining 3,000 Argo floats in active service. The Argo array of profiling floats provides essential broad-scale, basin-wide monitoring of the upper ocean heat content. The heat content of the upper 2,000 meters of the world's oceans, and the transfer of that heat to and from the atmosphere, are variables central in understanding the climate system. Global sea level change is directly related to the ocean's heat content – as the ocean's temperature rises the water expands and thus sea level rises. The Argo array provides measurements needed to: 1) document heat uptake, transport, and release by the ocean; 2) document global sea level change; and 3) document the air-sea exchange of heat and water and the ocean's overturning circulation. While prior oceanic data collection relied heavily upon research vessels with limited timetables and ranges, the Argo network has made it possible for scientists to gather real-time, evolving data around the clock and around the world. The Argo float network provides an average coverage of one sensor for every three degrees of latitude and longitude. Such coverage is necessary to understand the complex interplay between the components of the world's air-sea-land climate system. Some climate scientists have posited that the oceans have absorbed more than 80 percent of the excess heat generated by global warming over the past 50 years, though they have lacked observational data needed to verify such claims. With the completion of the Argo network, scientists will now have the ability to test such hypotheses and substantially advance the study of oceans and their role in climate variability.



Pisces launch in December 2008

Several major ship fleet recapitalization milestones were achieved in FY 2008. In August 2008, NOAA commissioned *Okeanos Explorer* in Seattle, Washington. The ship, a former Navy submarine surveillance ship that was converted to conduct research, is the only Federal ship dedicated to ocean exploration. It will be homeported in Rhode Island once its Pacific tour is completed. In September 2008, NOAA ship *Bell M. Shimada*, the fourth new fisheries survey vessel of the same class, was launched at the VT Halter Marine shipyard. The ship will be homeported on the West Coast. In December, NOAA launched *Pisces*, the third of four new fisheries survey vessels under construction at VT Halter Marine in Moss Point, Mississippi. The ship will be homeported in Pascagoula, Mississippi, when it becomes operational in 2009. NOAA's two oldest ships, *Rude* and *John N. Cobb*, were decommissioned in March and August 2008, respectively. A coastal mapping vessel currently under construction at VT Halter Marine will replace *Rude* in 2009; *Cobb's* mission will be continued by the NOAA fleet or charter vessels. In addition, two new 28-ft. survey launches acquired for NOAA ship *Rainier* improved overall survey efficiency and safety levels. The new vessels replaced launches that were more than 30 years old.

Aircraft Modernization

In 2008, NOAA completed structural modifications to house the tail Doppler radar (TDR) on the NOAA Gulfstream IV hurricane surveillance jet. All modifications were certified by the FAA as airworthy. Work continues on the TDR antenna design. Once it becomes operational in 2010, the G-IV's TDR will acquire meteorological data that will help forecasters more accurately predict the intensity of hurricanes.

NOAA MODERNIZES ITS FLEET



The renowned NOAA WP-3D Orion, participates in a wide variety of national and international meteorological, oceanographic, and environmental research programs in addition to their widely known use in hurricane research and reconnaissance

NOAA AIRCRAFT FLY BUSY HURRICANE SEASON

The hurricane season kept NOAA hurricane aircraft extremely busy in support of the National Hurricane Center and Hurricane Research Division. In FY 2008 (which covers parts of two hurricane seasons) OMAO flight crews from the Aircraft Operations Center flew in six named storms: three tropical storms and three hurricanes. The Gulfstream-IV high-altitude surveillance jet flew 23 missions and 177 flight hours. The two WP-3D Orion research and reconnaissance turbo-props flew a total of 54 missions, with 383 flight hours. Once Hurricanes Gustav and Ike had passed after making landfall, the NOAA Citation jet and Jet-prop Commander flew 16 damage assessment flights and 47 flight hours in support of NOAA's Remote Sensing Division. More than 5500 photographs of the hardest hit areas were taken for Federal and local managers. A NOAA WP-3D conducted a damage assessment flight after Ike to compare hurricane forecasts with actual damage.





NOAA GPRA PERFORMANCE RESULTS

NOAA's mission goals in ecosystems, climate, weather and water, and commerce and transportation are integrated from a funding and organizational perspective, in order to maximize support for the Departmental performance goal: observe, protect, and manage the Earth's resources to promote environmental stewardship. NOAA currently has 30 Government Performance & Results Act (GPRA) measure targets. In FY 2008, NOAA achieved or exceeded targets on 26 of 31 measures, or 83 percent of the targets. The funding requested in this budget is essential for employing new and modified measures to better represent and assess NOAA's performance in achieving our mission.

In February 2009, the American Recovery and Reinvestment Act (ARRA) appropriated \$830 million to NOAA, divided between ORF and PAC accounts. Programs in NOAA which receive funding from the ARRA will be required to establish and report on performance measures for success, as well as on schedule and cost progress. The additional funding will likely increase NOAA's ability to meet and exceed a number of our measures in FY09 and beyond in addition to making a positive investment in the economy.

Per 2008 GPRA measures, NOAA successfully installed a total of 114 stations which comprise the U.S. Climate Reference Network (USCRN) for the purpose of tracking national average changes in temperature and precipitation trends. Overfishing of three commercially valuable stocks ended in FY08: Petrale Sole, Bigeye Tuna, and Finetooth Shark. NOAA continues efforts to eliminate overfishing of stocks important to commercial, recreational, and subsistence fisheries. NOAA's Storm Prediction Center improved the preliminary average lead time for all verified tornado warnings, increasing safety and protecting lives and property.

NOAA's GPRA goals are focused on the results of key programs and services, support decision-making and congressional oversight, and are designed to measure and improve the performance of NOAA in meeting its mission. GPRA is unique in its requirement that agency "results" be integrated into the budgetary decision-making process. NOAA is continuously striving to improve its measures to better the service it provides to the American public.



For more information on NOAA's FY 2008 performance, please refer to the Department of Commerce FY 2008 Performance and Accountability Report (PAR), located at: <http://www.osec.doc.gov/bmi/budget/FY08PAR.htm>. Some of the actuals reported here are slightly different from what was reported in the FY 2008 PAR, as only estimates were available at the time.

NOAA PERFORMANCE SUMMARY FOR FY2008				
GOAL	MEASURE	FY2008 TARGET	FY2008 ACTUAL	MET/ UNMET
WEATHER AND WATER	Lead Time (Minutes), Accuracy (%), and False Alarm Rate (FAR) (%) for Severe Weather Warnings for Tornadoes (storm based)	Lead Time: 11	14	Exceeded Target
		Accuracy: 67%	72%	Met Target
		FAR: 74%	75%	Slightly Below Target
	Lead Time (Min) and Accuracy (%) for Severe Weather Warnings for Flash Floods	Lead Time: 48	77	Exceeded Target
		Accuracy: 90%	91%	Met Target
	Hurricane Forecast Track Error, 48 Hour (Nautical Miles)	110	86	Met Target
	Hurricane forecast intensity error (48 hour) (difference in knots)	14	14	Met Target
Accuracy (%) (Threat Score) of Day 1 Precipitation Forecasts	29%	33%	Met Target	
CLIMATE	Lead Time (Hours) and Accuracy (%) for Winter Storm Warnings	Lead Time: 15	17	Exceeded Target
		Accuracy: 90 %	89%	Slightly Below Target
	Cumulative Percentage of U.S. Shoreline and Inland Areas that Have Improved Ability to Reduce Coastal Hazard Impacts	32%	32%	Met Target
	U.S. Temperature Forecasts (Cumulative Skill Score)	19	26	Exceeded Target
	Reduce the Uncertainty in the Magnitude of the North American (NA) Carbon Uptake	0.35 GtC/yr	0.4 GtC/yr	Exceeded Target
	Reduce the Uncertainty in Model Simulations of the Influence of Aerosols on Climate	15% Improvement	15% Improvement	Met Target
	Determine the National Explained Variance (%) for Temperature and Precipitation for the Contiguous United States Using USCRN Stations	Captured 96.0% - Annual National Temperature Trend and 95.0% - Annual National Precipitation Trend	Temp – 98.0% Precip – 95.1%	Met Target
Reduce the Error in Global Measurement of Sea Surface Temperature	0.50 C	0.50 C	Exceeded Target	
Improve Society's Ability to Plan and Respond to Climate Variability and Change Using NOAA Climate Products and Information	35 risk assessments / evaluations	37 assessments / evaluations	Met Target	

Key To Color Coding: ■ Exceeded Target ■ Met Target ■ Slightly Below Target ■ Did Not Meet Target



NOAA PERFORMANCE SUMMARY FOR FY2008				
GOAL	MEASURE	FY2008 TARGET	FY2008 ACTUAL	MET/ UNMET
ECOSYSTEMS	Fish Stock Sustainability Index (FSSI)	530.5	535	Met Target
	Percentage of Living Marine Resources (LMR) with Adequate Population Assessments and Forecasts	41.1%	40.2%	Slightly Below Target
	Number of Protected Species Designated as Threatened, Endangered or Depleted with Stable or Increasing Population Levels	22	24	Met Target
	Number of Habitat Acres Restored (Annual/ Cumulative)	9,000 / 47,488	11,254 / 49,472	Exceeded Target
	Annual Number of Coastal, Marine, and Great Lakes Ecological Characterizations that Meet Management Needs	45	45	Met Target
	Cumulative Number of Coastal, Marine, and Great Lakes Issue-Based Forecasting Capabilities Developed and Used for Management	38	38	Met Target
	Percentage of Tools, Technologies, and Information Services That are Used by NOAA Partners/Customers to Improve Ecosystem-based Management	86%	86%	Met Target
	Annual Number of Coastal, Marine, and Great Lakes Habitat Acres Acquired or Designated for Long-term Protection (Annual)	2,000	6,219	Exceeded Target
COMMERCE & TRANSPORTATION	Reduce the Hydrographic Survey Backlog within Navigationally Significant Areas (square nautical miles surveyed per year)	2,500	2,127	Did Not Meet Target
	Percentage of U.S. Counties Rated as Enabled or Substantially Enabled with Accurate Positioning Capacity	60.0%	60.2%	Met Target
	Accuracy (%) and FAR (%) of Aviation Forecasts for Ceiling and Visibility (3 miles / 1000 feet)	Accuracy: 63%	62%	Slightly Below Target
		FAR: 44%	39%	Met Target
	Accuracy (%) of Forecast for Wind Speed and Wave Height	Wind Speed: 68%	72%	Met Target
	Wave Height: 73%	77%	Met Target	

Key To Color Coding: ■ Exceeded Target ■ Met Target ■ Slightly Below Target ■ Did Not Meet Target





CHAPTER 2 | NOAA OPERATIONS, RESEARCH, & FACILITIES BY LINE OFFICE



Katrin Iken (left) and Bodil Bluhm move deep-sea mud from the trawl net to a bucket. The benthic scientists will sieve the mud to find creatures within it for additional research. Photo taken during the 2005 NOAA-sponsored "Hidden Ocean" cruise to study marine life in all realms of the Canada Basin, one of the deepest parts of the Arctic Ocean.

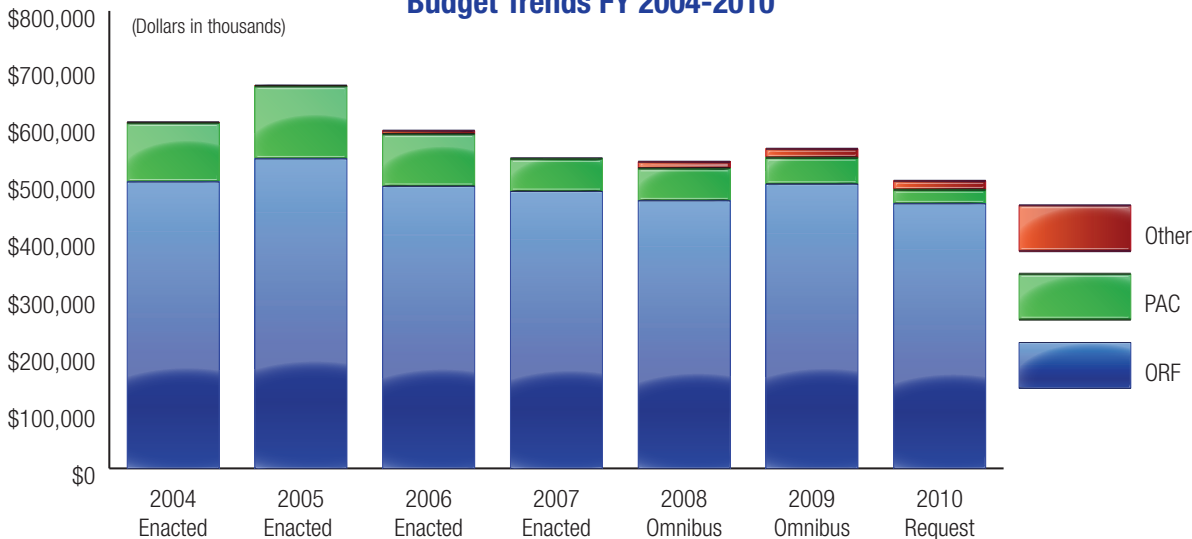
Credit: Jeremy Potter



NATIONAL OCEAN SERVICE

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
NOS — ORF				
Navigation Services	\$141,576	\$166,373	\$155,122	(\$11,251)
Ocean Resources Conservation & Assessment	182,752	175,494	159,665	(15,829)
Ocean and Coastal Management	143,602	155,100	147,884	(7,216)
Total, NOS - ORF	467,930	496,967	462,671	(34,296)
Total, NOS - PAC	56,599	46,188	24,385	(21,803)
Total, NOS - Other	11,600	15,600	15,600	0
GRAND TOTAL NOS (Direct Obligations)	\$536,129	\$558,755	\$502,656	(56,099)
Total FTE	1,241	1,240	1,246	6

NATIONAL OCEAN SERVICE Budget Trends FY 2004-2010



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction

Other: Environmental Improvement and Restoration Fund; Coastal Impact Assistance Fund; Coastal Zone Management Fund; Damage Assessment and Restoration Revolving Fund



NATIONAL OCEAN SERVICE

NOAA's National Ocean Service (NOS) is the primary Federal agency responsible for the preservation of coastal resources through the observation, measurement, assessment, and management of the Nation's coastal and ocean areas, as well as by providing critical navigation products and services, and conducting response and restoration activities to protect vital coastal resources. NOS balances environmental protection with economic development by providing the scientific, technical, and management expertise necessary to address the complex challenges of our coastal regions and the Great Lakes.



NOAA divers installing mooring buoy anchors using an underwater hydraulic drill at the Flower Garden Banks National Marine Sanctuary

Although coastal population growth has generally reflected the same rate of growth as the entire Nation, the limited land area of coastal counties is increasingly strained by the density of the population growth. This increasing density, coupled with the important economies of coastal areas, makes the task of managing coastal resources increasingly difficult, especially with the Nation's coastal population expected to rise to 165 million by 2015. Growth in coastal areas creates jobs, generates economic prosperity, adds new industries, enhances educational opportunities, and increases tax revenues. However, it also burdens local environments, threatening the very resources that draw people to the coast.

As a national leader for coastal stewardship, NOS promotes a wide range of research and operational activities aimed at developing a better understanding of ocean, coastal, and Great Lakes ecosystems. Research provides the strong science foundation required to effectively manage and advance the sustainable use of our coastal and ocean systems, improve ecosystem and human health, and support economic vitality. NOS provides improvements in the quality, quantity, geographic distribution, and timeliness of ocean and coastal observations. Observations conducted by NOS and their partners are critical components of the Nation's Integrated Ocean Observing System (IOOS) as well as fundamental contributors to the Global Earth Observation System of Systems (GEOSS). NOS mapping, charting, geodetic, and oceanographic activities build on the marine and coastal observations collected to increase the efficiency and safety of maritime commerce, support coastal resource management and address coastal flooding and water quality concerns. NOS protects and restores coastal resources damaged by



releases of oil and other hazardous materials. NOS also protects and manages the special marine areas of the Nations' marine sanctuaries and the Papahānaumokuākea and Rose Atoll Marine National Monuments. Through partnerships with coastal states, NOS oversees the Nation's valuable coastal zones and nationally significant estuarine reserves. Understanding of the coastal environment is enhanced through coastal ocean activities that support science and resource management programs. NOS helps federal, state, local and international managers build the suite of skills and capacity needed to protect, restore, and use coastal ecosystems by providing financial and technical assistance, process and technical skill training, and other applied research.

NOS contributes significantly to achieving two of NOAA's four Strategic Mission Goals: (1) protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management, and (2) support the Nation's commerce with information for safe, efficient, and environmentally sound transportation. While these two goals capture much of the National Ocean Service's activities, NOS also supports and makes important contributions to NOAA's other two mission goals: (1) serve society's needs for weather and water information, and (2) understand climate variability and change in order to enhance society's ability to plan and respond. NOS also contributes to the support goal through organizational excellence, infrastructure, and mission support.

In carrying out its diverse programs and services, NOS forges partnerships to integrate expertise and efforts across all levels of government as well as external partners. This coordinated approach is an essential component of NOS' national effort to protect, maintain, and sustain the viability of coastal communities, economies and ecosystems. The FY 2010 President's Budget Request supports funding and program requirements that enable NOS to deliver a dynamic range of nation-wide coastal and Great Lakes scientific, technical and resource management services in support of safe, healthy and productive oceans and coasts.

FY 2010 BUDGET SUMMARY

NOAA requests a total of \$462,671,000 and 1,229 FTEs to support the continued and enhanced operations of the National Ocean Service. This total includes \$4,929,000 and 0 FTEs for Adjustments to Base (ATB), and a program increase of \$22,348,000 and 6 FTEs.

ADJUSTMENTS TO BASE:

The above ATB request includes an increase of \$4,929,000 and 0 FTEs to fund the estimated FY 2010 Federal pay raise of 2.0 percent and annualize the FY 2009 pay raise of 3.9 percent. Program totals 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 — ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2010:

Program changes are summarized at the sub-activity level below. Detailed numeric breakouts are located in Chapter 5, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2010 Technical Budget.

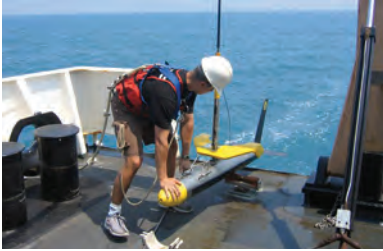
NAVIGATION SERVICES

\$155,122,000

NOAA requests an increase of \$5,173,000 and 0 FTEs in the Navigation Services sub activity, for a total of \$155,122,000 and 550 FTEs. The FY 2010 President's Budget requests funding for a suite of navigation



products and services which will help to ensure the safety of marine transportation, while improving the economic efficiency and competitiveness of American commerce. These activities are conducted under the authority of the Hydrographic Services Improvement Act and managed by the Office of Coast Survey (OCS), the Center for Operational Products and Service (CO-OPS) and the National Geodetic Survey (NGS). The Navigation Services subactivity includes three line items: Mapping and Charting, Geodesy, and Tides and Currents. This increase is comprised of two initiatives:



Side scan survey work in Pascagoula, MS ship channel

Address Survey Backlog and Contracts: NOAA requests an increase of \$1,173,000 and 0 FTEs to conduct hydrographic surveys of critical areas to support safe and efficient navigation.

NOAA's charting mandate authorizes NOAA to provide nautical charts and related hydrographic information for the safe navigation of maritime commerce for U.S. territorial waters and the U.S. EEZ, a combined area of 3.4 million square nautical miles (SNM), which extends 200 nautical miles offshore from the nation's coastline. The requested funds will augment NOAA's resources focused on surveying the most critical areas according to the priorities laid out in the "NOAA Hydrographic Survey Priorities" document (NHSP). NOAA is responsible for surveying the entire 3.4 million SNM of the EEZ, but the priority for commerce and safe transportation consists of 500,000 SNM of navigationally significant areas. Of the total navigationally significant area, about 4% (~20,000 SNM) have been identified as critical areas in need of survey. These 20,000 SNM are NOAA's highest survey priority. Mariners rely on NOAA's decision support tools to reduce risk and provide a complete understanding of the marine environment in which they must operate.



NOAA Citation on GRAV-D Flight

Geodesy: NOAA requests an increase of \$4,000,000 and 0 FTEs to collect gravity data for improving elevations and height information.

With the requested increase, NOAA will begin a multi-year effort to collect airborne gravity data to produce a new national vertical datum. Updating the nation's gravity-based geoid model from 40 cm of accuracy to 2 cm of accuracy across the nation will allow GPS to efficiently establish accurate elevations to improve commerce, to promote economic efficiencies, and to better protect against inundation from storms, flooding, and sea level rise. In 2010, NOAA will focus on coastal areas of the United States and in the out years collect airborne gravity measurements according to its 2007 Gravity for the Redefinition of the American Vertical Datum (GRAV-D) plan, which laid out an efficient process to acquire gravity measurements across the nation and redefine the geoid model based on areas of most critical need. A multi-year, national effort to collect and improve the gravity data used in the geoid model will eliminate errors, and allow efficient, centimeter-level measurement of heights using GPS. A 2009 socio-economic benefits study estimated benefits to the nation of the completed GRAV-D effort funded by this increase to be \$4.8 billion over 15 years, including \$2.2 billion in avoidance costs from improved floodplain management.

OCEAN RESOURCES CONSERVATION AND ASSESSMENT

\$159,665,000

An increase of \$12,135,000 and 3 FTEs is requested under the Ocean Resources Conservation and Assessment subactivity for a total of \$159,665,000 and 428 FTEs. Funds are requested under this subactivity to support a range of activities managed by the National Centers for Coastal Ocean Science (NCCOS), the Office of Response and Restoration (ORR), the Coastal Services Center (CSC), the Office of Ocean and Coastal Resource Management (OCRM), and the NOAA Integrated Ocean Observing System (IOOS) Program. These activities are implemented under a range of authorities to protect, conserve, and restore



natural resources and the environmental quality of the Nation's coastal ecosystems. The Ocean Resources Conservation and Assessment subactivity contains three line items, Ocean Assessment Program, Response and Restoration, and National Centers for Coastal Ocean Science. The requested increase is comprised of five initiatives:

Ocean Assessment Research Plan Implementation: NOAA requests an increase of \$3,000,000 and 1 FTE for the Ocean Research Priorities Plan (ORPP) to develop and improve sensors for ocean biological and physical parameters at multiple spatial and temporal scales. This request is in direct response to the near-term priorities in the ORPP and consistent with the 2007 Interagency Oceans and Human Health Research Implementation Plan. Over the next five years, NOAA and its partners will markedly increase efforts to develop and apply genomic microarrays and other technologies that will allow for the rapid and accurate detection, identification, and quantification of disease-causing microbes in marine waters and seafood in addition to providing information on changes in gene expression of multiple marine organisms in response to climate change, environmental conditions and disease. Information gained will be used to support improved ecosystem management strategies and protection of public health, including use for beach closure forecasts related to pathogens and harmful algal blooms, fisheries and protected species management, and coastal ecosystem health assessments. This work will enable rapid and cost-effective identification of ocean-borne health threats, thereby enabling actions to protect public and animal health, advance our understanding of how multiple stressors – including climate change – affect coastal ecosystems, and enhance our knowledge of recruitment processes for marine organisms of particular interest.

Ocean Assessment Research Plan Implementation: NOAA requests an increase of \$3,000,000 and 0 FTE for the Ocean Research Priorities Plan (ORRP) to support end-to-end development and integration of observations, research, and forecast models. With the requested funding, NOAA will work across federal agencies to provide and integrate observations, research results, and forecasts at regional and system-scales for the ORPP near-term opportunities. Initial implementation of this research priority will require assessment of Federal, regional and state programs, needs and capabilities, as well as the “state of knowledge,” to identify the requirements for specific forecasts and tools. NOAA will build on ongoing agency activities and focus on three primary capability areas: observations, forecasting, and applications. Effective integration of observational and forecast systems with research products will provide coastal resource managers, and emergency, and public health officials with short and long-term forecasts of changing coastal conditions. Key federal partners include USGS, EPA, U.S. Army Corps of Engineers, and the National Science Foundation. This increase will support priorities identified by State, regional, and interagency alliances and working groups such as the Gulf of Mexico Alliance and Great Lakes Interagency Task Force. High-priority research and technology investments, coupled with sound decision-making at all levels, will dramatically enhance community resilience and reduce vulnerability. In five years, coastal planners, resource and emergency managers, and policy makers at all governmental levels will have a wider variety of decision support tools, from diverse observations and models, at their disposal to make the best decisions for their coastal constituents and economies regarding to coastal hazards.



Gulf of Mexico Regional Collaboration: NOAA requests an increase of \$1,000,000 and 0 FTEs to advance regional coastal resource priorities defined by the five Gulf States of the Gulf of Mexico Alliance. With the requested funding NOAA will continue to support competitive grants representing the following six priority areas: create hazard resilient coastal communities; ensure healthy beaches and shellfish beds; support habitat conservation and restoration; increase environmental education; promote ecosystem integration and assessment; and reduce nutrient inputs to coastal ecosystems as outlined in the June 2009 regional action plan: *the Governors' Action Plan II for Healthy and Resilient Coasts*. The Gulf of Mexico Alliance is a partnership among state and federal agencies across the states of Alabama, Florida, Louisiana, Mississippi, and Texas, with the goal of significantly increasing regional collaboration to enhance the environmental and economic health of the Gulf of Mexico. At the request of the Council on Environmental Quality (CEQ), NOAA and EPA co-chaired a Federal Workgroup coordinating support from 13 federal agencies to the Gulf of Mexico Alliance to implement the first Governor's Action Plan. The Department of Interior (DOI) has now joined NOAA and EPA as a co-chair to support implementation of the Action Plan II. In this role, NOAA, EPA, and DOI work to increase collaboration among all federal partners, thereby increasing the effectiveness and efficiency of federal action in the Gulf of Mexico region. All actions in the *Governors' Action Plan II* directly support Gulf Coast recovery and contribute to more resilient coastal communities that protect lives and livelihoods. By working together, the five Gulf State Governors are building regional political strength, and are providing a working model of regional ocean governance called for by the U.S. Commission on Ocean Policy.

Response and Restoration: NOAA requests an increase of \$1,400,000 and 0 FTEs for the development of tools necessary to respond to oil spills and releases of hazardous materials. The funds will be used to develop tools and techniques related to response and natural resource damage assessment with a strong focus on building and maintaining state-of-the-art 3-D models to predict contaminant movement in the environment 24 hours a day, 7 days a week. NOAA's response activities deliver payoffs in many areas including reduced environmental harm, reduced impact from shipping and fisheries closures, lowering costs of cleanup by finding the most cost-effective approaches, and reduced cost of restoring natural resources realized by cutting transaction costs. In 2008, NOAA received requests for scientific assistance related to 169 environmental incidents, three-quarters of which were oil spills.



Harmful Algal Bloom

National Centers for Coastal Ocean Science: NOAA requests an increase of \$2,700,000 and 2 FTEs to develop and implement operational harmful algal bloom (HAB) forecasts by creating a national system of forecasts, and a national HAB event response capability. The funds will build upon the capabilities developed through the current operational forecast system for the eastern Gulf of Mexico. The forecast system will be a collaborative effort among several NOAA offices, along with state, local and federal management agencies, and the research community. This system will be implemented regionally starting with the western Gulf of Mexico (operational in 2010), the lower Great Lakes (operational in 2011), the Gulf of Maine (operational in 2012), California (operational in 2013), and the Pacific Northwest (operational in 2014), and will provide twice weekly comprehensive forecasts and support. The existing operational system for the eastern Gulf of Mexico has been in place for three years and NOAA has issued nearly 400 bulletins in that time in response to HABs. These outbreaks have impacted over 1000 km of coast,



with 90% weekly utilization of the bulletins by over 190 resource managers representing more than 50 organizations. The HAB forecasts and associated models, data, and analysis will permit coastal managers and emergency responders to make sound decisions on reducing the direct human health risk, protecting shellfisheries and shellfish industries by timely changes in management strategies, and reducing economic loss by designing mitigation strategies that are not possible without advance planning. HABs are one of the most scientifically complex and economically significant coastal issues facing the nation. HAB toxins can cause human illness and death, close waters to recreation or seafood harvesting, severely impact tourist economies, alter habitats, and adversely impact fish, endangered species, and other marine organisms. HABs affect virtually every coastal state and have caused an estimated \$1 billion in national economic losses over the past decade.

OCEAN AND COASTAL MANAGEMENT

\$147,884,000

NOAA requests an increase of \$5,040,000 and 3 FTEs for a total of \$147,884,000 and 251 FTEs for the Ocean and Coastal Management sub activity. The Nation’s ocean and coastal areas represent some of the most ecologically and economically important regions and this request will continue to support and advance NOAA’s important work to sustain these regions. These activities are conducted primarily under the authority of the Coastal Zone Management Act (CZMA) and the National Marine Sanctuaries Act (NMSA) and implemented by the Office of Ocean and Coastal Resource Management (OCRM) and the Office of National Marine Sanctuaries (ONMS). This subactivity includes two line items: Coastal Management, and Ocean Management. This increase is comprised of three initiatives:

Coastal Zone Management National Program: NOAA requests an increase of \$1,140,000 and 0 FTEs to provide national leadership through the CZMA National Program for implementation of the Coastal Zone Management Act (CZMA).

These funds support critical needs as NOAA works with numerous partners to implement cooperative agreements with 34 coastal states, as well as operational and construction grants for the 27 National Estuarine Research Reserves. The funds will enable NOAA to conduct necessary reviews in preparation of designating a National Estuarine Research Reserve in Wisconsin and establishing a coastal zone management program in Illinois; begin developing new management approaches that better integrate coastal management programs across all levels of government and disciplines; and focus on establishing and achieving specific targeted outcomes from NOAA’s coastal programs. NOAA will enhance its ability to understand and respond to national issues and trends in coastal resource management; and build capacity to enhance programmatic evaluations of CZM programs through the establishment of state-level performance goals. The convergence of increasing population, increased competition for use of coastal lands and ocean areas, loss of natural resources, and increasing coastal hazards affect both the national economy as well as the daily lives of Americans. While only 17% of the Nation’s land area is coastal, it supports over 50% of our population and generates nearly 60% of the U.S. gross domestic product. The magnitude, scope, complexity, and urgency of these issues require national leadership, especially since climate change is expected to amplify these challenges. Since the Nation’s coastal communities and economies depend on healthy coastal resources, NOAA’s request ensures adequate resources for programs to meet both existing requirements and emerging priorities for coastal and ocean management. Without these, coastal and ocean management will become more fragmented rather than better integrated.



Coastal Zone Management



Coastal Management: NOAA requests an increase of \$2,000,000 and 0 FTEs for Coastal Stewardship to convene a task force of key public, private, non-governmental, and university representatives to revise the future of the nation's coasts and NOAA's role. The Coastal Communities Task Force (CCTF) will specifically address enhancing coastal community economies while protecting and conserving ecologically sensitive areas. The purpose of the CCTF is to chart a new course of effective, meaningful actions for management of the nation's valuable coasts based on policy reform and strategic action at the local planning level. The CCTF will directly address and coordinate the implementation of major recommendations of the U.S. Ocean Commission, Pew Commission, the Joint Ocean Commission Initiative (JOCI), regional ocean governance initiatives, and various climate change reports. In particular, this effort will increase NOAA's effectiveness in implementing the CZMA goals and objectives and NOAA's coastal strategy. NOAA has an important role to play in improving the health of coastal ecosystems and communities. Under the CZMA, NOAA has a responsibility to assist states and federal agencies in planning and development within state and federal waters. NOAA's role is to bring leadership for interagency coordination and strong state and regional ties through the Coastal Zone Management Program, Sea Grant, National Estuarine Research Reserves, Office of Habitat Conservation and other partnerships and programs to support the CCTF. Additionally, NOAA will contribute management and scientific expertise in coastal zone management, marine mapping and planning, remote sensing, and observing, in support of the Task Force.

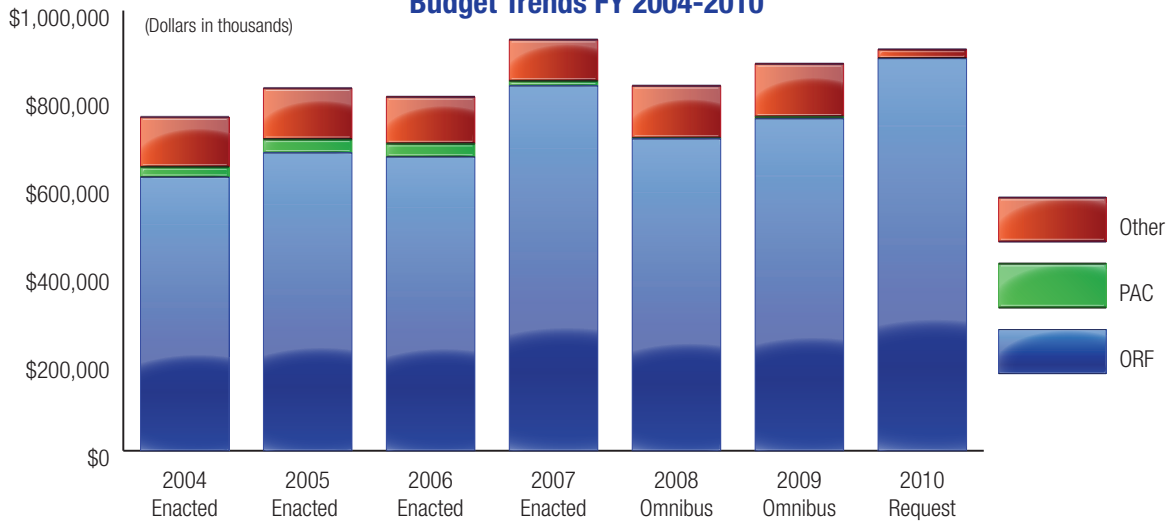
Energy Licensing and Appeals: NOAA requests an increase of \$1,900,000 and 3 FTEs to meet statutory, regulatory, and mission requirements relating to traditional, new, and alternative ocean and coastal energy development responsibilities. The requested increase will enable NOAA to more effectively administer its current legal authorities and respond to anticipated requirements related to ocean and coastal energy development. As a result, NOAA will be able to make sound decisions on behalf of the public and NOAA trust resources, while providing timely and complete responses to interested parties seeking to exercise their rights under the law. NOS will assist in incorporating the updated laws and regulations into state coastal zone management programs, as required by the CZMA. NOAA will also increase training for states, federal agencies, and the private sector to improve the understanding and application of the Federal Consistency provisions of the CZMA on proposed ocean and coastal energy projects. Finally, NOAA will lead policy coordination of Federal Consistency appeals to provide increased management input and to meet significant new, stricter time and process requirements of the Energy Policy Act of 2005. As the Nation strives to address current and projected energy needs, it is increasingly turning to the ocean and coasts to provide and transport traditional energy supplies and emerging alternative methods to harness ocean power. NOAA is responsible for assessing the potential effects on trust resources and existing coastal uses of concern.



NATIONAL MARINE FISHERIES SERVICE

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
NMFS — ORF				
Protected Species Research and Management	\$163,992	\$173,945	\$243,538	\$69,593
Fisheries Research and Management	327,260	360,826	421,467	60,641
Enforcement and Observers	84,894	90,085	103,132	13,047
Habitat Conservation and Restoration	50,245	53,655	44,023	(9,632)
Other Activities Supporting Fisheries	81,949	75,494	78,482	2,988
Total, NMFS - ORF	708,340	754,005	890,642	136,637
Total, NMFS - PAC	2,021	4,600	0	(4,600)
Total, NMFS - Other	118,722	120,369	21,110	(99,259)
GRAND TOTAL NMFS (Direct Obligations)	\$829,083	\$878,974	\$911,752	\$32,778
Total FTE	2,748	2,656	2,823	167

**NATIONAL MARINE FISHERIES SERVICE
Budget Trends FY 2004-2010**



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction

Other: Fishermen's Contingency Fund; Foreign Fishing Observer Fund; Fisheries Finance Program Account; Promote and Develop; Pacific Coastal Salmon Recovery Fund; Marine Mammal Unusual Mortality Event Fund; Federal Ship Financing Fund; Environmental Improvement and Restoration Fund; Limited Access System Administration Fund



NATIONAL MARINE FISHERIES SERVICE

NOAA's National Marine Fisheries Service (NMFS) is responsible for the management and conservation of living marine resources within the United States Exclusive Economic Zone (EEZ), the area extending from three to 200 nautical miles offshore. NMFS also provides critical scientific and policy leadership in the international arena and plays a key role in the management of living marine resources in coastal areas under state jurisdiction. NMFS implements science-based conservation and management measures and actions aimed at sustaining long-term use and promoting the health of coastal and marine ecosystems.



Chesapeake Bay Shellfish Farmers

NMFS' mission is to maximize benefits to the Nation from the protection and use (commercial, recreational, and aesthetic) of living marine resources. To achieve its mandates, NMFS works to ensure the long-term health, productivity, and diversity of our Nation's ocean and coastal resources including fish, invertebrates, sea turtles, whales, and other marine and coastal species and their habitats. NMFS is charged with balancing these protection mandates with multiple uses and interests in marine resources, including commercial, recreational, and subsistence fishing; aquaculture; and marine and coastal observation and research. Successful management relies upon NMFS' strong scientific and research competency to support the challenging public decision-making processes associated with NMFS' stewardship responsibilities.

NMFS continues to develop and track key performance measures that demonstrate meaningful results to the American public. In FY 2010, NMFS will continue to focus its resources on building and maintaining fish stocks at productive levels; improving the status of overfished fisheries and endangered and threatened species and ensuring those species have adequate population assessments and forecasts; implementing plans to rebuild, recover, and conserve major fish stocks and protected species; and restoring habitat for NOAA trust resources.

In FY 2010, NMFS will continue to support new requirements under the reauthorized Magnuson-Stevens Act including ending overfishing, promoting market-based management approaches, improving recreational fisheries



data collection, reducing bycatch of protected living marine resources, and addressing illegal, unregulated, and unreported (IUU) fishing.

In addition, the U.S. Ocean Action Plan specifies that an effective U.S. ocean policy must be grounded in an understanding and management of ecosystems. This ecosystem approach is the principal management tool that will help NMFS meet its immediate and long-term goals, including: Implementing the reauthorized Magnuson-Stevens Fishery Conservation and Management Act (MSRA); Doubling the number of Limited Access Privilege Programs (LAPPs) to 16 by 2011; Building a strong aquaculture program; Ending overfishing; Providing adequate consultations under the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA); Ensuring effective science and management; Strengthening environmental compliance for defense and energy-related activities in our oceans and coastal areas; Serving as an environmental leader, domestically and internationally.

NMFS will also collaborate with other agencies and organizations on an ecosystem-based approach to develop indicators of ecosystem status and trends, and on joint strategies to address priority regional ecosystem issues.

The FY 2010 President’s Budget Request supports funding and program requirements to enable NMFS to be effective stewards of living marine resources for the benefit of the Nation through science-based conservation and management and the promotion of ecosystem health.

FY 2010 BUDGET SUMMARY

NOAA requests a total of \$890,642,000 and 2,818 FTEs to support the continued and enhanced operations of the National Marine Fisheries Service. This total includes an increase of \$12,266,000 and 11 FTEs for Adjustments to Base (ATB), and a net program change of \$190,649,000 and 156 FTEs.

ADJUSTMENTS TO BASE:

The above ATB request includes an increase of \$12,266,000 and 11 FTEs to fund the estimated FY 2010 Federal pay raise of 2.0 percent and annualize the FY 2009 pay raise of 3.9 percent including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration. Program totals will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.

NMFS – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2010:

Program changes are summarized at the sub-activity level below. Detailed numeric breakouts are located in Chapter 5, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2010 Technical Budget.

PROTECTED SPECIES RESEARCH AND MANAGEMENT

\$243,538,000

NOAA requests an increase of \$81,171,000 and 65 FTEs in the Protected Species Research and Management sub-activity, for a total of \$243,538,000 and 737 FTEs. This increase is comprised of five initiatives:



Ribbon Seal in the Bering Sea

Protected Species Research and Management: NOAA requests an increase of \$5,550,000 and 20 FTEs to increase NMFS' capacity to deliver scientifically sound and legally defensible Endangered Species Act consultations and enhance conservation of listed species by other federal action agencies. Section 7 of the ESA requires all Federal agencies consult with NMFS to ensure that their actions will not jeopardize a marine listed species, destroy or adversely modify its designated Critical Habitat. Through the consultation process, NMFS helps agencies to tailor their actions to avoid further peril and help conserve those species. In 2010 and for the next few years, NMFS expects to face an increase in the number of interagency consultations on economically critical Federal actions. In order to provide technical assistance and consultation services to the EPA, USDA, and other Federal agencies in a timely manner and avoid future litigation, additional capacity is required. With these funds, NMFS will: (1) conduct ESA Section 7 consultations with the Bureau of Reclamation, U.S. Army Corps of Engineers, U.S. Forest Service, and Bureau of Land Management on various land management activities including large scale management plans, timber sales, and water management projects; (2) conduct ESA Section 7 consultations for transportation projects including those associated with the Safe Accountable Flexible Efficient Transportation Equity Act (SAFETEA-LU); (3) conduct ESA Section 7 consultations on energy projects, including additional new workload to complete consultations with the Office of Pipeline Safety; (4) conduct consultations with the U.S. Navy on their training activities, as well as day-to-day operations of military installations; (5) conduct consultations with the National Ocean Service, the U.S. Navy, and other Federal agencies operating vessels in the marine environment to address the potential to strike marine mammals, including the North Atlantic Right Whale (6) and provide technical assistance to EPA and other federal agencies to implement conservation measures and revise national water quality standards.

Species Recovery Grants: NOAA requests an increase of \$60,000,000 and 7 FTEs to conduct cooperative conservation and recovery implementation with States, tribes and other entities assisting protected species recovery under the Species Recovery Grants program. NOAA currently has jurisdiction over 68 threatened or endangered species, 2 species that have been proposed for listing, and 14 "candidates" for listing under the ESA. Recovery of listed species is dependent on collaboration and cooperation with partners, States, tribes, and other entities; however, most partners do not have adequate resources to address necessary recovery actions and Federal assistance is necessary to ensure their ability to engage in an effective partnership. The requested funds will be used by NMFS's partners to implement priority recovery actions for listed species including restoring habitat necessary to recover listed species; monitoring population trends of listed species; partnering with other States to conduct cross-jurisdictional conservation actions; developing conservation plans to address incidental take of listed species; and educating the public about the conservation of ESA listed species. Partners in States with ESA listed salmon may apply for these funds for salmon recovery projects similar to those funded through the Pacific Coastal Salmon Recovery Fund.



Marine Mammals: NOAA requests an increase of \$5,300,000 and 10 FTEs to conduct conservation and recovery actions. This increase is comprised of four sub-initiatives:

- » **Hawaiian Monk Seal Recovery Plan: NOAA requests an increase of \$1,500,000 and 4 FTEs to implement the management and conservation recovery actions as called for in the 2007 Final Hawaiian Monk Seal Recovery Plan.** Hawaiian monk seals are critically endangered, with a downward population trajectory expected to fall below 1,000 individuals in the next 10 years. As a result, this species may become extinct within 50 years without human intervention. In addition, monk seal numbers, while decreasing throughout most of the species' range, are increasing in the highly populated main Hawaiian Islands, which create additional management challenges. These funds will be used to enhance survival of juvenile monk seals by transporting seals to areas with higher survivability potential; bring juveniles into captive care to improve their nutritional status and then releasing them; provide medical care to free-roaming seals; and manage shark predation on juvenile seals. Specific management activities within the main Hawaiian Islands include eliminating or mitigating take of this endangered species by commercial and recreational fisheries, and protecting mother-pup pairs from human disturbance and domestic animals on main islands beaches.



Hawaiian Monk Seal

- » **Cook Inlet Beluga Whale: NOAA requests an increase of \$1,000,000 and 0 FTEs to support science and management activities for the Cook Inlet Beluga Whale.** This species was listed as "endangered" under the Endangered Species Act (ESA) in October 2008 and as "depleted" under the Marine Mammal Protection Act (MMPA) in June 2000. Under the mandates of the MMPA and ESA, NMFS must work to conserve and recover listed marine mammals. NMFS estimates this population once had numbered as many as 1,300 whales, and the most current estimate is 375 whales. The requested funds will be used to support research factors limit recovery, recovery plan development, enforcement activities, and annual monitoring. Funds will also support the Federal consultation process to allow Federal actions to proceed without jeopardizing survival and recovery of the species.



Tagging a Cook Inlet Beluga Whale

- » **Marine Mammal Take Reduction Program: NOAA requests an increase of \$1,500,000 and 2 FTEs to implement the Marine Mammal Take reduction program to protect marine mammal populations from commercial fishing activities.** The Marine Mammal Protection Act (MMPA) specifies that NMFS develop and implement take reduction plans to assist in the recovery or prevent the depletion of marine mammal stocks that interact with potentially harmful commercial fisheries activities. Funding will allow NMFS to convene a new Take Reduction Team (TRT) to develop a Take Reduction Plan (TRP), and conduct marine mammal stock assessments and monitoring of fisheries interactions in Alaska and the Gulf of Mexico. The immediate goal of the TRP is to reduce the incidental serious injury or mortality of marine mammals from commercial fishing within six months of the plan implementation.



Bearded Seal

- » **Ice-dependent Seals: NOAA requests an increase of \$1,300,000 and 4 FTEs for marine mammal research and recovery actions for ice-dependent seals identified as Species of Concern, which have the potential to be listed under the Endangered Species Act (ESA).** NMFS is currently conducting a status review to make a listing determination of three ice seal species: ring, spotted and bearded seals. Threats to ice seals include decreases in the species numbers due to loss of habitat as a result of climate change. At present, NMFS only has limited knowledge of the life history and ecological requirements of ice seals, as well as limited capacity to conduct recovery planning, recovery plan implementation, and potential regulation of ice seals under Section 7 of the ESA. Should NMFS list any of the ice seals under the ESA, a recovery plan will be written, and recovery measures may be required. The requested increase will be used to study abundance and distribution, seasonal migrations and habitat requirements, genetic discreteness and stock structures of these seals. NOAA will determine the factors for decline and develop a plan to rebuild the stock to a sustainable level. They will also support the Federal consultation process to allow Federal actions to proceed without jeopardizing survival and recovery of the species.

Atlantic Salmon: NOAA requests an increase of \$2,996,000 and 0 FTEs to support the recovery of endangered Atlantic salmon and to address habitat needs in key watersheds historically used by Atlantic salmon. Due to habitat impacts such as dam construction, pollution, and over-harvesting, Atlantic salmon populations have declined precipitously. With the requested funds, NOAA will support ecosystem-based habitat restoration efforts to improve habitat for all stages of the salmon life cycle. NOAA will provide technical assistance to projects addressing river barriers and habitat threats that prevent Atlantic salmon from utilizing upstream habitat critical for reproduction and growth. This funding supports the Atlantic Salmon Recovery Plan and will support ongoing management and research recovery efforts.



Coho Salmon

Pacific Salmon: NOAA requests an increase of \$7,325,000 and 28 FTEs to accelerate development of genetic stock indicators with the intent to improve management of the ocean fishery by minimizing bycatch of depleted Pacific salmon stocks. Funding will support participation of NMFS in interagency activities such as recovery of listed species of anadromous fish in the Ventura and San Joaquin river watersheds. Additionally, the increase will provide for Habitat Conservation Planning, Recovery Implementation with Local Partners, Klamath Salmon Recovery and Planning, and Section 7 consultations with EPA, and for Salmon Science and support.

FISHERIES RESEARCH AND MANAGEMENT

\$421,467,000

NOAA requests an increase of \$85,178,000 and 46 FTEs in the Fisheries Research and Management sub-activity, for a total of \$421,467,000 and 1,542 FTEs. This increase is comprised of sixteen individual initiatives, nine of which are under the Fisheries Research and Management Program:

Fisheries Research and Management Programs: NOAA request an increase of \$39,109,000 and 32 FTEs for the fisheries research and management program sub-activity. This increase is comprised of nine sub-initiatives:



» **Fisheries Research and Management Programs: NOAA requests an increase of \$12,000,000 and 12 FTEs to implement Annual Catch Limits (ACLs) and Accountability Measures (AMs) to end and prevent overfishing as required the MSRA.** Overfishing has a detrimental impact on the ecological and economic sustainability of fisheries, negatively affecting fishing communities, industry and recreational interests and other marine resources. The 2006 amendments to the Magnuson-Stevens Fishery Act require NOAA to end overfishing by implementing ACLs and AMs in all fisheries by 2011. For fisheries where overfishing is currently occurring, ACLs and AMs must be implemented by 2010. An ACL limits the amount of catch in a particular year at a level that ensures long-term stability. Accountability Measures (AMs) are used to correct for instances where the ACL is exceeded. The requested funds will support enhanced fishery management systems in the six NOAA Fisheries regions, including: implementing necessary regulations to establish and upgrade fishery data collections for monitoring ACLs; improving regional ACL management systems to ensure that timely management action can be taken to prevent ACLs from being exceeded; analyzing fishery data throughout the season to determine whether management action is needed (e.g., to close a fishery when it reaches its ACL or implement accountability measures); implementing AMs as needed; and monitoring the performance of ACLs and AMs each year and continuing to improve management systems if they are underperforming.

» **Fisheries Research and Management Programs: NOAA requests an increase of \$1,600,000 and 0 FTEs to fund commercial vessel charter days in lieu of the NOAA Vessel *John N. Cobb*.** NOAA Ship *John N. Cobb* was retired on August 13, 2008. This vessel provided critical support for the mission of Alaska Fisheries Science Center's Auke Bay Laboratory and National Marine Mammal Laboratory. There are currently no plans to replace the vessel with another NOAA vessel. This request will provide charter vessel support for the NMFS Alaska Fisheries Science Center's fishery-independent surveys, habitat assessments, longstanding marine mammal research, and logistical support of the Little Port Walter remote field station in southeast Alaska. This level of funding will provide approximately 160 days at sea annually, depending upon fuel costs.



John N. Cobb

» **Fisheries Research and Management Programs: NOAA requests an increase of \$2,500,000 and 0 FTEs for data collection and analysis to improve our understanding of the fishery impacts of hurricanes, our efforts to mitigate those impacts, and our ability to minimize the impacts of future storms.** NMFS will build upon ongoing activities in the following areas: prioritize fisheries and areas for field surveys and assessments; design and conduct select field surveys; adapt current ecosystem models to assess storm impacts; predict the benefits and costs associated with specific habitat recovery and restoration programs; and expand community assessment activities to include economic surveys. The funding will support time on ships and other platforms for surveys of fish, shrimp, other living marine resources as well as social and economic surveys of the fishing industry and fishing communities. This program provides the data and core assessments needed to support fisheries management in the hurricane-prone regions of the U.S. coast.



Mutton Snapper, Florida Keys

- » **Fisheries Research and Management Programs: NOAA requests an increase of \$3,000,000 and 8 FTEs to implement the international requirements of the reauthorized Magnuson-Stevens Fishery Conservation and Management Act (MSRA).** This increase will support participation and leadership for international obligations under the Convention on the Conservation and Management of Highly Migratory Fish stocks in the Western and Central Pacific Ocean as mandated by MSRA. This increase will also support the implementation of IUU/bycatch identification, consultation and certification procedures, and collection of data to support this activity with IUU/bycatch nations and governing Regional Fisheries Management Offices.

- » **Fisheries Research and Management Programs: NOAA requests an increase of \$3,000,000 and 10 FTEs to sustainably manage three new Marine National Monuments (MNM) in the Pacific Ocean.** These new National Monuments will encompass nearly 200,000 square miles, and together represent the largest marine reserve in the world. Management of this area requires NOAA to conduct fisheries and living marine ecosystem observation and monitoring, support the scientific and administrative needs associated with expanding the Fagatele Bay National Marine Sanctuary, develop a management plan and monument advisory council, conserve Essential Fish Habitat (EFH) designations, and consult on protected species. NOAA will conduct integrated living marine resource habitat surveys and biogeographic characterizations to establish baseline status of marine ecosystems in the MNMs; deploy moored instruments to support a time series of observations that will enable monitoring of ecosystem status and health; collect biological samples to support development of improved LMR population assessments and ecosystem models to define the ecological roles and vital rates of fish components of MNM ecosystems; and design and initiate studies to establish socioeconomic baseline and potential changes associated with MNM designation. In addition, NOAA will assess the potential impacts to EFH and protected species from any proposed fisheries management actions or any proposed non-fishing activities within the Monuments, including ecotourism, shoreline stabilization projects, or development of infrastructure.

- » **Fisheries Research and Management Programs: NOAA requests an increase of \$5,000,000 and 0 FTEs to support the Comparative Analysis of Marine Ecosystem Organization (CAMEO) which strengthens the scientific basis for an ecosystem approach to the stewardship of our ocean and coastal living marine resources.** The program will support fundamental research to understand complex dynamics controlling ecosystem structure, productivity, behavior, resilience, and population connectivity, as well as effects of climate variability and anthropogenic pressures on living marine resources and critical habitats. CAMEO encourages the development of multiple approaches, such as ecosystem models and comparative analyses of managed and unmanaged areas (e.g., marine protected areas (MPAs)) that can ultimately form a basis for forecasting and decision support.

- » **Fisheries Research and Management Programs: NOAA requests an increase of \$1,902,000 and 0 FTEs to streamline and modernize the fishery plan development and regulatory analysis, evaluation, and implementation capabilities of the Fisheries Management Program.** This request will support



the complete process of developing fishery management recommendations through their eventual analysis, approval, and implementation. With the request funding, NOAA will improve the quality and timeliness of regulatory processes and policy development for its Fishery Management Program through comprehensive impact analyses, full and timely consideration of all relevant issues, and compliance with all applicable laws and procedures. NOAA will be able to efficiently address policy issues early in the regulatory process, rather than later when it becomes difficult to comprehensively address a new and possibly contentious issue.

» **Fisheries Research and Management Programs NOAA requests an increase of \$5,003,000 and 0 FTEs to support the NOAA National Marine Fisheries Service (NMFS) Pacific Islands Regional Office (PIRO) and Pacific Islands Fisheries Science Center (PIFSC) in Hawaii.** The increase is a realignment of funding from the Other Projects budget line and provides resources needed for NOAA to protect, restore, and manage the use of coastal and ocean resources in the Pacific Islands Region through an ecosystem approach to management. NOAA's request provides funding for 33 existing FTEs, supports more effective science-based fishery management decisions, improves grants management, advances peer-reviewed ecosystem science, and institutes overall organizational management efficiency.

» **Fisheries Research and Management Programs: NOAA requests an increase of \$5,104,000 and 2 FTEs to support emergent needs in the areas of pelagic fisheries, West Coast groundfish, Atlantic Bluefin tuna, and regional science and operations.** This increase includes \$1,250,000 to support competitively-funded research projects under the Pelagic Fisheries Research Program; \$1,899,000 for scientific support of West Coast groundfish stock management, including conducting resource surveys and biological studies, managing the observer program, and preparing stock assessments; \$1,100,000 for observer coverage of pelagic longline fishery of Atlantic Bluefin tuna in the Gulf of Mexico; \$590,000 to improve regional marine ecosystem based management strategies; and \$265,000 in base funding restoration.



Atlantic Bluefin Tuna

Expand Annual Stock Assessments: NOAA requests an increase of \$9,900,000 and 6 FTEs to update fish stock assessments to support implementation of annual catch limits (ACLs) as required by MSRA. This increase will support resource surveys over larger geographic areas and habitats to monitor the abundance of more fish stocks; refine mathematical and statistical models that will produce forecasts of ACLs; hire highly specialized staff to conduct assessments with these models; and include ecosystem considerations in more assessments. NMFS will take a multifaceted, tiered approach to update stock assessments to implement ACLs. For stocks that are already periodically assessed at an adequate level, NMFS will update these assessments. For stocks with currently inadequate assessments, NMFS will expand resource surveys and assessment efforts. For those stocks that lack sufficient data to conduct an adequate assessment in the near term, NMFS will analyze data from more data-rich stocks to develop proxies that can be used to set ACLs for the data-limited stocks.



Bongo Net Sampling



Economics and Social Sciences Research: NOAA requests an increase of \$3,271,000 and 5 FTEs to implement economic analyses projects. This request will enable NOAA to address significant economic and social data gaps in major federal fisheries and to develop decision support tools to conduct MSRA-mandated cost-benefit analyses of regulatory options such as Annual Catch Limits (ACLs) and Limited Access Privilege Programs (LAPPs). Specifically, this request enables NMFS to: (1) develop decision support tools that will enable NMFS to efficiently assess the management impacts on fishery participants, shoreside firms, and fishing communities (sales, income, and employment) in a timely manner; and (2) significantly expand NMFS' economic and social data that enable NMFS to identify management options that impose the least cost on stakeholders and achieve the greatest benefit to society. These activities are important components of our overall FY2010 MSRA funding request.



Chinook Salmon

Salmon Management Activities: NOAA requests an increase of \$16,876,000 and 0 FTEs to implement Annex IV of the Pacific Salmon Treaty. This increase includes \$376,000 to support existing program requirements not provided for in the Omnibus Appropriations Act of 2009. The funds will support the commitments of Alaska and Washington to fulfill the agreements to conserve the shared Chinook salmon stocks between the United States and Canada. An increase of \$7.5 million will support projects to assist in recovery of critical Puget Sound salmon stocks listed under the ESA. Projects supported by these funds will augment the benefits from harvest reductions provided in the new agreement. Additional funding of \$7.5 million in FY 2010 will go towards mitigating the economic consequences of Alaska's reduction of allowable annual Chinook harvests in Southeast Alaska. This request also includes \$1.5 million for a coded wire tagging program with Canada to improve salmon data collection and fishery monitoring in the United States.

Regional Councils and Fisheries Commissions: NOAA requests an increase of \$4,000,000 and 0 FTEs to provide the eight Regional Fishery Management Councils with the additional resources necessary to set, evaluate, and revise annual catch limits (ACLs) and accountability measures (AMs) to end overfishing as required under the MSRA. The Regional Councils are critical NMFS' partners for successful fisheries management, yet they face funding shortfalls for their increased responsibilities under MSRA. The regional councils will use the funds to evaluate fishery management plans to determine appropriate ACLs and AMs and develop measures to implement ACLs and AMs. The regional councils will also use the funds for the annual process of reviewing the best available scientific information and setting the appropriate ACLs for stocks in every fishery. The views and experiences of the Regional Council membership, which includes commercial and recreational industry, federal agencies, the conservation community, and State fishery managers, are required for sound decision making during revisions to the fishery management plans required under the Magnuson-Stevens Act. Incorporating fisheries data analysis and stakeholder input for evaluation and revision of the fishery management plans is necessary to meet legislated requirements to end and prevent overfishing, ensure long-term sustainability of commercial and recreational harvests, and maximize the economic and social benefits of U.S. fisheries.



Fisheries Statistics: NOAA requests an increase of \$4,771,000 and 0 FTEs to address MSRA requirements for enhanced monitoring of recreational and commercial fisheries. Funds will be used to continue development of a state–federal national registry program for marine recreational fishing participants, expand commercial fisheries biological sampling programs, and expand electronic reporting of commercial fisheries landings. This request will support state efforts needed to expand the federal registry into a state–federal National Registry of recreational fishing participants for both federal and state waters. Funding will help states to (1) collect more complete and reliable phone contact information for current license holders, (2) register fishing participants currently excluded from licensing, and (3) provide more timely delivery of up-to-date participant contact information to the National Registry. This increase will also support expansion of commercial fisheries biological sampling and electronic reporting programs. With this request, NMFS will upgrade the quality and timeliness of the fisheries statistics used in fish stock assessments and fishery management decisions by expanding efforts to: develop and maintain more complete, up-to-date registries of anglers and for-hire fishing vessel operators in all states; collect more samples of commercially caught fish for size measurements and age determination; and report commercial fisheries landings in a more timely manner. These activities are important components of our overall FY2010 MSRA funding request.

Survey and Monitoring Projects: NOAA requests an increase of \$6,251,000 and 0 FTEs to increase NOAA's ability to administer survey and monitoring projects. This increase will support fishery-independent surveys, fishery monitoring, and research in the Pacific Ocean, Alaskan waters, the Gulf of Mexico, and the Northwest Atlantic. This increase will enable NOAA and partners to generate scientific data needed to improve the scientific basis for managing fisheries toward optimum yield and to determine annual catch limits (ACLs) in accordance with the MSRA.

Fisheries Oceanography/Integrated Ecosystem Assessments: NOAA requests an increase of \$1,000,000 and 3 FTEs to support the creation of integrated ecosystem assessments (IEAs) for the nation. IEAs provide the science for NOAA's ocean and coastal zone management and legislative mandates by integrating ecological, climatic and economic data into forecast models, assessments and decision support tools. NOAA's stakeholders are demanding improved stock assessments and finer-scale spatial and temporal information because of new MSRA requirements. With this increase, NOAA will integrate ocean biological (e.g. plankton, fish, marine mammals), physical (e.g. currents, climate), chemical (e.g. pollution, nutrients), and human (e.g., fishing pressure, coastal development) data into ecological assessments that managers and the public can use for managing coastal and ocean ecosystems in the California Current. Additionally, NOAA will assemble, catalog, and make data accessible in anticipation of future IEA development in the Northeast Shelf and Gulf of Mexico regions.

ENFORCEMENT AND OBSERVERS/TRAINING

\$103,132,000

NOAA requests an increase of \$12,600,000 and 41 FTEs in the Enforcement and Observers/ Training sub activity, for a total of \$103,132,000 and 296 FTEs. This increase is comprised of two initiatives:



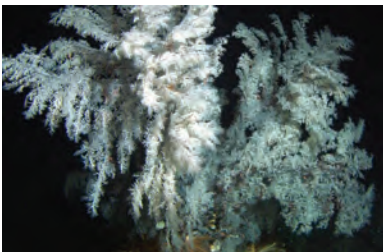
Enforcement: NOAA requests an increase of \$7,600,000 and 22 FTEs to satisfy the enforcement requirements of the MSRA. MSRA mandates that NOAA end overfishing and impose annual catch limits on fisheries experiencing overfishing by 2010 and on all managed fisheries by 2011. To achieve this new requirement, NOAA will use these funds to enhance enforcement capacity to gain and maintain compliance with these additional management measures. Of this request, \$3,200,000 and 10 FTEs will be used to implement limited access privilege programs (LAPPs) and the use of a sector management approach. \$1,000,000 will go to the Cooperative Enforcement with States program to be distributed to State and Territorial enforcement partners based on a NOAA assessment of stressed fish stocks. \$900,000 and 1 FTE will be provided to the Vessel Monitoring program to allow expansion of the program and the ability of the infrastructure to support communication and data processing requirements, and \$900,000 for enforcement and surveillance to distribute 4 enforcement officers throughout the nation. In addition, \$1,600,000 and 7 FTEs will be used to build upon the program initiated in the FY 2009 President's Budget to create a focused analytical and investigative capacity within the Office for Law Enforcement (OLE) to combat illegal, unregulated and unreported (IUU). This request is an important component of our overall FY 2010 MSRA funding request.

Observers & Training: NOAA requests a net increase of \$5,000,000 and 19 FTEs for the National Fisheries Observer Program to improving observer coverage in an increasing number of fisheries with insufficient bycatch data. Funding will specifically be targeted to meet the requirements of the MSRA for implementation of annual catch limits in six regional fisheries. Comprehensive catch and bycatch information is an essential component of all stock assessments and is necessary for the development of effective fisheries and protected resource management strategies. This funding will allow the National Observer Program to supplement observer coverage in three currently observed fisheries and to implement three new observer programs. The Observer Program will also evaluate and incorporate cost-effective monitoring of catch and bycatch. This request is an important component of our overall FY 2010 MSRA funding request.

HABITAT CONSERVATION AND RESTORATION

\$44,023,000

NOAA requests an increase of \$1,000,000 and 1 FTE in the Habitat Conservation and Restoration sub activity, for a total of \$44,023,000 and 235 FTEs. This increase is comprised of one initiative:



Christmas Tree Coral

Sustainable Habitat Management: NOAA requests an increase of \$1,000,000 and 1 FTE to support priority activities of the MSRA-mandated *Deep Sea Coral Research and Technology Program*. This is an important component of our overall FY 2010 MSRA funding request. Recent research has revealed that coral and sponge habitats with very high biological diversity exist in deep ocean areas of many U.S. marine ecosystems. These areas are vulnerable to damage from bottom-tending fishing gears, energy exploration and production, deployment of cables and pipelines, and other human activities. Recovery from damage may take decades to centuries as most deep sea corals grow slowly. The President's *Ocean Action Plan* and the U.S. Commission on Ocean Policy calls for enhanced research on, and surveying and protection of, deep sea coral communities. Funding will allow NOAA to identify, understand, and provide information needed to protect deep sea coral habitats, implementing the priority mandates of the *Deep Sea Coral Research and Technology Program*. Activities will include (1) targeted new field research and habitat



characterization activities; (2) development of databases and analyses, management and reporting of existing information;(3) development of management-driven research products; (4) training and workshops with observers, fishermen and the scientific community; and (5) the development and implementation of management actions through prescribed processes such as the Fisheries Management Councils and the system of National Marine Sanctuaries.

OTHER ACTIVITIES SUPPORTING FISHERIES

\$78,482,000

NOAA requests an increase of \$10,700,000 and 3 FTEs in the Other Activities Supporting Fisheries sub activity, for a total of \$78,482,000 and 8 FTEs. This increase is comprised of three initiatives:

Aquaculture: NOAA requests an increase of \$2,000,000 and 1 FTE to increase NOAA's aquaculture research capacity at the Northeast Fisheries Science Center's lab in Milford, CT and the Northwest Fisheries Science Center's research station in Manchester, WA.

NMFS will add staff and funding in these two science centers to bolster existing expertise and capacity in commercial marine aquaculture and marine stock enhancement research. The United States cannot meet current seafood demand with its existing seafood supply. With U.S. seafood demand expected to grow by over 2 million metric tons by 2025, the United States must either increase its reliance on imported seafood or increase its domestic seafood production through aquaculture. Increasing domestic marine aquaculture is preferred as it would improve food security, provide domestic jobs, and ensure aquaculture operations operate in a sustainable manner. This increase will allow NOAA's aquaculture research enterprise to effectively assess marine aquaculture permit applications; evaluate environmental impacts of coastal aquaculture; and maintain four new broodstocks for species that show promise for stock enhancement or commercial aquaculture.



Aquaculture in Maine: Salmon Pen Inspection

Climate Regimes and Ecosystem Productivity: NOAA requests an increase of \$2,700,000 and 2 FTEs in the Climate Regimes and Ecosystem Productivity line item. This increase is comprised of the following two sub-initiatives:

- » **Climate Change Research & Management: NOAA requests an increase of \$1,200,000 and 2 FTEs to support climate change research and management activities by increasing the number of research vessel charter days to adequately cover the expanded area of commercially fished stocks in the Bering Sea.** Bering Sea commercial fisheries account for more than 40 percent of the total U.S. catch, and average summer water temperature there is now 2° to 3°C higher than during the 1990s. Some commercially important species have shifted to areas outside of NOAA's current surveys in the Bering Sea and thus are incompletely monitored. Increased funding will enable NOAA to increase the amount of charter days by 20 additional days. NOAA will assess how changes in the distribution of seasonal sea ice are affecting the distributions of economically important fish and shellfish and ice-dependent marine mammals. This research will enable scientists to distinguish between changes due to commercial fisheries and those due to natural causes. With this information, NOAA's scientific advice to the North Pacific Fisheries Management Council will allow for the continued sustainable management of com-



mercially important fish, shellfish and marine mammal species as climate change influences the productivity of the Bering Sea. Without improved stock assessment capability and reduced uncertainty in stock levels, Bering Sea fish harvests will be reduced, causing a substantial economic impact (e.g., a 10% reduction in pollock harvest would result in an \$80 million loss to the U.S. economy).

- » **Effects of Ocean Acidification: NOAA requests an increase of \$1,500,000 and 0 FTEs to assess the effects of ocean acidification on commercial and recreational marine fish stocks and other living marine resources.** NMFS will begin implementing an integrated Ocean Acidification (OA) initiative to provide understanding, monitoring, and forecasting on how OA is currently and will continue to affect the Nation's ecosystems and associated living marine resources. This request will provide support for intensive field and laboratory research into the physiological response of the nation's living marine resources to OA. This effort will provide critical knowledge to help quantify the impacts OA will have on marine ecosystems and associated living resources. NOAA will conduct a coordinated effort to conduct biological surveys to provide the observations necessary to assess the biological response to increasing acidity of the oceans. The data collected will also be used in integrated ecosystem assessment models to better forecast the biological and socioeconomic impact of OA now and in the future.

Cooperative Research: NOAA requests an increase of \$6,000,000 and 0 FTEs to expand cooperative research and management program. Cooperative research provides a means for commercial and recreational fishermen to become involved in the collection of fundamental fisheries information. This involvement provides a means for stakeholders and fishermen to trust NOAA science and leads to well-informed fishing communities that are more supportive of management actions. NMFS will provide funds on a competitive basis to address needs identified by the Councils in consultation with the Secretary and fisheries managers. This request is a crucial part of the agency's response to recommendations made in the March 2009 OIG report calling for more targeted cooperative research with the Northeast groundfish industry.

The Reauthorized Magnuson-Stevens Fishery Conservation and Magnuson Act (MSRA)

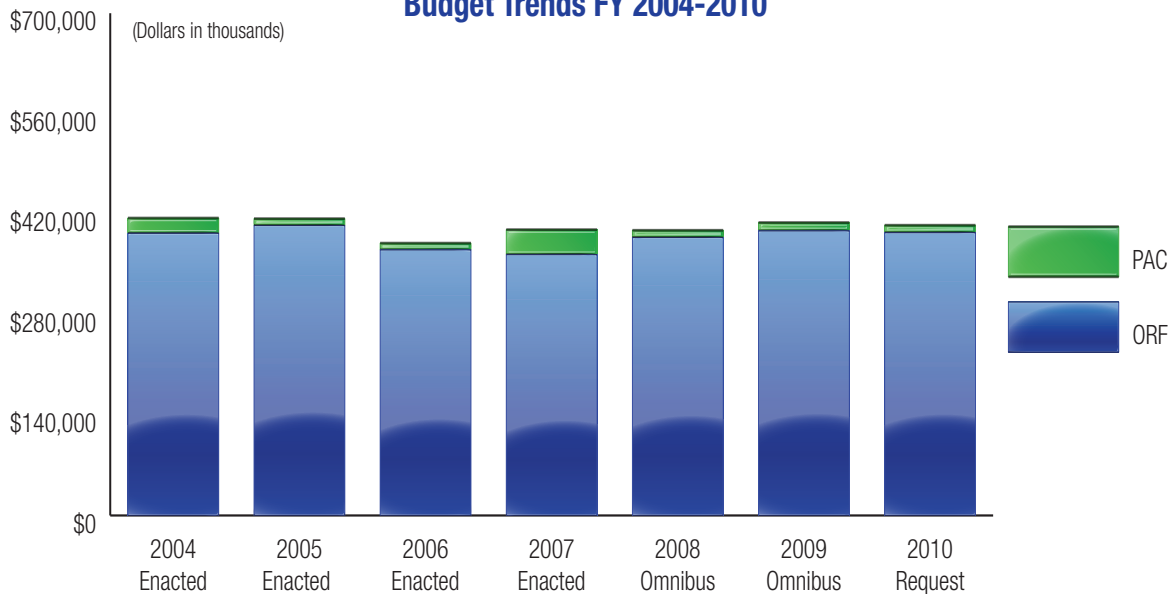
NOAA requests an increase of \$56,542,000 and 0 FTEs for a total of \$98,342,000 for activities supporting the mandates of the reauthorized Magnuson-Stevens Fishery Conservation and Management Act (MSRA) of 2006. The new requirements under MSRA to end overfishing in federal waters include improving fisheries management and data collection procedures, employing market-based approaches to management, addressing issues in management of International fisheries, and expanding the use of ecosystem-based approaches to management. The major components of this initiative are: (1.) Fisheries Research and Management Programs: Annual Catch Limits (ACLs) and Accountability Measures; (2.) Fisheries Statistics: Recreational and Commercial Fisheries Information; (3.) Fisheries Research and Management Programs: Illegal, Unregulated, and Unreported (IUU) Fishing; (4.) Expand Annual Stock Assessments; (6.) Enforcement: ACLs and IUU Fishing; (7.) Sustainable Habitat Management: Deep Sea Coral Research and Technology Program; (8.) Cooperative Research; (9.) Economics and Social Science Research.



OFFICE OF OCEANIC & ATMOSPHERIC RESEARCH

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
OAR — ORF				
Climate Research	\$192,812	\$196,536	\$209,840	\$13,304
Weather and Air Quality Research	52,070	63,411	63,922	511
Ocean, Coastal, and Great Lakes Research	130,401	122,759	107,362	(15,397)
Information Technology, R&D & Science Education	12,659	14,028	13,081	(947)
Total, OAR - ORF	387,942	396,734	394,205	(2,529)
Total, OAR - PAC	10,131	11,579	10,379	(1,200)
Total, OAR - Other	0	0	0	0
GRAND TOTAL OAR (Direct Obligations)	\$398,073	\$408,313	\$404,584	(3,729)
Total FTE	625	735	744	9

OFFICE OF OCEANIC & ATMOSPHERIC RESEARCH Budget Trends FY 2004-2010



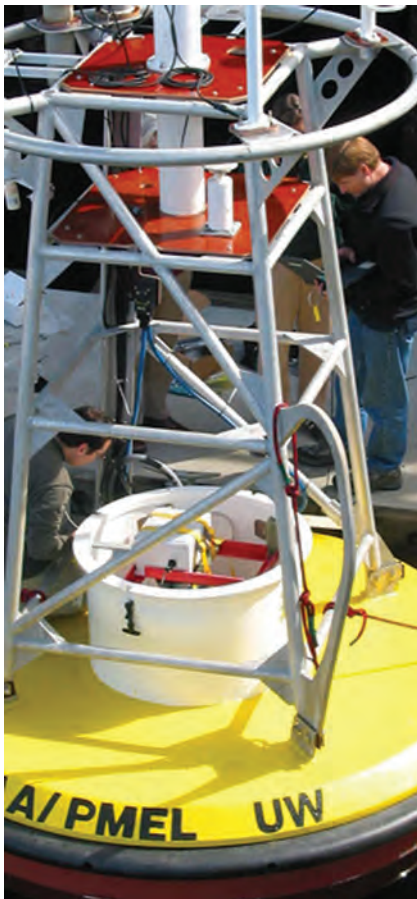
ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction



OFFICE OF OCEANIC & ATMOSPHERIC RESEARCH

The primary focus for research and development within NOAA is the Office of Oceanic and Atmospheric Research (OAR), often referred to as NOAA Research. OAR conducts the scientific research, environmental studies, and technology development needed to improve NOAA's operations and broaden our understanding of the Earth's atmospheric and marine environmental systems. OAR currently consists of 7 internal research laboratories and manages or facilitates extramural research at 32 National Sea Grant colleges, universities, and research programs; several undersea research centers; a research grants program through the Climate Program Office; and 13 cooperative institutes with academia.



Acidification Measuring Buoy

OAR's activities are organized along four themes: (1) Climate Research; (2) Weather and Air Quality Research; (3) Ocean, Coastal and Great Lakes Research; and (4) Information Technology R&D and Science Education. The goals of these four theme areas are to: (1) understand complex climate systems to improve predictions, (2) Understand atmospheric events to assist in saving lives and property worldwide, (3) Explore, investigate, and understand the complexities of all our coastal, Great Lakes, and ocean habitats and resources and (4) Accelerate adoption of advanced computing, communications, and information technology throughout NOAA and support science education, expanding the pipeline of potential future environmental scientists and researchers for industry, academia, and government. The research is carried out through a national work of more than fifty Federal laboratories and university-based research programs. With this diverse research "tool kit," OAR: provides national and international leadership on critical environmental issues and addresses the environmental R&D needs of internal NOAA customers, states, industry, the Department of Commerce, and other Federal agencies. OAR researchers represent the cutting edge in sustained, long-term environmental observations and modeling; their contributions enhance the health and economic well-being of society.

OAR's FY 2010 request seeks funding to: (1) sustain critical research activities in support of NOAA climate, weather, and ocean missions, (2) initiate new activities that address currently unmet gaps in the NOAA service missions, and (3) meet the information needs of our Nation's environmental decision-makers. The request also responds to recent considerations regarding: (1) Hurricane Forecast Improvement Project, (2) strengthened collaboration



between OAR & NWS, (3) support for “warn on forecast” / improved lead time / new tools, e.g., MPAR (Multi-Function Phased-Array Radar) and (4) preparation for a National Climate Service.

FY 2010 BUDGET SUMMARY

NOAA requests a total of \$394,205,000 and 744 FTEs to support the continued and enhanced operations of OAR. The total includes \$3,109,000 and 0 FTEs for Adjustments to Base (ATB) and a net program change increase of \$22,021,000 and 9 FTEs.

ADJUSTMENTS TO BASE

The above ATB request includes an increase of \$3,109,000 and 0 FTEs to fund the estimated FY 2010 Federal pay raise of 2.0 percent and annualize the FY 2009 pay raise of 3.9 percent. Program totals will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.

OAR – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2010:

Program changes are summarized at the sub-activity level below. Detailed numeric breakouts are located in Chapter 5, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2010 Technical Budget.

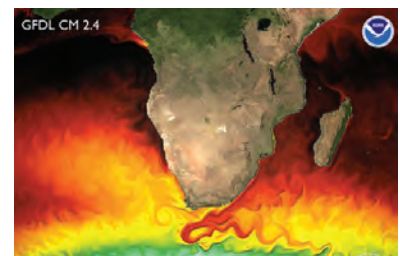
CLIMATE RESEARCH

\$209,840,000

NOAA requests an increase of \$15,578,000 and 5 FTEs in the Climate Research sub activity for a total of \$209,840,000 and 359 FTEs.

Climate Data and Information: NOAA requests an increase of \$3,751,000 and 0 FTEs. This increase is comprised of two program initiatives:

National Climate Model Portal: NOAA requests an increase of \$2,451,000 and 0 FTEs for the development of a National Climate Model Portal (NCMP) to generate and house model based data records and implement an operational archive and access capability for the next generation, high-resolution weather and climate reanalysis datasets. Decision makers are increasingly seeking information that will help their communities plan and respond to climate variability and change. This interoperable portal will provide an operational archive and user access capability for the next generation of climate reanalysis products utilizing major advancements in model physics and coupling across the ocean, air and land interfaces. Reanalysis output and products will improve our understanding of various climate phenomena, including verification, detection, and determination of drought severity and location; verification and improvements to forecasts of El Niño occurrence and persistence; and verification and improvements to our understanding of the hydrologic cycle and water resources. The NCMP will leverage existing supercomputer resources to provide a unified and consistent suite of climate information to users at all levels so that they can make better decisions about their specific management needs. Information will be provided on time scales from days (weather), to months (El Niño), to years and decades (climate variability and change).



Climate Model: Sea Surface Temperature



Climate Reference Network: Baker, NV

U.S. Climate Reference work (USCRN): NOAA requests an increase of \$1,300,000 and 0 FTEs to deploy U.S. Climate Reference work (USCRN) benchmark observing stations at 29 locations in Alaska, which will complete the network, to better document, monitor, and assess climate variability and change.

Climate change impacts in Alaska, including accelerated melting of Alaskan coastal frozen sea cliffs (permafrost) and erosion, inland permafrost melting, soil fluctuation and thermokarst heaving are estimated to cost between \$3.6 billion and \$6.1 billion in additional infrastructure costs between now and 2030 as a result of damage to Alaskan roads, highways, buildings, airports, pipelines, and harbor facilities. USCRN in Alaska will provide high quality observations to improve our understanding of climate variability and change in Alaska, a region observed to be impacted by climate change early and to a greater degree than other regional locations, and where it is projected to have the largest changes in climate over the next 25-50 years. The requested funding will be used to purchase hardware and install over a five-year period 29 USCRN observing stations across the state of Alaska. The USCRN sites will increase the value and utility of other more spatially comprehensive observing works, including satellites, *in-situ*, and remote based observing systems, and it will enhance the ability of policy makers and resource managers to make informed regional, national and global policy decisions.

Competitive Research Program: NOAA requests an increase of \$11,831,000 and 5 FTEs. This increase is comprised of three program initiatives:

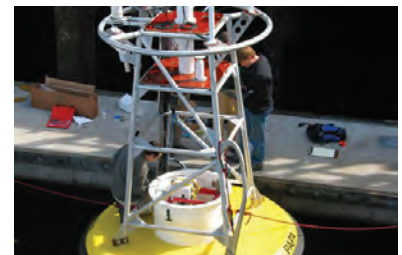
National Integrated Drought Information System (NIDIS): NOAA requests a net increase of \$4,550,000 and 1 FTE to: 1) implement three early warning system development projects; and 2) develop and implement the next generation Climate Forecast System, which will lead to improved NOAA climate forecast products.

The U.S. is currently experiencing drought: the Southwest has experienced ongoing drought since 1999; the Great Lakes are experiencing declining water levels; and in the last year, the U.S. had the most severe drought in a century in the Southeastern U.S. The Federal Emergency Management Agency estimates the annual direct losses to the U.S. due to drought are \$6-8 billion, the highest average annual cost of any natural disaster. Stakeholders impacted by drought have repeatedly communicated that drought products currently available, including forecasts, have limited utility for their decision making. NIDIS will address this need through the development of early warning system pilot projects in different water, energy, agricultural, ecosystem management and drought conditions at different geographical resolutions. The three early warning system pilot project areas are: the Colorado River Basin (\$1.0M), the Southeastern U.S. (\$825K), and California (\$725K). These diverse pilot areas will provide a foundation for the NIDIS Drought Early Warning Information System capable of providing accurate, timely, and integrated information on drought conditions at the relevant spatial scale. The pilots will focus on information needs for impact mitigation and improving predictive capabilities for early warning. In addition, NOAA will improve its climate forecasts (\$2,000K) related to drought and increase the scope and applicability of those forecasts for the drought user community. Both the early warning system pilot projects and improved forecasts are keys to developing drought related triggers for informing management and stakeholders and will lead to the development of the first NIDIS drought early warning information systems, a direct implementation requirement of the NIDIS Act of 2006.



Decadal Climate Predictions: NOAA requests an increase of \$2,600,000 and 4 FTEs to develop the capability to make ongoing decadal climate predictions including sea-level projections, Arctic forecasts, and early warnings of climate ‘surprises’ resulting from natural climate variations on decadal timescales. There is an urgent need to be able to provide predictions and projections that answer questions such as: Will the enhanced hurricane activity in the Atlantic continue over the next decade? Will drought conditions in the U.S. southwest continue? Will observed changes in the Arctic accelerate or moderate over the next decade? What is the potential for rapid changes in land-based ice sheets and further acceleration in the rate of sea level rise? NOAA needs to develop climate prediction systems that use the observed state of the climate system to make predictions of how the system will evolve over the next decade. To do this, NOAA will develop: 1) a new data assimilation system to provide initial conditions for climate model; 2) enhanced models including, a coupled climate model with a high-resolution ocean component; and 3) a program to support modeling glaciers and high-resolution climate/carbon/ice/ snow models. This suite of activities will allow NOAA to conduct and evaluate prototype decadal-scale predictions of the climate system and provide a prototype warning system for abrupt climate change events.

Ocean Acidification Monitoring: NOAA requests an increase of \$4,000,000 and 0 FTEs to implement long-term monitoring of ocean acidification for assessing climate change impacts on living marine resources. Magnuson-Stevens Reauthorization Act of 2006 requires that climate impacts be considered in living marine resource management decisions. NOAA has made it a high priority to understand climate-ecosystem interactions, particularly ocean acidification impacts on biological productivity and distribution. A sustained monitoring capability is required to underpin these efforts. NOAA will expand the in situ observations of sea surface carbonate chemistry not only in the Pacific, but also in the Atlantic basin, which is currently under sampled. NOAA will equip 13 open-ocean and 7 coastal moorings with additional sensors to monitor the changes in the pH of the global ocean resulting from the uptake of anthropogenic emissions, in particular CO₂. This component of the Global Ocean Observing System will result in an improved ability to quantify and predict changes in coastal and global ocean dissolved CO₂ and pH, and to predict the future ecological, climate and socio-economic consequences of ocean acidification.



Ocean Acidification Buoy

WEATHER & AIR QUALITY RESEARCH

\$63,922,000

NOAA requests an increase of \$5,592,000 and 4 FTEs in the Weather and Air Quality Research sub activity for a total of \$63,922,000 and 209 FTEs.

Laboratories and Cooperative Institutes: NOAA requests an increase of \$4,592,000 and 2 FTEs. This increase is comprised of two program initiatives:

Weather Research & Forecasting (WRF) Developmental Testbed Center (DTC): NOAA requests an increase of \$2,000,000 and 1 FTE to continue to build the Weather Research and Forecasting (WRF) Developmental Testbed Center (DTC) as the principal vehicle for leveraging the modeling capabilities for Federal, academic, and private numerical modelers. The increased funding will allow the DTC to provide advanced hurricane and numerical ensemble prediction systems to the research community



for further advancement and refinement, initially including a Hurricane version of the WRF model (HWRF), advanced data assimilation techniques, and the capability to supply a basic verification toolkit for the centrally managed computer coding and software. The funds will also cover: (1) Documentation for developed modeling and evaluation systems and components (2) Enhanced support to the user community through the development of a HWRF tutorial (including ocean and wave modeling). NOAA research laboratories and their cooperative institutes expect to conduct this work in partnership with the National Center for Atmospheric Research (sponsored by the National Science Foundation) and the Department of Defense. The DTC is located in Boulder, CO, where the operational and research communities work closely together in developing and testing the next generation numerical forecast systems.

Severe Weather Forecast Improvements: NOAA requests a net increase of \$2,592,000 and 1 FTE to perform research and development activities to enable forecast offices to issue tornado warnings with a 30-minute lead time or greater.

Research that contributes to increases in tornado and severe-weather lead time has the potential to save lives and mitigate property damage. Impacts from severe storms in the US cost hundreds of millions of dollars as well as 150 to 250 lives per year. On average, flash floods created by severe storms kill over 130 people per year, while tornadoes kill more than 50 people per year. Additionally, this increase in research funding is responsive to the National Research Council report *Completing the Forecast*, in which the National Academies of Sciences recommends new products that convey the certainty of severe weather forecasts, allowing users to take appropriate risk mitigation actions. Today's National Weather Service (NWS) tornado warning lead times are typically 10 to 15 minutes and are based principally on radar observations. The ability to provide tornado warnings and other severe thunderstorm hazardous weather based on forecast models (in addition to observations) is referred to as "Warn on Forecast" (WoF). While the focus is on tornado-warning lead-time services, this increase in funding will also lead to improved forecasts of hail, straight-line winds, and heavy rain (flash floods). The WoF effort has three integrated components: First, to improve the understanding of the small-scale (microphysical) processes occurring within thunderstorms; second, to improve existing high-resolution forecast models; and lastly, to take advantage of incremental improvements that will be useful in NWS forecast operations by testing them first in the NOAA Hazardous Weather Testbed (HWT).

Weather & Air Quality Research Programs: NOAA requests an increase of \$1,000,000 and 2 FTEs. This increase is comprised of a single program initiative:



Multi-Function Phased Array Radar (MPAR) Schematic

Tornado Severe Storm Research/Multi-Function Phased Array Radar (MPAR): NOAA requests an increase of \$1,000,000 and 2 FTEs to continue research to demonstrate that MPAR technology can cost effectively replace aging operational weather and aircraft tracking radars.

This risk-management work will focus on assessing the radar's ability to meet agency requirements and improve services, reducing technical and program uncertainties, and developing information for future analyses of alternatives. Through the efforts of the Office of the Federal Coordinator for Meteorology (OFCM) Working Group for MPAR and in collaboration with the Federal Aviation Administration (FAA), NOAA's National Severe Storms Laboratory and the FAA, along with university and industrial partners, are adapting a Phased Array Radar (PAR) system for weather observation and aircraft surveillance. This increase will support the risk-reduction activity needed to provide



decision makers with the appropriate information needed for a multi-agency decision on a gross purchase of these radars. By 2020-2025, more than 350 FAA radars and nearly 150 weather radars will need to be either replaced or have their service life extended. If MPAR is successful and implemented as replacement radar, estimated multi-agency savings total \$4.8 billion in acquisition costs (\$1.8 billion if replacing all existing radars with similar technology) and life-cycle costs (\$3.0 billion due to fewer radars) over 30 years.

OCEAN, COASTAL, & GREAT LAKES RESEARCH

\$107,362,000

NOAA requests an increase of \$851,000 and 0 FTEs in the Ocean, Coastal, and Great Lakes Research sub activity for a total of \$107,362,000 and 163 FTEs.

Laboratories and Cooperative Institutes: NOAA requests an increase of \$501,000 and 0 FTEs. This increase is requested as a single program initiative:

Great Lakes Environmental Research Laboratory Operations: NOAA requests an increase of \$501,000 and 0 FTEs for Great Lakes Environmental Research Laboratory Operations. This funding will expand and advance key Great Lakes forecasting research programs with identifiable operational products, and specifically to restore the Environmental Chemistry and Toxicology program and to sustain the Laboratory's Aquatic Invasive Species program and its Hydrology program. The requested funds will enable the Laboratory to support such critical research efforts in the Great Lakes and beyond as: assess toxic chemical sources and impacts, forecast harmful algal bloom occurrence and toxicity, determine how contaminated sediments move up the food chain to humans, identify causes and solutions to water-borne diseases, provide lake-level predictions, and prevent ballast-tank transport of invasive species.



Great Lakes Environmental Research Laboratory

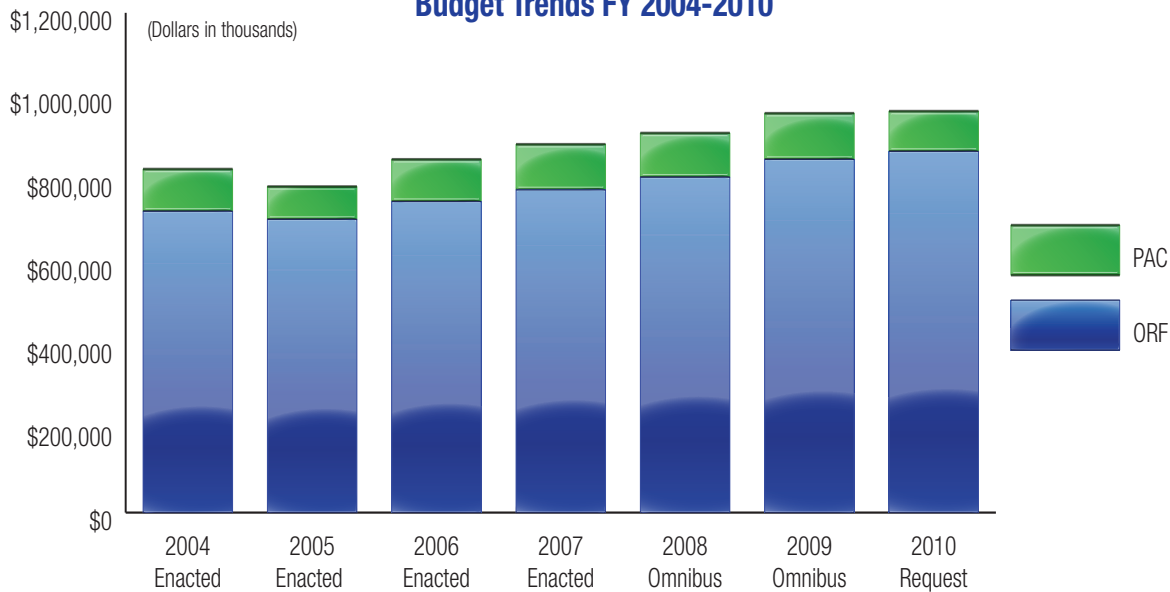




NATIONAL WEATHER SERVICE

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
NWS — ORF				
Operations and Research	\$711,252	\$749,583	\$764,914	\$15,331
Systems Operation & Maintenance (O&M)	94,042	98,355	102,308	3,953
Total, NWS - ORF	805,294	847,938	867,222	19,284
Total, NWS - PAC	106,112	110,951	96,658	(14,293)
Total, NWS - Other	0	0	0	0
GRAND TOTAL NWS (Direct Obligations)	\$911,406	\$958,889	\$963,880	\$4,991
Total FTE	4,732	4,639	4,644	4

NATIONAL WEATHER SERVICE Budget Trends FY 2004-2010



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction



NATIONAL WEATHER SERVICE

The National Weather Service (NWS) is the Nation's first line of defense against severe weather. The NWS provides 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. NWS data and products form a national information database and infrastructure that can be used by other government agencies, the private sector, the public, and the global community.



Shelf Cloud: Great Bend, KS

The United States is one of the most severe weather prone countries on Earth. Each year, Americans cope with an average of 10,000 thunderstorms, 5,000 floods, 1,000 tornadoes, as well as six hurricanes. Some 90 percent of all Presidentially-declared disasters are weather-related. There are approximately 7,900 weather-related deaths per year and \$14 billion in damage due to weather incidents. Of these 7,900 deaths per year, 7,400 are attributed to weather-related traffic fatalities. According to the American Meteorological Society, weather is directly linked to public safety, and about one-third of the U.S. economy (about \$4 trillion) is weather-sensitive. Vulnerability threat from severe weather is increasing as the Nation's population grows and shifts to coastal areas.

More and more sectors of the U.S. economy recognize the impacts of weather, water, and climate on their businesses and are becoming more sophisticated at using weather, water, and climate information to make better decisions. To meet this growing demand for information and to improve the timeliness and accuracy of warnings for all weather-related hazards, the NWS will continue to enhance observing capabilities; improve data assimilation to effectively use all the relevant data NWS and others collect; improve collaboration with the research community; make NWS information available quickly, efficiently, and in a useful form (e.g., the National Digital Forecast Database); and include information on forecast uncertainty to help customers make fully informed decisions. A key focus for the NWS is to improve decision support for high impact weather events.



With about 4,800 employees in 122 weather forecast offices, 13 river forecast centers, 9 national centers, and other support offices around the country, NWS provides a national infrastructure to gather and process data worldwide from the land, sea, and air. This infrastructure enables data collection using technologies such as Doppler weather radars; satellites operated by NOAA's National Environmental Satellite, Data, and Information Service (NESDIS); data buoys for marine observations; surface observing systems; and instruments for monitoring space weather and air quality. These data feed sophisticated environmental prediction models running on high-speed supercomputers. Our highly trained and skilled workforce uses powerful workstations to analyze all of these data to issue climate, public, aviation, marine, fire weather, air quality, space weather, river and flood forecasts and warnings around-the-clock. A high-speed communications hub allows for the efficient exchange of these data and products between NWS components, partners and customers. NWS forecasts and warnings are rapidly distributed via a diverse dissemination infrastructure including NOAA Weather Radio. Finally, customer outreach, education, and feedback are critical elements to effective public response and improvements to NWS services.

The FY 2010 President's Budget Request supports the funding and program requirements necessary to address established NOAA strategic goals and continues NWS on the path to achieve its vision to: produce and deliver forecasts that can be trusted, use cutting-edge technologies, provide services in a cost-effective manner, strive to reduce weather-related fatalities, and improve the economic value of weather, water, and climate information.

FY 2010 BUDGET SUMMARY

NOAA requests a total of \$867,222,000 and 4,613 FTEs to support the continued and enhanced operations of the National Weather Service. This total includes \$16,525,000 and 0 FTEs for Adjustments to Base (ATB), and a net program change of \$22,578,000, and 5 FTEs.

ADJUSTMENTS TO BASE:

The above ATB request includes an increase of \$16,525,000 and 0 FTEs to fund the requested FY 2010 Federal pay raise of 2.0 percent and annualize the FY 2009 pay raise of 3.9 percent. Program totals will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.

NWS – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2010:

Program changes are summarized at the sub-activity level below. Detailed numeric breakouts are located in Chapter 5, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2010 Technical Budget.

OPERATIONS AND RESEARCH

\$764,914,000

NOAA requests an increase of \$18,810,000 and 5 FTEs in the Operations and Research sub activity, for a total of \$764,914,000 and 4,425 FTEs.

Local Warnings and Forecasts: NOAA requests an increase of \$8,810,000 and 4 FTEs for local warnings and forecasts. This increase is comprised of two initiatives:



Local Warnings and Forecasts: NOAA requests an increase of \$2,700,000 and 0 FTEs to transition space weather warnings and services numerical models into Operations in order to accommodate the new critical needs of our rapidly growing customer base. Industries; other agencies including DOD, NASA, and DHS; state and local governments; and the public increasingly rely on advanced technologies to provide global business products and services and to safeguard national security. These technologies are vulnerable to the threats of space weather. Millions of precision Global Positioning System users, satellite operators, and the majority of commercial and military space and aviation activities will be vulnerable to a new round of solar storms during the upcoming solar maximum (peaking in 2012) unless NOAA develops the critical prediction and warning tools to safeguard these efforts. Current NOAA services provide forecast and nowcast information, but timeliness, accuracy, and coverage of existing products and services fall short in meeting the critical needs identified by our fast-growing and diverse customer base.

Aviation Weather: NOAA requests an increase of \$6,110,000 and 4 FTEs to expand this multi-year effort to improve services and support the multi-agency Next Generation Air Transportation System (NextGen). This requested increase will lay the foundation and accelerate the development of the NOAA-led effort to field the weather information data base (WIDB), known as the 4-dimensional weather data cube (4D Cube), as required by the NextGen Integrated Work Plan. This WIDB will integrate observed and forecast weather information into an automated, multi-agency coordinated, air traffic management system. In its May 2008 report on the cost of flight delays to passengers, the airline industry and the economy, the Congressional Joint Economic Committee quantified the total cost of air traffic delays for 2007 at \$41 billion. Roughly \$29 billion of this cost can be attributed to weather effects. Federal Aviation Administration (FAA) records indicate that on average, weather is a factor in 70% of delays. The FAA estimates that two-thirds of these delays can be avoided with enhanced weather information. These delay costs will only increase as demand for air transportation continues to grow, nearly tripling by 2025. The National Airspace System (NAS) will be saturated and unable to accommodate the increased demands by 2015. The Joint Planning and Development Office (JPDO) has developed a NextGen plan for accommodating the expected growth in demand. A critical component of the NextGen plan is a weather forecast process, with meteorologist intervention, that generates rapidly-updated, high-resolution probabilistic weather information which is consistent across space and time. This Single Authoritative Source (4-D Weather SAS) of weather information will be stored in a WIDB where it can be accessed by all NAS users. This capability does not presently exist within the federal government, and the JPDO partner agencies are depending on NOAA, as the federal weather information experts, to deliver it.

Central Forecast Guidance: NOAA requests an increase of \$10,000,000 and 1 FTE. This is comprised of one initiative:

Hurricane Forecast System Improvements: NOAA requests an increase of \$10,000,000 and 1 FTE to significantly accelerate the improvement of hurricane track and intensity forecasts. This request would carry forward the FY2009 supplemental funding to Accelerate Hurricane Forecasting System Improvements. The goal of the hurricane forecast improvement project is to improve hurricane track and intensity forecast accuracy by 20% within 5 years, provide for objective forecast probability guidance and



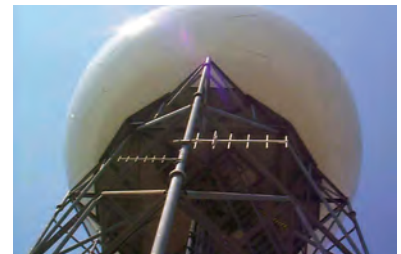
substantially improve the capability to forecast the associated storm surge. NOAA's overall strategy to improve hurricane forecasts and warnings includes increasing the research capacity and improving the observation and scientific understanding of hurricanes. NOAA will use this to accelerate the applied research and engineering development of a greatly improved higher resolution national Global Ensemble Forecast System (GEFS) and higher resolution Hurricane Forecast System (NHFS); and to transition these new and improved capabilities into operations to provide operational model track, intensity and storm surge forecast guidance to the National Hurricane Center (NHC) for their use in providing operational forecasts and warnings.

SYSTEMS, OPERATIONS & MAINTENANCE (O&M)

\$102,308,000

NOAA requests an increase of \$3,768,000 and 0 FTEs. This increase is comprised of three initiatives:

NEXRAD Operations & Maintenance: NOAA requests an increase of \$1,029,000 and 0 FTEs to operate and maintain hardware and software which generates weather products from each of the 45 FAA Terminal Doppler Weather Radars (TDWRs). The NEXRAD Product Improvement program has invested \$725,000 to develop and implement the necessary infrastructure to deliver TDWR data to Weather Forecast Offices. However, there is a recurring cost component for this capability which cannot be supported under the existing O&M budget. NWS completed deployment of the required infrastructure by the end of FY 2008 and now requires funding for FY 2009 and beyond for continued operations and maintenance. The potential value to NWS operations was highlighted in several recent reports. In March 2004, when a fast-moving thunderstorm resulted in high winds over the Baltimore Harbor, a water taxi capsized and lives were lost. The service assessment report for this event noted that TDWR radar data better depicted the change in wind speed and direction because of its location relative to the storm. Had this data been integrated into the forecasters' primary workstations, they may have been able to better warn the citizens in the inner harbor area. In addition, the DOC Inspector General determined, after review of the Rogers, MN tornado event in 2006, that the FAA TDWR radar indicated tornadic conditions sooner than the NEXRAD work, most likely due to the position and timing.



NEXRAD: Pittsburgh, PA

ASOS Operations & Maintenance: NOAA requests an increase of \$1,500,000 and 0 FTEs to establish an on-going sustaining engineering/technology refresh capability within the joint NWS/FAA ASOS O&M program. This initiative will ensure the continued operation of this critical system which supports the meteorological requirements of the NWS, FAA, and Department of Defense (DOD). The request will bring the system into compliance with Federal, DOC, NOAA, and NWS Information Technology (IT) security policies and procedures to avoid future costly wholesale replacement and preserve the \$170,000,000 investment in ASOS production and product improvement. Two critical ASOS IT subsystems require technology refresh. The Acquisition Control Unit (ACU) and Data Collection Package (DCP) subsystems were designed in the 1980s and are becoming increasingly obsolete, logistically unsupportable, and unable to support new or changing



Winnemucca, NV Airport Automated Surface Observing System (ASOS)



system and service requirements. Technology refresh of the ACU and DCP subsystems is required to ensure ASOS is able to support NWS weather forecast activities, FAA aviation operations, and the needs of the meteorological, hydrological, and climatological research communities.

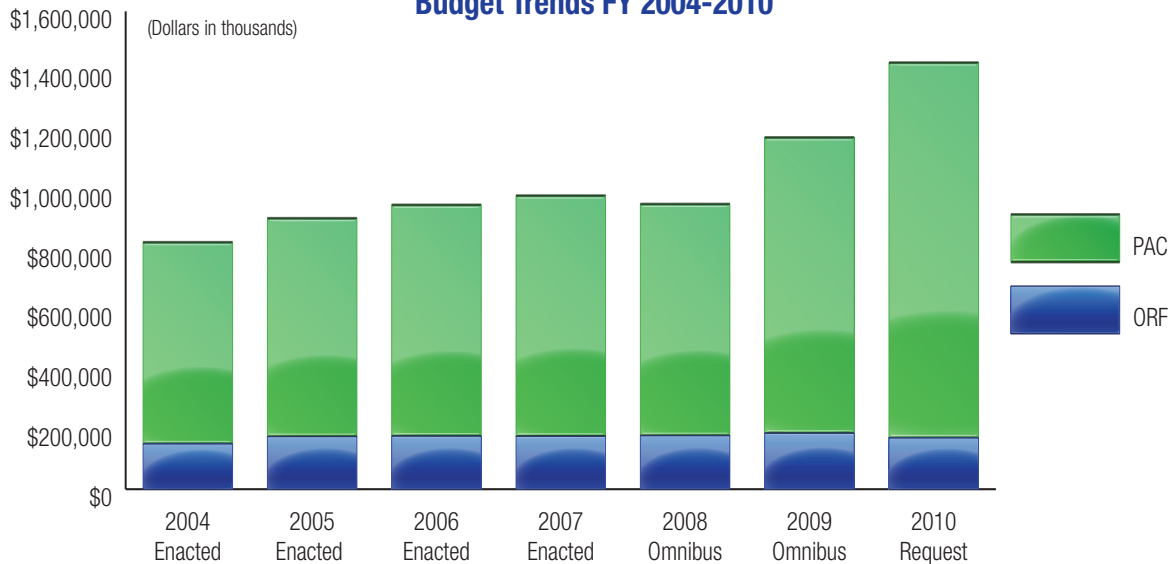
AWIPS Operations & Maintenance: NOAA requests an increase of \$1,239,000 and 0 FTEs to provide needed telecommunications backup capabilities; increase AWIPS system capacity to accommodate increased data demands imposed on the system by external programs, including the National Polar-orbiting Environmental Satellite System (NPOESS), the Geostationary Operational Environmental Satellites-Series R (GOES-R), dual-polarization radar, and numerical model enhancements; and operate and maintain critical centralized AWIPS support systems. AWIPS is vulnerable to service interruption and downtime due to its reliance on terrestrial telecommunication services. This was evident following Hurricane Katrina, where the destruction of commercial terrestrial telecommunications infrastructure along the Gulf Coast prevented NWS Weather Forecast Offices from providing forecast and warning services via AWIPS even though the offices were staffed and operating under backup power. The Post-Katrina Service Assessment Report recommended NWS supplement its terrestrial telecommunications with satellite based back-up. The AWIPS NOAAPort satellite broadcast work is the vehicle by which satellite and other observational data are transmitted to NWS field forecasters. Today, AWIPS NOAAPort does not have the necessary capacity to transmit new data sets associated with planned NOAA investments in NPOESS and GOES-R instruments, numerical weather prediction model upgrades, and higher resolution dual polarized radar data. In order to fully support NPOESS and GOES-R data, an additional SBN upgrade will be needed; the current SBN bandwidth allocated to satellite data is about 9 Mbps and NPOESS and GOES-R will produce a total of about 90 Mbps of data. The activities funded by this budget initiative will (1) provide a Wide Area work (WAN) backup capability to address the Post-Katrina Service Assessment Report recommendations, (2) initiate enhancement of the Satellite Broadcast work (SBN) to add bandwidth for NPOESS and GOES-R data, and (3) provide O&M support for several centralized subsystems that were developed and deployed using one year development funds.



NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
NESDIS — ORF				
Environmental Satellite Observing Systems	\$101,919	\$107,896	\$110,490	\$2,594
NOAA's Data Centers & Information Services	77,235	79,526	61,247	(18,279)
Total, NESDIS - ORF	179,154	187,422	171,737	(15,685)
Total, NESDIS - PAC	775,922	990,579	1,256,857	266,278
Total, NESDIS - Other	0	0	0	0
GRAND TOTAL NESDIS (Direct Obligations)	\$955,076	\$1,178,001	\$1,428,594	\$250,593
Total FTE	776	831	831	0

**NATIONAL ENVIRONMENTAL SATELLITE, DATA, & INFORMATION SERVICE
Budget Trends FY 2004-2010**



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction



NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

The NOAA National Environmental Satellite, Data, and Information Service (NESDIS) provides timely access to global environmental data from satellites and other sources to promote, protect, and enhance the Nation's economy, security, environment, and quality of life. To do so, NESDIS acquires and manages the Nation's civil operational environmental satellites, provides data and information services, and conducts related research. Additionally, NESDIS manages the NOAA environmental data collections and disseminates data and information to meet the user needs in commerce, industry, agriculture, science, and engineering, as well as federal, state, and local governments.



NOAA N Prime Before Launch

To fulfill its responsibilities, NESDIS meets the Nation's requirement of an environmental satellite system capable of providing timely and accurate environmental data. Early warnings of major weather events help save countless lives and help prevent substantial property damage. NESDIS' satellite command and control acquire data from on-orbit satellites 24 hours per day, 365 days per year. This includes monitoring the day-to-day operations at the NOAA Satellite Operations Control Center in Suitland, Maryland, and satellite command and data acquisition stations in Wallops, Virginia and Fairbanks, Alaska. From these ground stations, NOAA operates and acquires data from Polar-orbiting Operational Environmental Satellites (POES), Geostationary Operational Environmental Satellites (GOES), Department of Defense (DOD) Meteorological Satellite Program (DMSP), and Jason-2.

NESDIS provides the Nation with specialized expertise and computing systems that process, analyze, and distribute satellite-derived products and services using data from NOAA, DOD, and NASA environmental satellites, as well as foreign and commercial spacecraft. These products and services are provided to national and international users 24 hours per day, 7 days per week. This enables NOAA to accurately track the location, extent and duration of severe weather, such as hurricanes, tornadoes, and winter storms; support development of flash flood warnings; track volcanic ash clouds and severe winds that threaten aviation safety; detect remote wild land fires; monitor coastal ecosystem health; identify and monitor maritime hazards from sea ice; and assist in search and rescue activities.



As an important part of this support, NESDIS works to transition research satellite capabilities to operational products and services. NESDIS also provides the Nation with a long-term archive of past, present, and future environmental observations and associated data recorded across the United States and globally. Through its three (3) National Data Centers, environmental data, information, products, and services are provided to support atmospheric, oceanographic, and the solid earth and solar-terrestrial physical sciences and promote sustained economic growth, scientifically sound environmental management, and public safety.

NESDIS delivers critical solutions for the protection of human life, property, and critical infrastructure through its satellites, products and services. NESDIS also supports the President’s priorities in climate sciences, ocean and coastal management, integrated earth observations, energy, and forest resources protection through various product developments.

FY 2010 BUDGET SUMMARY

NOAA requests a total of \$171,737,000 and 678 FTEs to support the continued and enhanced operations of NESDIS. This total includes \$2,449,000 and 0 FTEs for Adjustments to Base (ATB), and a net program change of \$7,880,000 and 0 FTEs.

ADJUSTMENTS TO BASE:

The above ATB request includes an increase of \$2,449,000 and 0 FTEs to fund the estimated FY 2010 Federal pay raise of 2.0 percent and annualize the FY 2009 pay raise of 3.9 percent. Program totals will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.

NESDIS – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2010:

Program changes are summarized at the sub-activity level below. Detailed numeric breakouts are located in Chapter 5, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2010 Technical Budget.

ENVIRONMENTAL SATELLITE OBSERVING SYSTEMS

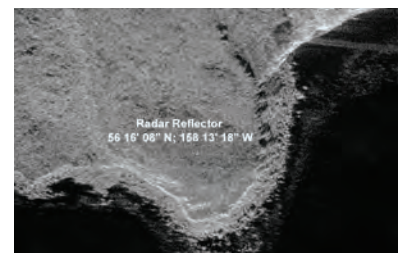
\$110,490,000

NOAA requests an increase of \$110,490,000 and 409 FTEs in the Environmental Satellite Observing Systems sub activity.

Product Processing and Distribution: NOAA requests an increase of \$880,000 and 0 FTEs. This increase is composed of one initiative:

National Ice Center (NIC) Sea Ice Data Buy: NOAA requests an increase of \$880,000 and 0 FTEs for the National Ice Center (NIC) Sea Ice Data Buy.

This increase will purchase Synthetic Aperture Radar (SAR) imagery scenes from commercial remote sensing data providers to create operational products to identify safe routes through ice covered waters. SAR data are critical to producing ice products because of its all-weather, cloud-discerning capability. Arctic and cold regions are cloud covered 75-80% of a typical winter season, especially over icy waters. SAR data provides the 100-meter resolution required for large areas which cannot be met with any other data sets. The procurement of SAR imagery will help



0.6 meter reflector in a 1 meter resolution SAR image



to mitigate the loss of free data from RADARSAT-1, which is no longer available to NOAA. The National Ice Center (NIC) operates under a Memorandum of Agreement with the U.S. Coast Guard, U.S. Navy, and NOAA. The NIC provides sea ice nowcast and forecast products to support marine transportation in northern U.S. and adjacent international ocean waters that are subject to ice cover. These products are also used by vessels to plan efficient shipments of commerce through small areas such as ports, harbors, bays, rivers and channels or specific locations where industrial or other commercial activity is ongoing. More than 3,000 ships per year pass through Alaska's Aleutian Islands while traveling between North America and Asia via the "Great Circle Route." Safe and efficient travel through such remote and environmentally sensitive areas is dependent upon National Ice Center forecasts and NOAA charts of these waters.

DATA CENTERS AND INFORMATION SERVICES

\$61,247,000

NOAA requests a total of \$61,247,000 and 269 FTEs in the Data Center and Information Services sub activity. The FY 2010 President's Budget requests funding to provide archive of, and access to, environmental observations and products.

Archive, Access, and Assessment (AAA): NOAA requests an increase of \$7,000,000 and 0 FTEs to provide archive of, and access to, environmental observations and products. This increase is comprised of one initiative:

Climate Data Records: NOAA requests an increase of \$7,000,000 and 0 FTEs to transform raw satellite data into unified and coherent long-term environmental observations and products that are critical to advance climate change understanding, prediction, mitigation and adaptation. Climate Data Records (CDRs) are distinct from operational weather/hazard satellite products since they remove or minimize time dependent biases in satellite data and provide long term "seamless" records characterizing climate change and variation (50+ years). The Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report (2007) underscores the urgent need for CDRs. Key NOAA constituents, including major private sector industries, such as insurance, energy, and transportation, have increasingly called for authoritative climate reference data upon which to base investments and strategic plans.

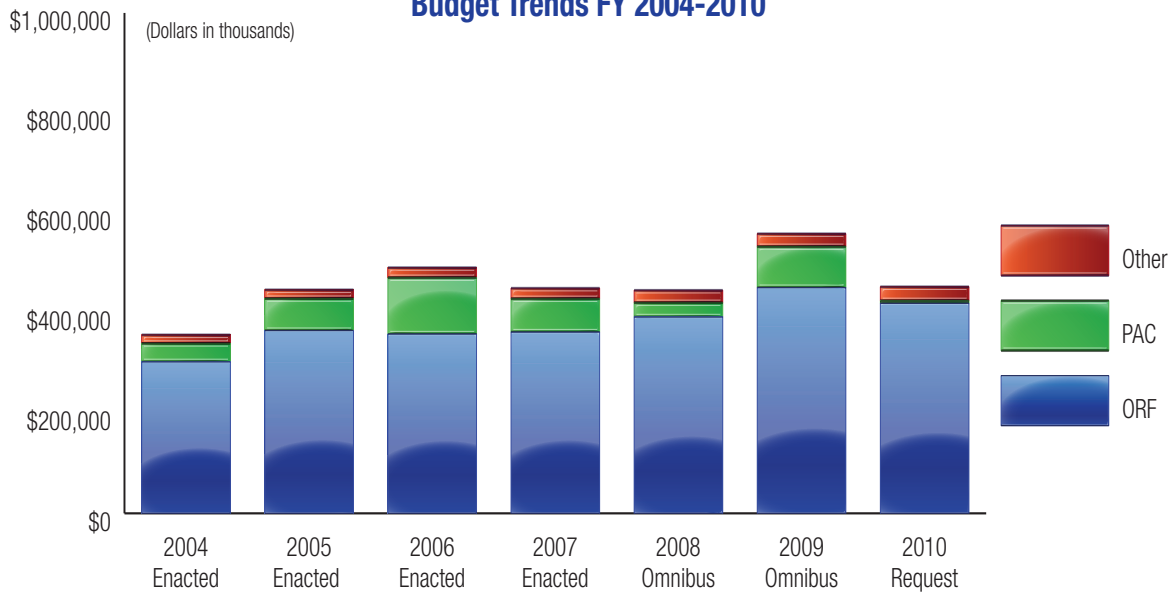
NOAA's CDR efforts are initially focused on critical CDRs that address key societal issues including: water, drought, and floods; energy and renewable energy; and hurricanes and coastal hazards. Improved knowledge in these areas translates into lives and property protected or saved, as well as economic resiliency and national security. This increase will provide Phase 1 production of Climate Data Records (CDRs) and Climate Information Records (CIRs). CDRs and CIRs provide authoritative climate reference sets, which are required by scientists to detect, assess, model and predict climate change, and by decision-makers to devise strategies to respond, adapt, and mitigate the effects of climate change.



PROGRAM SUPPORT

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
PS — ORF				
Corporate Services	\$187,983	\$205,809	\$204,493	(\$1,316)
NOAA Education Program	34,057	46,114	20,653	(25,461)
Facilities	18,501	21,000	30,346	9,346
Office of Marine & Aviation Operations	151,841	178,055	164,168	(13,887)
Total Program Support - ORF	392,382	450,978	419,660	(31,318)
Total, PS - PAC	28,422	81,750	5,000	(76,750)
Total, PS - Other	24,921	25,946	28,050	2,104
GRAND TOTAL PS (Direct Obligations)	\$445,725	\$558,674	\$452,710	(\$105,964)
Total FTE	1,858	2,019	2,053	34

PROGRAM SUPPORT Budget Trends FY 2004-2010



ORF: Operations, Research, and Facilities

PAC: Procurement, Acquisition, & Construction

Other: NOAA Corps Commissioned Officers Retirement (Mandatory) and Medicare Eligible Retiree Healthcare (Discretionary)



PROGRAM SUPPORT

Program Support consists of Corporate Services, the NOAA Education Program, Facilities, and the Office of Marine and Aviation Operations (OMAO). NOAA Program Support provides the planning, administrative, financial, and infrastructure services that are essential to the successful performance of NOAA's mission. In addition to NOAA-wide corporate services and agency management, Program Support activities specifically support the people and programs of NOAA, ensuring that they have the proper work environment, the necessary tools and equipment, and the vital personnel and finance services which, in turn, allow them to provide the finest possible service to the American people, our economy and our environment. Through OMAO, Program Support provides data collection at sea and in the air to support NOAA program requirements.



NOAA Ship Miller Freeman with Fisheries Oceanography Coordinated Investigations (FOCI) buoy

FACILITIES

The NOAA Chief Administrative Officer (CAO), through the Facilities Management and Modernization Program, provides program direction and oversight to NOAA's major construction program and has been the focal point for facility master planning, project planning formulation and development, and project management oversight to support critical NOAA mission requirements. This program supports an integrated capital investment planning process, integrated facility condition inspection program, systems and technology tools to enable maximum efficiency in project and facility management planning, and investments required to support repair and modernization of NOAA' facilities.

NOAA owns more than 400 buildings, in addition to piers and other structures, which are valued at over \$2 billion. These facilities are aging, with more than 30 facilities over 60 years old. NOAA's facilities are often subject to the extremes of weather and climate conditions, and are, therefore, more prone to unplanned repairs. This program provides funding to conduct facility condition inspections and supports investments in necessary facility repairs and modernization needed to ensure that the facilities remain safe, effective, and efficient in support of NOAA's programs. It also supports operations at NOAA's state-of-the-art laboratory building in Boulder, Colorado. This facility houses staff and programs from three NOAA line organizations (OAR, NES-



DIS, and NWS) as well as NOAA's program support units for the region, and supports NOAA's climate and weather research.

The CAO organization is responsible for managing the total project life cycle for facility construction and modernization projects, including environmental and safety projects.

OFFICE OF MARINE AND AVIATION OPERATIONS (OMAO)

Marine Operations

OMAO operates NOAA's fleet of vessels and provides ship support to NOAA programs through outsourcing, operational readiness, and maximum platform utilization in support of NOAA's at-sea data collection requirements. OMAO provides centralized management for operations, fleet planning, and maintenance support and is responsible for NOAA's fleet safety and diving programs. Other mission responsibilities include training and certifying NOAA Corps Officers, crews, and scientists for at-sea duty. OMAO also contributes funding and platform operation support to NOAA's Teacher-at-Sea program.

NOAA's vessels support nautical charting, fisheries research, marine environmental assessments, coastal-ocean circulation studies, and oceanographic and atmospheric research, and operate on both the East and West Coasts. The 20 active ships will perform approximately 3,390 operating days in FY 2010 in support of NOAA programs. The fourth of four newly constructed Fisheries Survey Vessels (FSVs), the *Bell M. Shimada*, will be operational in FY 2010 and will be homeported on the West Coast.



NOAA Ship Pisces Launch

OMAO's Marine Operations Center (MOC) has Atlantic and Pacific regional offices located in Norfolk, Virginia, and Seattle, Washington, respectively, and the vessels are assisted by a small support staff at the home port of most ships. The centers provide maintenance, stores, supplies, and repair facilities for the vessels.

The NOAA Commissioned Corps is the nation's seventh and smallest uniformed service. NOAA Corps officers support the fleet and NOAA Line Offices. The majority of the NOAA Corps payroll is funded through the Marine Services line. The officers of the NOAA Corps command NOAA's research and survey vessels, fly NOAA's "hurricane hunter" and environmental monitoring aircraft, support field operations, and serve in a variety of technical and management positions throughout the agency.

Aviation Operations

OMAO's Aircraft Operations Center (AOC), located at MacDill Air Force Base in Tampa, Florida, ensures the availability and readiness of NOAA's uniquely configured aircraft. AOC operates a fleet of 12 aircraft used as observation platforms equipped with comprehensive data-collection systems in support of missions related to the Earth's environment, coastal and marine resources, and severe weather.



NOAA Gulfstream IV (foreground) with NOAA WP-3D Orion (background)

In FY 2010, Aircraft Services will provide approximately 2,845 flight hours in support of NOAA missions. NOAA aircraft are fitted with specialized instrumentation for airborne research, airborne data collection, and observation. Two of NOAA's three WP-3D aircraft (the "Hurricane Hunters") and the G-IV high-altitude jet will be mission-ready with instruments and personnel for hurricane surveillance, reconnaissance, and research during the hurricane season from June 1 to December 1. NOAA's third P-3 has a mission that includes



air chemistry and air quality research, remote sensing, oceanographic research, and other missions not involving flights in severe weather. The G-IV will also be mission-ready with instruments and personnel to collect data for West Coast winter storm predictions from January 15 to April 1. NOAA's Jet Prop Commander and Shrikes will be mission-ready with equipment and personnel for snow radiation surveys, flood forecasts, water management, and other background surveys throughout the year in Alaska and Northern United States. The Twin Otters will continue to operate throughout the coastal Atlantic, Pacific, and Gulf of Mexico, surveying living marine resources and conducting remote sensing missions. NOAA's premier remote sensing aircraft, the King Air, will fly throughout the coastal United States responding and collecting damage assessment imagery, testing new remote sensing technologies, and performing coastal mapping missions.

NOAA CORPS RETIREMENT PAY (MANDATORY)

The retirement system for the uniformed services provides a measure of financial security after release from active duty for service members and their survivors. It is an important factor in the choice of a career in the uniformed services and is mandated by Federal statutes under Title 10, United States Code. NOAA transfers retirement pay funds to the Coast Guard, which handles the payment function for retirees and annuitants. Health care funds for non-Medicare-eligible retirees, dependents, and annuitants are transferred to the U.S. Public Health Service, which administers the health care program.

FY 2010 BUDGET SUMMARY

NOAA requests a total of \$419,660,000 and 2,048 FTEs for NOAA Program Support. This total includes \$13,802,000 for Adjustments to Base (ATB) and 11 FTEs, and a net increase of \$22,032,000 and 23 FTEs.

ADJUSTMENTS TO BASE:

The above ATB request includes a net increase of \$13,802,000 and 11 FTEs to fund the estimated FY 2010 Federal pay raise of 2.0 percent and annualize the FY 2009 pay raise of 3.9 percent. Program totals will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.

PROGRAM SUPPORT - ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2010:

Program changes are summarized at the sub-activity level below. Detailed numeric breakouts are located in Chapter 5, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2010 Technical Budget.

CORPORATE SERVICES

\$204,493,000

NOAA requests an increase of \$7,057,000 and 3 FTEs in the Corporate Services sub activity, for a total of \$204,493,000 and 1,009 FTEs. This increase is comprised of one initiative:

NOAA-Wide Corporate Services & Agency Management: NOAA requests an increase of \$1,763,000 and 3 FTEs to support compliance with Homeland Security Presidential Directive-12 (HSPD-12), Personal Identity Verification-II (PIV-II) physical and logical access requirements. HSPD-12, PIV-II requires Agencies to comply with Federal Information Processing Standards (FIPS) 201 standards for secure and reliable identity credentials supporting both physical and logical (systems) access. NOAA has chosen to use



the DoD CAC as NOAA's HSPD-12 solution. NOAA must ensure re-badging of over 16,400 employees and contractors. Implementation of the DoD CAC solution to comply with OMB requirements under HSPD-12 provides NOAA cost avoidance/savings of over \$11 million over a 6-year period compared to implementation of the General Services Administration Managed Service Option. This increase supports the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs." Specifically, this increase supports the NOAA Mission Support Goal, Improve safety and other condition indices for facilities and platforms.

NOAA Wide Corporate Services and Agency Management: NOAA requests an increase of \$4,345,000 and 0 FTEs to support acquisition and grants services for NOAA. This investment will enhance NOAA's ability to provide dedicated personnel assets to increase the capacity of the acquisition and grants workforce sufficient to ensure successful obligation of the increasing volume of contractual and financial assistance actions. Additionally, requested funding will provide dedicated personnel and funding sufficient to implement an effective procurement oversight program. These resources will afford NOAA an opportunity to establish a Policy and Oversight Division (POD). The POD will implement recommendations made by the Government Accountability Office (GAO) in their June 2006 report to Congress (GAO-06-594, NOAA Acquisition Function).

NOAA EDUCATION PROGRAM

\$20,653,000

NOAA requests an increase of \$4,000,000 and 0 FTEs in the NOAA Education Program sub activity, for a total of \$20,653,000 and 10 FTEs. This increase is comprised of one initiative:

National Competitive Educational Grant Program: NOAA requests an increase of \$4,000,000 and 0 FTEs for the NOAA Education Program to support a national competitive educational grant program. This request will enable NOAA to support a competitive national environmental literacy programs to promote excellence in informal and formal education related to ocean, coastal, Great Lakes, weather, and climate sciences. This request will allow additional 8 to 12 competitive awards to be issued per year. This grants program directly addresses the educational mandate established in the America COMPETES Act and providing support to improve America's science education enterprise, both the formal and informal components, strengthens our Nation's economy by improving America's competitiveness in the global market.



Students Replanting Eelgrass in Gulf of Mexico

FACILITIES

\$30,346,000

NOAA requests an increase of \$8,776,000 and 4 FTEs in the Facilities Management and Modernization sub activity, for a total of \$30,346,000 and 4 FTEs. This increase is comprised of two initiatives:

Facilities, Management, Construction, & Safety: NOAA requests an increase of \$4,500,000 and 0 FTEs to address critical facility deficiencies and repairs. The FY 2010 request will support addressing the most critical repair and building system deficiencies, including projects to replace failing electric, plumbing, HVAC and building systems that have outlived their useful service lives; install required fire suppression and alarm systems; and address emergency power systems requirements. As NOAA's facilities age,



their condition continues to deteriorate due to historical underfunding of necessary repairs and building system replacement. Repair of the most critical building deficiencies in NOAA's facilities enables NOAA to provide safe working conditions for NOAA's employees, ensure NOAA facilities meet current code requirements, and address continuity and sustainability of operations requirements.

Facilities, Management, Construction, & Safety: NOAA requests an increase of \$1,000,000 and 4 FTEs for to comply with legal requirements associated with execution of real property leases. The FY 2010 request supports NOAA's compliance with GSA lease requirements through increasing both Federal and contract support to manage the increasing lease backlog. NOAA has been delegated from GSA responsibility for over 2,200 leases, supporting a diverse spectrum of activities, ranging from office and laboratory space, to space for NOAA tide gauges and weather forecast sensors on towers. NOAA faces an increasing lease workload: a growing holdover lease backlog (300+ expired leases that must be renegotiated to ensure the Government is getting the best value), and expiration of an additional 1,100 leases between FY 2010 and 2014). Failure to effectively staff this increasing workload will pose both a significant legal and financial risk, as well as increasing the potential for adverse financial audit findings.

OMAO
\$164,168,000

Marine Operations and Maintenance

NOAA requests an increase of \$2,199,000 and 16 FTEs in the Marine Operations and Maintenance sub activity, for a total of \$164,168,000 and 1,025 FTEs. This increase is comprised of one initiative:



111th NOAA Corps Basic Officer Training Class

NOAA Commissioned Corps: NOAA requests an increase of \$2,199,000 and 16 FTEs to increase the number of officers in the NOAA Commissioned Corps. The request will support an end-strength of 321 NOAA Corps officers, and the funding request includes salaries, benefits, healthcare, pre-commissioning, permanent change of station (PCS), recruiting, and a third Basic Officer Training Course (BOTC) for the additional officers. Properly staffed platforms provide increased data collection and increased data quality, which is crucial to NOAA's missions. An expanded NOAA Corps will lower officer attrition rates by avoiding particularly long and arduous at-sea assignments. NOAA Corps officers serve at sea for longer rotations than officers in other maritime services, spending an average of 222 days per year at sea compared to the U.S. Coast Guard's 185 days and the U.S. Navy's 180 days. This puts NOAA at a disadvantage in recruitment and retention of officers. Additional officers also provide a response capability in times of natural disasters or other emergency situations.





CHAPTER 3 | NOAA PROCUREMENT, ACQUISITION, & CONSTRUCTION



At Space Launch Complex 2 at Vandenberg Air Force Base in California, the NOAA-N Prime spacecraft is set up for testing. NOAA-N Prime is the latest polar-orbiting operational environmental weather satellite.

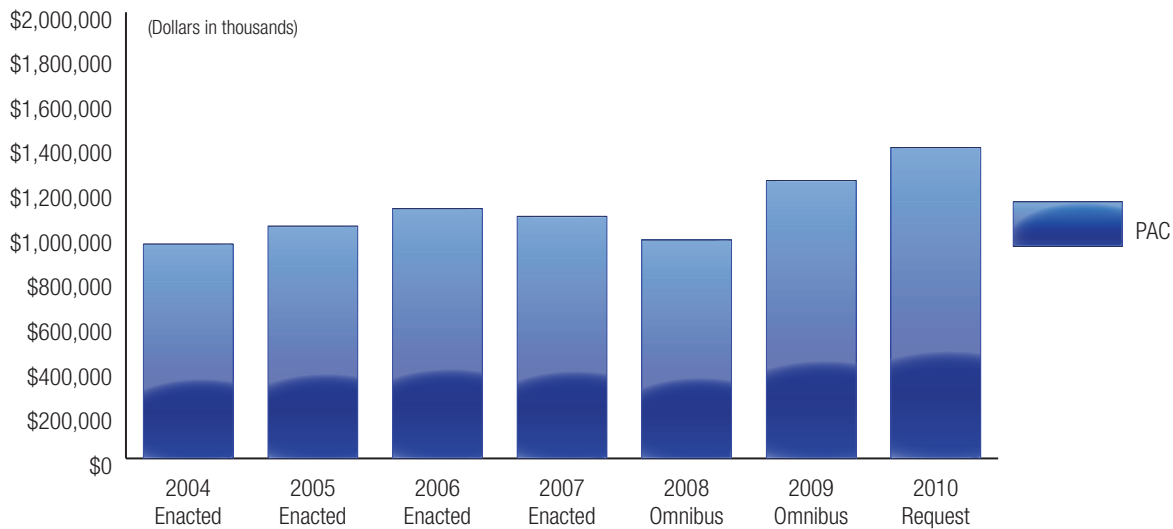
Credit: Daniel Liberotti, VAFB



PROCUREMENT, ACQUISITION, AND CONSTRUCTION (PAC)

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY09 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
National Ocean Service	56,599	46,188	24,385	(21,803)
National Marine Fisheries Service	2,021	4,600	0	(4,600)
Ocean and Atmospheric Research	10,131	11,579	10,379	(1,200)
National Weather Service	106,112	110,951	96,658	(14,293)
National Environmental Satellite, Data and Information Service	775,922	990,579	1,256,857	266,278
Program Support	28,422	81,750	5,000	(76,750)
GRAND TOTAL PAC	979,207	1,245,647	1,393,279	147,632
Total FTE	235	190	190	0
Systems Acquisition	859,308	1,109,277	1,373,162	263,885
Construction	114,640	124,870	15,117	(109,753)
Fleet Replacement	5,259	11,500	5,000	(6,500)
TOTAL	979,207	1,245,647	1,393,279	147,632

Budget Trends FY 2004-2010



PAC: Procurement, Acquisition, & Construction



PROCUREMENT, ACQUISITION, AND CONSTRUCTION (PAC)

NOAA's Procurement, Acquisition, and Construction (PAC) account captures the cost of acquiring and improving capital assets, which are mission-critical to all agency programs and contribute significantly to achieving each of NOAA's Strategic Goals. This account is grouped by line office into three common activities: (1) "Systems Acquisition," which includes projects that will have a major impact on NOAA's ability to monitor and to forecast weather and climate change on a global basis; (2) "Construction," which includes projects involving new construction, or major modification of existing facilities; and (3) "Fleet and Aircraft Replacement," which includes funding to support modernization of NOAA's fleet of ships and aircraft either through new construction, major modification to existing assets, or long-term acquisition of capacity from third parties.



National Weather Service Supercomputer

ADJUSTMENTS TO BASE:

The NOAA Procurement, Acquisition, and Construction (PAC) requests adjustments to FY2010 Base of \$1,000,000 and 0 FTEs to transfer base construction funds from the NOAA Center for Weather and Climate Prediction to the Operations, Research and Facilities (ORF) account to reflect the transition from the construction phase of the project to long-term operations and maintenance.

PAC PROGRAM CHANGE HIGHLIGHTS FOR FY2010:

NOAA requests a net increase of \$214,886,000 and 0 FTEs for a total of \$1,393,279,000 for the PAC programs. Detailed numeric breakouts are located in Chapter 5, Special Exhibits. Descriptions of each request by line item are located in the NOAA FY 2010 Technical Budget.



NATIONAL WEATHER SERVICE

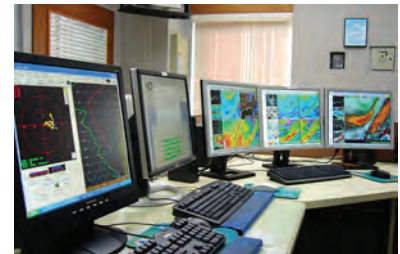
\$96,658,000

Systems Acquisition: NOAA requests an increase of \$11,467,000 and 0 FTEs. This increase is composed of four initiatives, with one decrease:

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
AWIPS	24,364	24,364	24,364	24,364	24,364

Advanced Weather Interactive Processing System (AWIPS) Technology

Infusion: NOAA requests an increase of \$5,300,000 and 0 FTEs. The Advanced Weather Information Processing System (AWIPS) is the information technology backbone of the weather enterprise enabling forecasters to prepare and issue timely, accurate forecasts and warnings. AWIPS has been operational since 1999 and needs to transform its service delivery to better align itself with the Department of Homeland Security, Federal Aviation Administration (FAA), emergency managers, decision makers, the American public and industry. Additionally, the Next Generation Air Traffic Control System will require the future AWIPS infrastructure provided by this initiative. With this increase NOAA will: (1) develop new data visualization capabilities (total integration of display, graphical editing, and river/hydrology applications), (2) begin development of new information generation capabilities (e.g., common alerting protocol, GIS, Next Generation Warning Tool), (3) begin development of systems and processes for 4-D Weather Data Cube of weather observation and forecast data in support of NextGen and public weather mission, and (4) begin development of real-time forecast verification system to measure accuracy and bias.



AWIPS: Tallahassee, FL

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
NEXRAD	7,976	1,626	—	—	—

Next Generation Weather Radar (NEXRAD): NOAA requests a decrease of \$400,000 and 0 FTEs for Product Improvement.

This decrease of \$400,000 reflects the one-time reduction of \$7,400,000 for NEXRAD Dual Polarization funding that was provided under the American Recovery and Reinvestment Act (ARRA) of 2009 and an increase of \$7,000,000 for the acquisition and installation of a commercial weather Doppler radar to eliminate the coverage gap identified by the National Weather Service in Western Washington. Installation of this weather Doppler radar will improve overall coverage for both Western Washington and Northwest Oregon and adjacent coastal waters.

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
Weather & Super Computing	22,092	22,092	22,092	22,092	22,092



Weather & Climate Supercomputing: NOAA requests an increase of \$3,000,000 and 0 FTEs to accelerate the planned NOAA hurricane forecasting system improvements in both hurricane track and hurricane intensity forecasts.

Funds are required to procure additional High Performance Computing (HPC) necessary to provide higher resolution numerical weather prediction modeling to support the acceleration of improved intensity forecasts earlier than initially planned. Additional investment in HPC in FY 2010 will enable the procurement of ~6 million CPU hours. NOAA's overall strategy to improve hurricane forecasts and warnings includes: improving the observations; accelerating and transitioning the necessary research and development into operations; improving the models based upon that research; and procuring the additional computational resources to provide operational model guidance to the National Hurricane Center (NHC) for their use in providing operational forecasts and warnings. This initiative addresses the computing necessary for accelerating hurricane intensity and track forecast model improvements.

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
NOAA Weather Radio	11,337	12,614	5,594	5,594	5,590

Complete and Sustain NOAA Weather Radio: NOAA requests an increase of \$1,337,000 and 0 FTEs to continue the modernization of the NOAA Weather Radio system via the Weather Radio Improvement Project (WRIP).

The most critical component of WRIP is the replacement of the obsolete and unsupported broadcast recoding equipment (Console Replacement System (CRS)). NWS will deploy the NOAA Weather Radio Broadcast Management System (NWR BMS) as a replacement for the Console Replacement System (CRS). The CRS is a main component of NOAA Weather Radio that converts text warning messages into digital voice. This conversion provides the voice warning messages which are broadcasted over NOAA Weather Radio to alert the public. It is critical that we address this issue now in order to avert potential outages which may affect our ability to disseminate timely warnings to the public.

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
Profiler Weather Conversion	9,730	9,730	9,730	9,730	—



NOAA Profiler: Glenallen, AK

NOAA Profiler Weather Conversion: NOAA requests an increase of \$2,230,000 and 0 FTEs to continue the planned technology refresh and operating frequency conversion of the 20-year old NOAA Profiler Network.

The Wind Profilers, vertical looking radars installed in 1988, are used as input for numerical (computer) weather models that predict clouds, precipitation, and temperature. The data also provides important indicators of where severe weather such as tornadoes and winter storms will form and is used for issuing aviation advisories, volcanic ash plumes and wildfire predictions. Research has shown Wind Profiler data improves accuracy and lead times for tornado, severe thunderstorm, flash flood, and winter storm warnings. The FY 2010 request reflects higher revised estimates for the cost of this project based on actual solicited bids. Initially NWS envisioned



an off-the-shelf (COTS) acquisition solution to its requirement to change the profilers operating frequency as well as providing system-wide tech refresh. The bids NWS received in response to its procurement called for a complete system re-design and significantly increased total cost. Without increased funding, NWS will be unable to maintain the NOAA Profiler Network in operations. The requested increase will convert thirty (30) of the profilers currently operating at 404MHz to 449MHz over a three year period. The funding will also provide a technology refresh to all thirty-five (35) profilers (20-year old systems).

Construction: NOAA requests a decrease of \$12,100,000 and 0 FTEs for NWS Construction. This decrease is composed of two initiatives:

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
WFO Construction	3,504	12,504	12,504	12,504	12,504

Weather Forecast Office (WFO) Construction: NOAA requests a net decrease of \$9,000,000 and 0 FTEs. This decrease of \$9,000,000 reflects a one-time reduction for the Weather Forecast Office. NOAA received an additional \$9,000,000 in FY 2009 from the American Recovery and Reinvestment Act (ARRA) to accelerate WFO Construction projects in Alaska Region and upgrades of Heating, Ventilation, and Air Conditioning (HVAC) systems. This construction effort is essential to bring NWS into full compliance with federal law and national and local building codes.

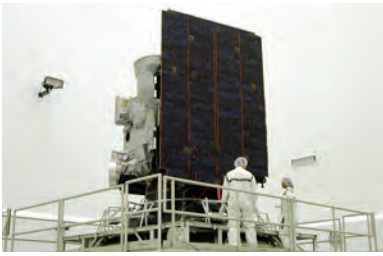
NOAA Center for Weather and Climate Prediction (NCWCP): NOAA requests a transfer of \$1,000,000 and 0 FTEs to Central Forecast Guidance and a decrease of \$3,100,000 and 0 FTEs. This transfer supports recurring NCWCP Operations & Maintenance (O&M) costs including IT infrastructure support. This decrease is a result of project completion.

NATIONAL ENVIRONMENTAL SATELLITE, DATA, & INFORMATION SERVICE \$1,256,857,000

Systems Acquisition: NOAA requests a net increase of \$276,269,000 and 0 FTEs. This increase is comprised of six initiatives:

Geostationary Operational Environmental Satellites (GOES): NOAA requests a net increase of \$256,338,000 and 0 FTEs to continue the procurement of spacecraft, instruments, launch services, and ground systems equipment necessary to maintain an uninterrupted flow of environmental data to users from the GOES-N and GOES-R series satellites. This increase is comprised of two sub-initiatives:

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
GOES-N	57,601	49,500	45,894	39,201	37,429
GOES-R	737,000	848,000	826,000	816,000	836,196
GOES TOTAL	794,601	897,500	871,894	855,201	873,625



GOES-N

- » **NOAA requests a planned decrease of \$15,662,000 and 0 FTEs for the GOES-N Series.** The GOES-N Series is nearing the end of its production, with two remaining satellites to be launched: GOES-O will be launched in spring 2009 and GOES-P is currently in storage with the launch date currently under review. A decrease is requested since the instrument contractors have completed delivery of all flight model instruments. However, funds are still required for spacecraft launch and storage, technical management, program management, data product development, and ground systems checks.

- » **NOAA requests an increase of \$272,000,000 and 0 FTEs for the GOES-R Series to provide continued satellites engineering development and production activities.** GOES-R is a cooperative venture between NOAA and the National Aeronautics and Space Administration (NASA). NOAA defines requirements, manages, funds, implements system integration, procures ground segments and operates the satellites. NASA serves as the agency with multi-disciplinary expertise to oversee acquisition of the instruments and space segment, develops detailed system specifications, procures and launches the spacecraft, and assists NOAA in system integration.

The GOES-R series provides for two satellites with a Life Cycle Cost (LCC) of \$7.67 billion through 2028. The series includes the following instruments which are under development: (1) the Advanced Baseline Imager (ABI), (2) Space Environment In-Situ Suite (SEISS), (3) Extreme Ultraviolet Sensor/X-Ray Sensor Irradiance Sensors (EXIS), (4) Solar Ultraviolet Imager (SUVI), and (5) Geostationary Lightning Mapper (GLM). These satellites will not only provide critical weather observations for severe weather events such as hurricanes, but will also provide key enhancements in observational capabilities for climate, oceans and coasts, and the space environment. Funding will be used for systems engineering, continued development of the satellite instruments and ground systems, risk reduction activities, transition to the system-level acquisition and operations phase of the program, and support of an initial GOES-R launch date in April 2015. In FY 2010, the program will complete the Integrated Baseline Review (IBR) of both systems.

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
POES	43,135	40,874	40,874	40,874	40,874

POES: NOAA requests a planned decrease of \$22,284,000 and 0 FTEs for the continuation of the Polar-Operational Environmental Satellite Systems (POES) program. POES launched the last satellite in the POES Series (N-Prime) in February 2009. Funds in the out years will provide satellite and instrument anomaly support to the on-orbit POES satellites, maintain the ground system for their operation and support the maintenance and testing of U.S. instruments on the MetOp satellites in FY 2010.

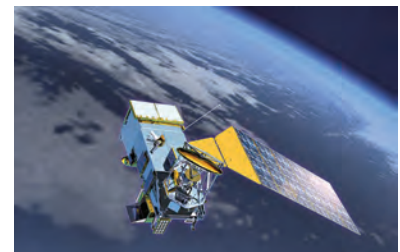


(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
Altimetry Mission - Jason 3	20,000	50,000	53,000	29,000	2,000

Jason-3: NOAA requests an increase of \$20,000,000 and 0 FTEs to initiate a satellite altimetry mission to provide continuity of precise measurement of sea surface height for ocean climatology and ocean weather applications. Ocean climatology includes global sea-level rise, decadal variability in the ocean, seasonal/inter-annual variability, and coastal variability and its impact on ecosystems. Ocean weather involves operational oceanography, surface wave forecasting and evaluation, and hurricane intensity forecasting. Jason 3 is a satellite altimetry mission, which will continue the nearly 20 year data record that was started with the altimetry missions of TOPEX/POSEIDON and Jasons-1 and -2. Jason-3 is planned as a joint mission with the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT). NOAA will provide the launch services, the microwave radiometer, precision orbit components, ground system and operations. EUMETSAT will provide the spacecraft, altimeter, precision orbit components, as well as ground system and operations. NOAA and EUMETSAT will jointly develop mission concept and determine roles and responsibilities for system acquisition, the deployment, and operations. This request allows NOAA and EUMETSAT to launch Jason-3 in CY 2013, providing an overlap with the Jason-2 mission of 6 months. The overlap period is necessary to conduct initial cross-calibration and validation activities, complete on-orbit check-out operations, and maintain consistent observations of sea surface height between successive altimeter missions. The request is contingent on EUMETSAT demonstrating its funding commitment to the program in FY 2009.

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
NPOESS	382,200	428,800	383,900	413,800	501,700

NPOESS: NOAA requests an increase of \$94,215,000 and 0 FTEs for NOAA’s contribution (additional funding is provided by the USAF) to tri-agency NPOESS program for the development and production of the NPOESS spacecraft and instruments, ground system readiness for NPOESS Preparatory Project (NPP) Launch, as well as operations and maintenance. NPOESS will address NOAA’s requirements to provide global environmental data, such as cloud imagery, sea surface temperature, and atmospheric ozone concentrations which are used in numerical weather prediction models for near term (1-3 day) and mid-term (3-5 day) forecasts. NPOESS will also provide space weather observations, search and rescue detection capabilities, as well as direct read-out and data collection products and services to customers. The NPOESS Program will consist of U.S. satellites in two orbits (early morning and afternoon) and will use data from the European Meteorological Operational (MetOp) satellites for the mid-morning orbit, while providing flexibility to reassign Defense Meteorological Satellite Program (DMSP) satellites to the mid-morning orbit depending on the health of the constellation. The



*National Polar-orbiting Operational Environmental Satellite System (NPOESS)
(Artist Representation)*



NPOESS Program seeks to provide an integrated satellite program that meets the needs and mission requirements of both the civilian and military communities. Data and imagery obtained from NPOESS satellites will help increase timeliness, accuracy, and cost-effectiveness of public warnings and forecasts of climate and weather events, thus reducing the potential loss of human life and property and advance the national economy.

The FY 2010 request for NPOESS supports a revised life-cycle cost estimate of \$14 billion through 2024 to reflect additional resource requirements necessary to address continued difficulties in instrument developments and outyear operations and sustainment costs.

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
NDE	4,455	4,455	4,455	4,455	4,455

NPOESS Preparatory Data Exploration (NDE): NOAA requests an increase of \$2,000,000 and 0 FTEs to prepare its ground systems for the NPOESS Preparatory Project (NPP) satellite launch in FY 2011. These ground system upgrades are necessary for NESDIS to process and distribute the large volume of NPP observations and will enable NOAA Operational Centers to improve their services. Specifically, funds will allow the procurement of equipment and the development of new science products necessary for NESDIS to ingest, process, and stage the large volume of environmental observations from the NPP satellite starting in 2011. The NDE project will develop and implement capabilities to process and distribute NPOESS products and services, starting with the NPP satellite. The NPP satellite mission is specifically undertaken to permit the users and developers to address the risks associated with the new technologies of NPOESS Program. The NDE project has been established to make NPP and NPOESS observations available to NOAA forecasters and climate scientists, to other Government agencies, and to civilian entities such as universities and private sector forecasters. The project intends to replace poorly integrated legacy systems with centralized, reusable capabilities. By providing a common IT architecture for science development, system test and operational systems, NDE will eliminate the need to operate and maintain the stovepipe processing systems currently in use to process and distribute fourteen different polar product applications. The NDE infrastructure will be scalable and may serve as a model for future satellite data processing systems.

(BA IN THOUSANDS)	FY2010 REQUEST	FY2011 ESTIMATE	FY2012 ESTIMATE	FY2013 ESTIMATE	FY2014 ESTIMATE
Climate Sensors	0	60,000	73,000	73,000	93,000

Restoration of Climate Sensor Data Records: NOAA requests a one-time decrease of \$74,000,000 and 0 FTEs. This one-time decrease is a result of forward-funding provided in the American Recovery and Reinvestment Act (ARRA) of 2009 which enabled NOAA to accelerate development work on the Clouds and the Earth Radiant Energy System (CERES) and the Total Solar Irradiance System (TSIS) climate sensors. In FY 2010, using funds provided in the Omnibus Appropriations Act, 2009 and ARRA, NOAA will continue to work with NASA in developing the most cost-effective options for acquiring and launching



the CERES and TSIS climate sensors, including exploring all reasonable options in terms of cost, schedule, and mission continuity. With the prior year funding, CERES flight model 5 will be completed for launch on NASA's NPP satellite and development of a CERES flight model 6 and the TSIS instrument will be initiated. This effort is necessary to fill the likely gap in earth radiation and total solar irradiance observations between NASA's Earth Observing Satellites (EOS) and the NPOESS mission. It is anticipated that CERES flight model 6 will be manifested on the NPOESS C1 satellite and TSIS on either NPOESS C1 or C2.

PROGRAM SUPPORT

\$5,000,000

Construction: NOAA requests a net decrease of \$54,250,000 and 0 FTEs in the Program Support Construction sub-activity. This decrease is comprised of one initiative:

Pacific Regional Center: NOAA requests a decrease of \$54,250,000 and 0 FTEs for the construction of the Pacific Regional Center. Through the funding in the Omnibus Appropriations Act, 2009 and the American Recovery and Reinvestment Act of 2009, NOAA will complete the Main Facility construction phase of the new Pacific Regional Center on Ford Island in Honolulu, HI.

OMAO Fleet Replacement: NOAA requests a decrease of \$6,500,000 and 0 FTEs for the OMAO fleet replacement sub-activity. This is comprised of four initiatives:

Fisheries Survey Vessel: NOAA requests an increase of \$3,000,000 and 0 FTEs to design a new shallow-draft vessel, Fisheries Survey Vessel (FSV) 5. A shallow-draft FSV will be needed to replace Oregon II which is among the oldest ships in the NOAA Fleet at 44 years of service life by FY 2010. The shallow-draft FSV will operate in near-shore coastal waters as shallow as 30 feet and is intended to be the primary ship supporting Gulf of Mexico living-marine resource, habitat, and integrated-ecosystem surveys. The Southeast Fisheries Science Center (SEFSC) must survey near-shore waters to maintain decades-long time series. The OREGON II is unable to operate safely in 30-42 feet and this limits critical fishery-independent sampling in nursery and high-density areas responsible for the majority of fishery resources and the high-productivity of the Gulf of Mexico ecosystem. From FY 2000 to FY 2006, Oregon II lost an average of 19 days of operation each year due to engineering related problems. If a suitable replacement ship is not acquired, Oregon II will reach the end of its useful service life and will be removed from service in FY 2017.

NOAA Ship *Bell M. Shimada*: NOAA requests a decrease of \$1,000,000 and 0 FTEs to reflect the completion of the calibration of *Bell M. Shimada*. The ship will be homeported on the West Coast and will collect data to manage fish stocks such as Pacific Whiting and to monitor marine mammals in the Pacific Northwest.



NOAA Ship *Bell M. Shimada* Launch



Hydro Survey launch construction: NOAA requests a decrease of \$2,400,000 and 0 FTEs to reflect the completion of the construction of hydrographic survey launches equipped with multibeam sonar equipment. NOAA received funds in the FY 2009 ARRA to accelerate this project. The launches increase the number of miles of navigationally significant waters that can be surveyed in order to update the nation's nautical charts. These charts directly relate to the safety of the United States' commercial and recreational waterways.

NOAA Ship *Rainier*: NOAA requests a decrease of \$6,100,000 and 0 FTEs to reflect the completion of the major repair period of the NOAA Ship *Rainier*. The ship is homeported in Seattle, Washington and conducts coastal hydrographic survey operations in Alaskan coastal waters.





CHAPTER 4 | OTHER ACCOUNTS



Humpback whale tail slap with NOAA Ship MacArthur II in background

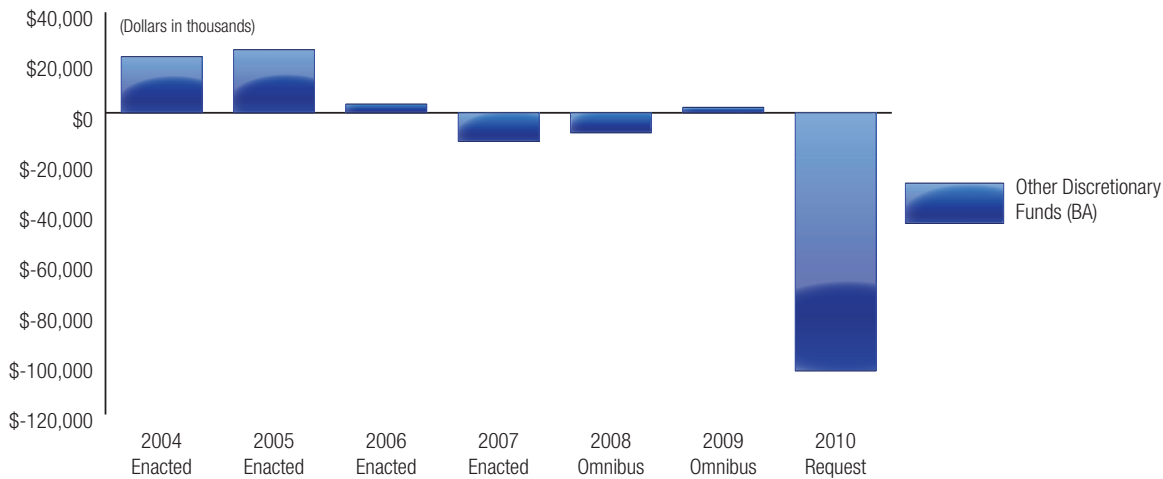
Credit: Shannon Rankin



OTHER DISCRETIONARY FUNDS

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
Other Discretionary Funds				
Fisheries Finance Program Account	235	(495)	0	495
Promote and Develop American Fisheries	(77,000)	(79,000)	(104,600)	(25,600)
Pacific Coastal Salmon Recovery Fund	67,000	80,000	0	(80,000)
Medicare Eligible Retiree Health Care Fund	1,802	1,674	1,934	260
Total Other Discretionary Funds (Budget Authority - BA)	(\$7,963)	\$2,179	(\$102,666)	(\$104,845)
Total FTE	1	1	1	0

Budget Trends FY 2004-2010



ORF: Operations, Research, and Facilities



OTHER DISCRETIONARY FUNDS

NOAA's other discretionary funds are a significant part of NOAA's ecosystem-based management of coastal and ocean resources. These funds address threatened and endangered species, promote biodiversity, contribute to the improvement of ocean science, and promote fisheries research.

COASTAL ZONE MANAGEMENT FUND

The Coastal Zone Management (CZM) Fund was created in 1990 in order to reimburse NOAA for expenses incident to the administration of the Coastal Zone Management Act. The CZM Fund was intended to issue grants to states for improving coastal zone management. Emphasis was placed on planning for unforeseen or disaster-related circumstances and recognition of excellence in coastal management. In FY 2010, NOAA proposes to continue the transfer of authorized funding from the CZM Fund for obligation in the ORF account.

FISHERMEN'S CONTINGENCY FUND

The Fishermen's Contingency Fund (FCF) program minimizes financial instability of the fishing industry caused by competing uses of the Outer Continental Shelf (OCS) and provides for timely resolution of claims by vessel owners. The Fishermen's Contingency Fund is authorized under Section 402 of Title IV of the Outer Continental Shelf Lands Act Amendments of 1978. NOAA compensates U.S. commercial fishermen for damage or loss of fishing gear, vessels, and resulting economic loss caused by obstructions related to oil and gas exploration, development, and production in any area of the Outer Continental Shelf. The funds used to provide this compensation are derived from fees collected by the Secretary of the Interior from the holders of leases, exploration permits, easements, or rights-of-way in areas of the Outer Continental Shelf.

The FCF account is funded solely through user fees. Disbursements can be made only to the extent authorized in appropriation acts.

FOREIGN FISHING OBSERVER FUND

The Foreign Fishing Observer Fund (FFOF) is financed through fees collected from owners and operators of foreign fishing vessels fishing within the Exclusive Economic Zone (EEZ) of the United States (such fishing requires a permit issued under the Magnuson-Stevens Fishery Conservation and Management Act). The FFOF reimburses NOAA for costs incurred in placing observers aboard foreign fishing vessels. The observer program is conducted primarily through contracts with the private sector. NOAA/NMFS places these observ-



ers aboard foreign fishing vessels to monitor compliance with U.S. fishery laws and to collect fishery management data.

Amounts available in the Fund can be disbursed only to the extent and in amounts provided in appropriation acts. In FY 1985, Congress approved the establishment of a supplemental observer program. The program provided that foreign vessels without federally-funded observers are required to obtain the services of private contractors certified by the Secretary of Commerce.

FISHERIES FINANCE PROGRAM ACCOUNT

The Fisheries Finance Program (FFP) Account provides direct loans that promote building sustainable fisheries. This account was established in FY 1997 to cover the cost of financing direct loans as authorized by Title XI of the Merchant Marine Act of 1936. The President's Request proposes loan levels of \$8 million for individual fishing quotas and \$59 million for FFP Traditional loans. Because these loans have a negative subsidy rate no appropriated funds are required. The re-authorization of the Magnuson-Stevens Fisheries Conservation and Management Act in October 1996 changed the program to provide direct loans rather than loan guarantees previously made under the Fishing Vessel Obligation Guarantee appropriation.

PROMOTE AND DEVELOP FISHERIES PRODUCTS

The Promote and Develop Fisheries Products (PDFP) account makes grants for fisheries research and development projects. Funds are derived from a Department of Agriculture transfer to NOAA from duties on imported fisheries products. An amount equal to 30% of these duties is made available to NOAA, subject to appropriation limitations. The budget proposes that \$104.6 million be transferred to the ORF account to offset fisheries research and management activities. ORF expenses related to fisheries management support are reimbursed from the PDFP account. At least 60 percent of the funds not transferred are used for the Saltonstall-Kennedy competitive research grants program.

PACIFIC COASTAL SALMON RECOVERY FUND

NOAA proposes to eliminate funding for this item and promote salmon recovery through other programmatic increases. Resources will continue to be provided for ESA-listed salmon and steelhead populations through the expansion of the existing Conservation and Recovery of ESA-listed Species with States program into a new Species Recovery Grants program. Grant funds will be used by partners to implement priority actions identified in NMFS Recovery Plans for listed species, including Pacific Salmon. Such actions may include restoring degraded habitat necessary for species recovery, mitigating incidental take of listed species, assessing status and monitoring population trends of listed and candidate species, conducting scientific research to evaluate threats to listed species and develop mitigation measures, educating the public about the conservation of ESA listed species, and supporting multi-state and cross-jurisdictional conservation actions. Pacific salmon conservation and management is also being supported by an increase in funding in the Salmon Management Activities and Protected Species- Pacific salmon budget lines.

MEDICARE ELIGIBLE RETIREE HEALTH CARE FUND

This account provides for NOAA's contribution to a healthcare accrual fund for NOAA Corps officers. The accrual fund pays for the future healthcare benefits for current officers once they retire and become Medicare-eligible, as well as for their dependents and annuitants. The FY 2003 Department of Defense Authorization Act requires all uniformed services including NOAA to participate in an accrual fund for



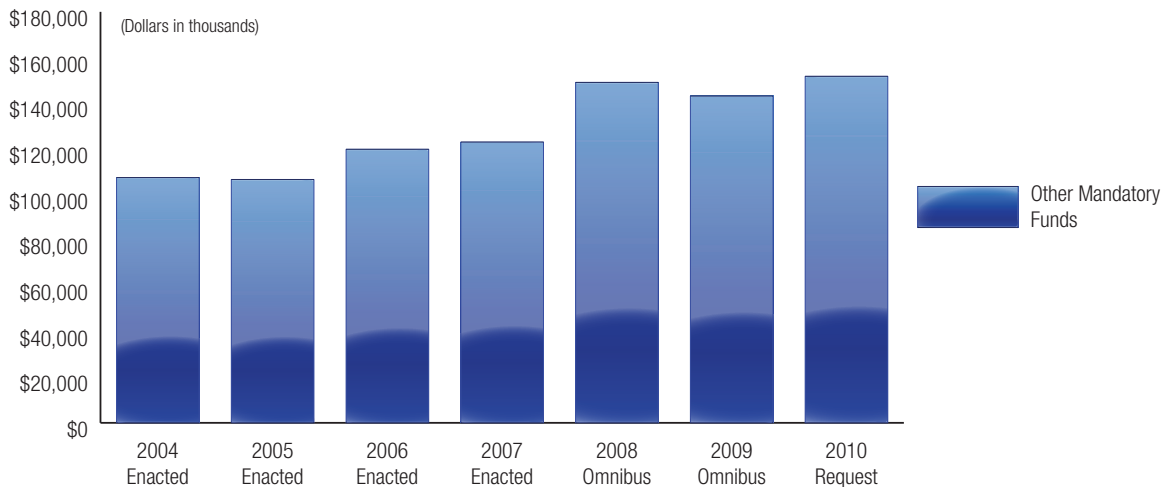
Medicare-eligible retirees. The Ronald W. Reagan National Defense Authorization Act for 2005 (P.L. 108-375) provided permanent, indefinite appropriations to finance these costs for all uniformed service members. However, since these costs are in support of NOAA's mission, they will continue to be shown as part of the NOAA discretionary total.



OTHER MANDATORY FUNDS

(DOLLARS IN THOUSANDS)	FY 2008 OMNIBUS	FY 2009 OMNIBUS	FY 2010 REQUEST	INCREASE (DECREASE)
Other Mandatory Funds				
Coastal Zone Management Fund	(\$525)	(\$1,500)	(\$1,500)	\$0
Damage Assessment & Restoration Revolving Fund	1,194	2,000	2,000	0
Promote and Develop American Fisheries Products	84,594	108,510	114,000	5,490
Fisheries Finance Program Account	27,389	1,996	0	(1,996)
Federal Ship Financing Fund	(156)	(773)	0	773
Environmental Improvement & Restoration Fund	9,322	1,198	3,719	2,521
Limited Access System Administration Fund	10,268	7,444	7,444	0
Western Pacific Sustainable Fisheries	234	0	0	0
NOAA Corp Commissioned Officers Retirement	23,119	24,272	26,112	1,840
Total Other Mandatory Funds (Budget Authority - BA)	\$155,439	\$143,147	\$151,775	\$8,628
Total FTE	50	20	20	0

Budget Trends FY 2004-2010



ORF: Operations, Research, and Facilities



OTHER MANDATORY FUNDS

COASTAL ZONE MANAGEMENT FUND

The Coastal Zone Management (CZM) Fund was established under the Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508) to receive repayments from the Coastal Energy Impact Program. These payments are used for CZM programs and administration as authorized by section 308 of the Coastal Zone Management Act, and will offset CZMA implementation costs in the ORF account.

DAMAGE ASSESSMENT & RESTORATION REVOLVING FUND

The Damage Assessment and Restoration Revolving Fund (DARRF) was established in 1990 to facilitate oil and hazardous material spill response, damage assessment, and restoration activities for damages to natural resources for which NOAA serves as trustee. The Fund receives proceeds from claims against responsible parties, as determined through court settlements or agreements. In FY 1999 and prior years, funds were transferred to the Operations, Research, and Facilities account for the purposes of damage assessment and restoration. Beginning in FY 2000, funds were expended in DARRF and treated as mandatory budget authority.

DARRF facilitates and sustains: (1) natural resource damage assessment while the Departments of Commerce and Justice seek full reimbursement from potentially responsible parties, and (2) restoration, replacement, or acquisition of the equivalent of injured or lost natural resources, including resources of National Marine Sanctuaries and National Estuarine Research Reserves, tidal wetlands, and other habitats for which NOAA is trustee. These program functions are conducted jointly within NOAA by the Office of General Counsel, the National Ocean Service, and the National Marine Fisheries Service.

PROMOTE AND DEVELOP AMERICAN FISHERY PRODUCTS & RESEARCH PERTAINING TO AMERICAN FISHERIES FUND

The American Fisheries Promotion Act of 1980 authorized a grants program for fisheries research and development projects funded by Department of Agriculture duties on fishery-related products. Thirty percent of these duties support the Promote and Develop American Fishery Products & Research Pertaining to American Fisheries Fund. The FY 2010 budget estimate is \$114 million. Of this amount, \$5.6 million will be used for the grants program to promote industry development through competitively awarded external grants (Saltonstall-Kennedy) for innovative research and development of projects in the fishing industry and for NOAA research efforts that comple-



ment the external program. NOAA will transfer the remaining \$104.6 million to offset marine fishery resource programs in the Operations, Research, and Facilities account in FY 2010.

FISHERIES FINANCE PROGRAM ACCOUNT

All Fisheries Finance Program Account (FFP) Account authority is subject to the Federal Credit Reform Act of 1990 (FCRA) (2 U.S.C. 661). The FCRA requires estimated loan costs (FCRA cost) be appropriated in cash at the time Congress authorizes annual credit ceilings. FFP Account loan activity demonstrates that the FCRA subsidy is negative. Statutory authority is found in 46 U.S.C. 1274 and 16 U.S.C. 1801 et seq. FFP Account lending guidelines are found at Title 50, Code of Federal Regulations (CFR), Part 253, subpart B; and tempered by NOAA's sustainable fisheries policy and by the practical considerations of a program that has been self-sustaining throughout its credit history.

ENVIRONMENTAL IMPROVEMENT & RESTORATION FUND

The Environmental Improvement and Restoration Fund (EIRF) was established by Title IV of P.L. 105-83, the Department of the Interior and Related Agencies Appropriations Act, 1998, to fund marine research activities in the North Pacific. Twenty percent of the interest earned from this fund is made available to the Department of Commerce. The Fund issues grants to Federal, State, and private or foreign organizations or individuals to conduct research activities on or relating to fisheries or marine ecosystems in the North Pacific Ocean, Bering Sea, and Arctic Ocean. Research priorities and grant requests are reviewed and approved by the North Pacific Research Board, with emphasis placed on cooperative research efforts designed to address pressing fishery management or marine ecosystem information needs. This program supports the NOAA strategic plan goal to sustain healthy coasts.

LIMITED ACCESS SYSTEM ADMINISTRATION FUND

The Limited Access System Administration Fund (LASAF) was established by Title III of Public Law 104-297. Fee Collections equaling no more than three percent of the proceeds from the sale or transfer of limited access system permits are deposited into the Fund. These deposits into the Fund are used to administer an exclusive central registry system for the limited access system permits.

Under the authority of the Magnuson-Stevens Act Section 304(d)(2)(A), NMFS must collect a fee to recover the costs of managing and enforcing the Individual Fishing Quota (IFQ) Halibut/Sablefish program. Funds collected under this authority are deposited into the Limited Access System Administration Fund. Of the funds collected, 75 percent of fee payments are to be made available to the Secretary to offset costs of management and enforcement of the halibut and sablefish IFQ program, and 25 percent of fees collected are to be made available for appropriation to support the North Pacific IFQ loan program.

NOAA CORPS COMMISSIONED OFFICERS RETIREMENT

The retirement system for the uniformed services provides a measure of financial security after release from active duty for service members and their survivors. It is an important factor in the choice of a career in the uniformed services and is mandated by federal statutes under Title 10, United States Code. NOAA transfers retirement pay funds to the Coast Guard, which handles the payment function for retirees and annuitants. Health care funds for non-Medicare-eligible retirees, dependents, and annuitants are transferred to the U.S. Public Health Service, which administers the health care program.



MARINE MAMMAL UNUSUAL MORTALITY EVENT FUND

Marine Mammal Protection Act Section 405 (16 USC 1421d) establishes the Marine Mammal Unusual Mortality Event Fund. The fund: “shall be available only for use by the Secretary of Commerce, in consultation with the Secretary of the Interior to compensate persons for special costs incurred in acting in accordance with the contingency plan issued under section 1421c(b) of this title or under the direction of an Onsite Coordinator for an unusual mortality event; for reimbursing any stranding network participant for costs incurred in preparing and transporting tissues collected with respect to an unusual mortality event for the Tissue Bank; and for care and maintenance of marine mammal seized under section 1374(c)(2)(D).” According to the MMPA, deposits can be made into Fund by the following: “amounts appropriated to the Fund; other amounts appropriated to the Secretary with respect to unusual mortality events; and amounts received by the United States in the form of gifts, devises, and bequests under subsection (d) of this section.”





CHAPTER 5 | SPECIAL EXHIBITS



Harmful algal bloom in Lake Erie

Credit: NOAA



SUMMARY BY APPROPRIATION

Dollars in thousands

APPROPRIATION	2008 ACTUAL	2009 OMNIBUS	2010 REQUEST	INCREASE (DECREASE)
Operations, Research & Facilities (ORF)	\$2,942,277	\$3,045,549	\$3,087,537	\$41,988
ORF Recovery Act	0	230,000	0	(230,000)
Procurement, Acquisition & Construction (PAC)	985,207	1,243,647	1,391,279	147,632
PAC Recovery Act	0	600,000	0	(600,000)
Coastal Zone Management Fund	3,000	3,000	3,000	0
Fisheries Finance Program Account	0	0	0	0
Pacific Coastal Salmon Recovery	67,000	80,000	0	(80,000)
Medicare-Eligible Retiree Healthcare Fund	1,802	1,674	1,934	260
TOTAL APPROPRIATION	3,999,286	5,203,870	4,483,750	(720,120)
Transfers:				
Operations, Research & Facilities				
FROM: Promote & Develop Fishery Products	77,000	79,000	104,600	25,600
Coastal Zone Management Fund	3,000	3,000	3,000	0
Pacific Coastal Salmon Recovery	67	0	0	0
Procurement, Acquisition and Construction	979	0	0	0
Fisheries Finance Program Account	0	495	0	(495)
Department of Agriculture	170,000	0	0	0
TO: Fisheries Finance Program Account	(235)	0	0	0
Subtotal, ORF	250,811	82,495	107,600	25,105
Coastal Zone Management Fund				
TO: ORF	(3,000)	(3,000)	(3,000)	0
Pacific Coastal Salmon Recovery				
TO: Fisheries Finance Program Account	(67)	0	0	0
Procurement, Acquisition & Construction (PAC)				
TO: ORF	(979)	0	0	0
Fisheries Finance Program Account (FFPA)				
FROM: ORF	235	0	0	0
TO: ORF	0	(495)	0	495
Promote & Develop American Fishery Products (P&D)				
TO: ORF	(77,000)	(79,000)	(104,600)	(25,600)
FROM: Department of Agriculture (mandatory funds)	84,594	108,510	114,000	5,490
Subtotal, P&D	7,594	29,510	9,400	(20,110)
TOTAL TRANSFERS	254,594	108,510	114,000	5,490



SUMMARY BY APPROPRIATION

Dollars in thousands

APPROPRIATION	2008 ACTUAL	2009 OMNIBUS	2010 REQUEST	INCREASE (DECREASE)
Unobligated balances, rescission				
Operations, Research & Facilities (ORF)	(5,108)	0	0	0
Procurement, Acquisition & Construction (PAC)	(6,264)	0	0	0
TOTAL UNOBLIGATED BALANCES, RECISSION	(11,372)	0	0	0

MANDATORY ACCOUNTS	2008 ACTUAL	2009 OMNIBUS	2010 REQUEST	INCREASE (DECREASE)
Damage Assessment & Restoration Revolving Fund	1,194	2,000	2,000	0
Fisheries Finance Program Account	27,389	1,996	0	(1,996)
Environmental Improvement and Restoration Fund	9,322	1,198	3,719	2,521
CZMF mandatory offsetting collections	(525)	(1,500)	(1,500)	0
Federal Ship Financing Fund	(156)	(773)	0	773
NOAA Corps Retirement Pay	23,119	24,272	26,112	1,840
Western Pacific Sustainable Fisheries	234	0	0	0
Limited Access System Administration Fund	10,268	7,444	7,444	0
TOTAL BUDGET AUTHORITY	4,313,353	5,347,017	4,635,525	(711,492)
Mandatory Funds	155,439	143,147	151,775	8,628

DISCRETIONARY BUDGET AUTHORITY	2008 ACTUAL	2009 OMNIBUS	2010 REQUEST	INCREASE (DECREASE)
Operations, Research & Facilities (ORF)	3,187,980	3,358,044	3,195,137	(162,907)
P&D Transfer	(77,000)	(79,000)	(104,600)	(25,600)
Procurement, Acquisition & Construction (PAC)	977,964	1,843,647	1,391,279	(452,368)
Medicare-Eligible Retiree Healthcare Fund	1,802	1,674	1,934	260
Fisheries Finance Program Account	235	(495)	0	495
Pacific Coastal Salmon Recovery	66,933	80,000	0	(80,000)
TOTAL DISCRETIONARY BUDGET AUTHORITY	4,157,914	5,203,870	4,483,750	(720,120)



**ADJUSTMENTS TO CURRENT PROGRAMS
(ADJUSTMENTS TO BASE) – REQUESTED \$52,080,000**

Adjustments to Base (ATBs) are defined as increases or decreases to specific object classes that: represent the same level of effort as the current budget year, are outside of the agency management’s control, are supported by specific documentation, and are a known cost (or fixed cost of doing business).

NOAA has requested the following increases for labor-related and non-labor ATBs:

ORF & PAC	SALARY & BENEFITS	OTHER OBJECT CLASSES	TOTAL
NOS	3.9	1.1	5.0
NMFS	9.9	2.3	12.2
OAR	2.4	0.7	3.1
NWS	13.7	1.8	15.5
NESDIS	2.0	0.5	2.5
PS	3.0	9.3	12.3
OMAO	1.8	-0.4	1.4
Total Discretionary- ATBs (Budget Authority)	36.7	12.7	52.1
Other Accounts (Mandatory Accounts)			
NOAA Corp Retirement	1.8	N/A	1.8
Total Appropriated ATBs	38.5	12.7	53.9

These increases for ATBs will help fund the agency’s overall anticipated adjustments to the current programs. Program totals will fund the FY2010 Federal pay raise of 2.0 percent and annualize the FY2009 pay raise of 3.9 percent. In addition, program totals will also fund inflationary increase for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.



NOAA MARINE AND AVIATION OPERATIONS

Planned Fiscal Year 2009 Operating Days of Ship Support for NOAA Programs

Operating days are days that a ship is away from home port and engaged in a project including days in any port other than home port or days transiting to or from a project. Days at sea are days that a ship is at sea engaged in a project or days transiting to or from a project.

The private sector and University National Oceanographic Laboratory System (UNOLS) ships generally track operating days rather than days at sea, so all days in the table below, including in-house ships days, are operating days. Operating days are typically 10 to 15 percent higher than days at sea.

	OPERATING DAYS	DOLLARS IN MILLIONS
In-house	3,390	\$113.5 O&M
In-house subtotal	3,390	\$113.5
Outsourced		
Private Sector	2,070	\$11.5
UNOLS	300	\$5.0
Contracts for hydro-graphic data*	780	\$31.2
Outsourced subtotal	3,150	\$47.7
Grand Total	6,540	\$161.2

**All hydrographic charters have been combined under contracts for hydrographic services. These contracts deal with area (square nautical miles), not operating days.*

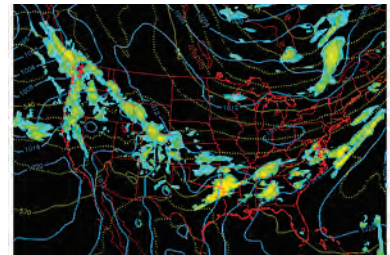


NOAA RESEARCH AND DEVELOPMENT

NOAA manages a preeminent research and development enterprise focused on three critical areas: climate, weather and air quality, and ocean, coastal, and Great Lakes phenomena and resources. The goal of NOAA's research enterprise is to develop, enhance and expand NOAA's suite of products and services for improved prediction and understanding of the environment. Data from NOAA's research allow decision makers to make informed judgments to prevent the loss of human life, conserve and manage natural resources, and maintain a strong and growing economy. The following are just a few of NOAA's research and development accomplishments in 2008:

NOAA's Earth System Research Laboratory Transitions Rapid Update Cycle (RUC) Model Upgrade To National Weather Service's National Centers For Environmental Prediction

The Rapid Update Cycle (RUC) model is a NOAA/NCEP operational weather prediction system comprised primarily of a numerical forecast model and an analysis/assimilation system to initialize that model. It was developed to serve users needing frequently updated short-range weather forecasts, including those in the US aviation community and US severe weather forecasting community. The FY 2008 upgrade included initialization with data collected from regional aircraft, the addition of radar reflectivity and lightning data (where available), as well as higher resolution surface observations and model physics. These additions will help to increase lead times, and reduce model biases and error.



Rapid Update Cycle (RUC)

Bycatch Days May Be Bygone With Creation of 'Eliminator' Trawl

A team of Rhode Island Sea Grant researchers were awarded the \$30,000 grand prize in the World Wildlife Federation's International Smart Gear Competition for a net called "The Eliminator." Cod and flounder are heavily restricted by federal fisheries regulations but often swim with haddock, and are caught together in commercial fishing trawlers. Fishermen then have to throw thousands of pounds of cod and flounder back into the ocean, where they will likely die. The Eliminator effectively solves this problem by taking advantage of haddock's tendency to swim up when faced with a net, when other fish swim down. The collaborative design and development of the Eliminator trawl is a great example of industry and scientists working together with fisheries managers to develop innovative solutions to reduce or eliminate bycatch. It's expected to allow fishermen continued access to haddock while allowing the cod stocks to rebuild.

First Ever Lake Erie Harmful Algal Bloom Bulletin issued

GLERL research continues to characterize harmful algal bloom (HAB) dynamics in the Great Lakes. Blooms of the cyanobacterial HAB *Microcystis* are common in parts of western Lake Erie and Lake Huron's Saginaw Bay. The excessive nutrient levels and shallow depth of these areas promotes *Microcystis* blooms, which are of great concern to human health due to the toxins they produce. In 2008, GLERL, working in close conjunction with NOAA Center for Coastal Monitoring and Assessment and the NOAA Center of Excellence for Great Lakes and Human Health, produced the first ever Lake Erie Harmful Algal Bloom Bulletin, which predicted *Microcystis* blooms based on satellite imagery in combination with hydrological, meteorological and limnological data. The bulletin was distributed to users throughout the Lake Erie watershed.



Lake Erie Harmful Algal Bloom



Integration of Radar Data from Other Federal Partners Enhances Weather Forecasts and Warnings

NOAA developed a new capability called the Supplemental Product Generator (SPG) which uses live data streams from FAA/DOD radars to create radar products that are integrated with NWS radar data and displayable on AWIPS. In 2008 and early 2009, connections to 45 FAA Terminal Doppler Weather Radars were established to dozens of NWS Weather Forecast Offices. New versions of SPGs have already been created and are in the prototype stage, accessing data from air surveillance radars, the FAA's ASR-11 and FAA/Department of Defense's ARSR-4. Products generated by the Supplemental Product Generators fill gaps in NWS radar coverage; provide backup capability for the NWS radar network; and allow forecasters to see storms from multiple points of view, leading to improved weather forecasts and warnings.

NOAA Implements Soil Moisture Observational Network



Drought Conditions

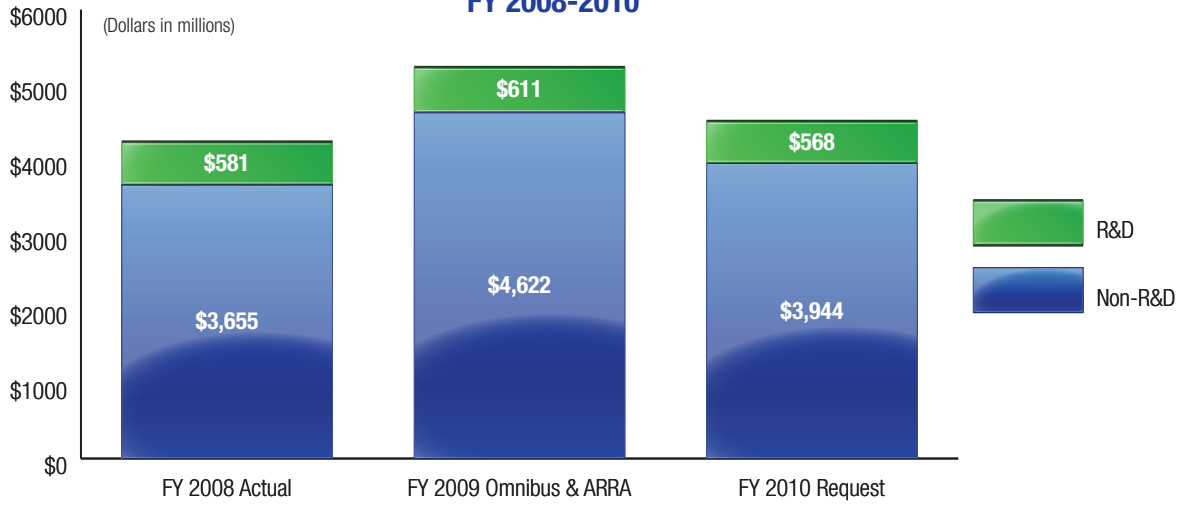
NOAA's Earth System Research Laboratory (ESRL) implemented a Soil Moisture Observational Network across southern Arizona's San Pedro River Basin, measuring soil moisture and temperature, and basic meteorological parameters at the surface (pressure, temperature, humidity, and rainfall). ESRL, working with the National Weather Service aims to improve flash flood forecasting and the understanding of how soil information (i.e., moisture, texture, and temperature) can be included in hydrologic models. Southern Arizona's San Pedro River recharges ground water storage and provides water for human needs and those of agriculture. However, during the North American monsoon season (July-September), heavy precipitation events can cause severe flooding in the San Pedro basin. Arizona's dry climate and a rapidly growing population increase the risk of impacts from both flash floods and drought.

The following charts display the scope and nature of R&D at NOAA. Key elements include the following for FY 2010:

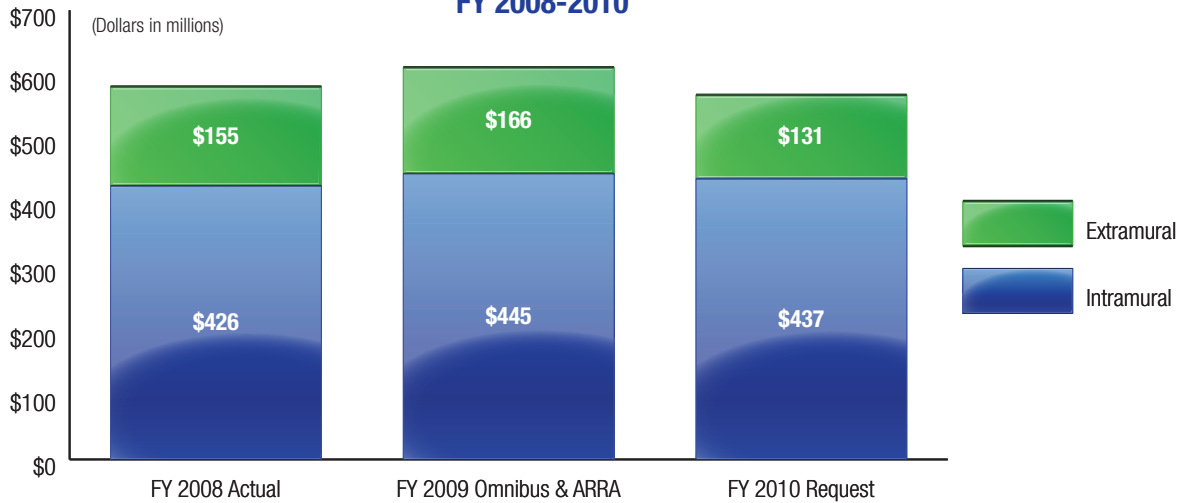
- R&D represents 12 percent of total NOAA funding in FY 2010.
- Seventy-three percent of NOAA's R&D is intramural and 27 percent is extramural.
- NOAA's R&D budget is 93 percent research and 7 percent development.
- NOAA's Office of Oceanic and Atmospheric Research (OAR, also known as "NOAA Research") manages 51 percent of NOAA's R&D. The remainder is distributed among NOAA's operational units.
- Major R&D efforts are supported by four of NOAA's mission goals: Ecosystems (32 percent), Climate (31percent), Weather and Water (14 percent), and Commerce and Transportation (1 percent). The 22 percent conducted for Mission Support primarily provides research vessels for research.



NOAA R & D FUNDING FY 2008-2010

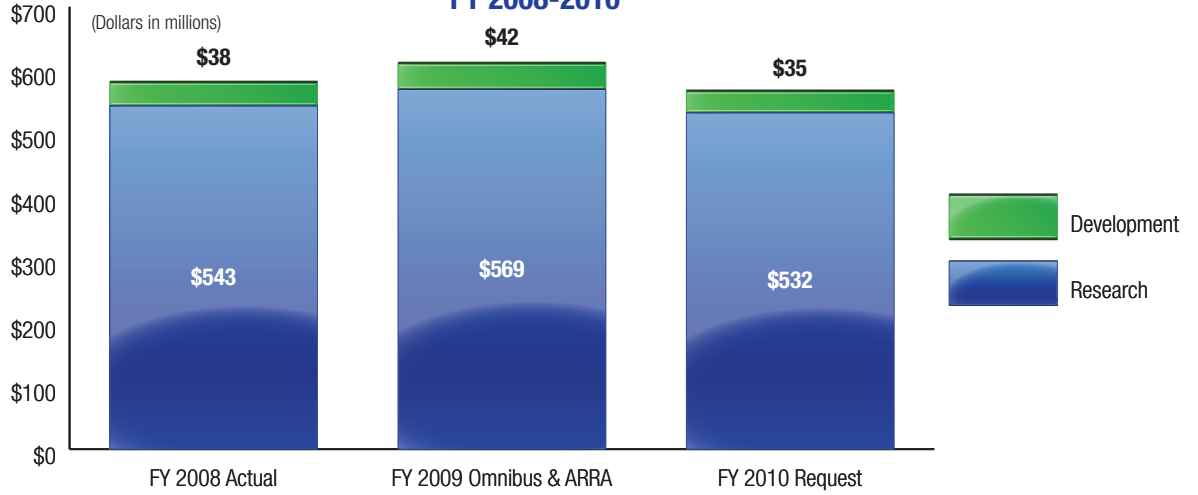


EXTRAMURAL & INTRAMURAL FUNDING FY 2008-2010

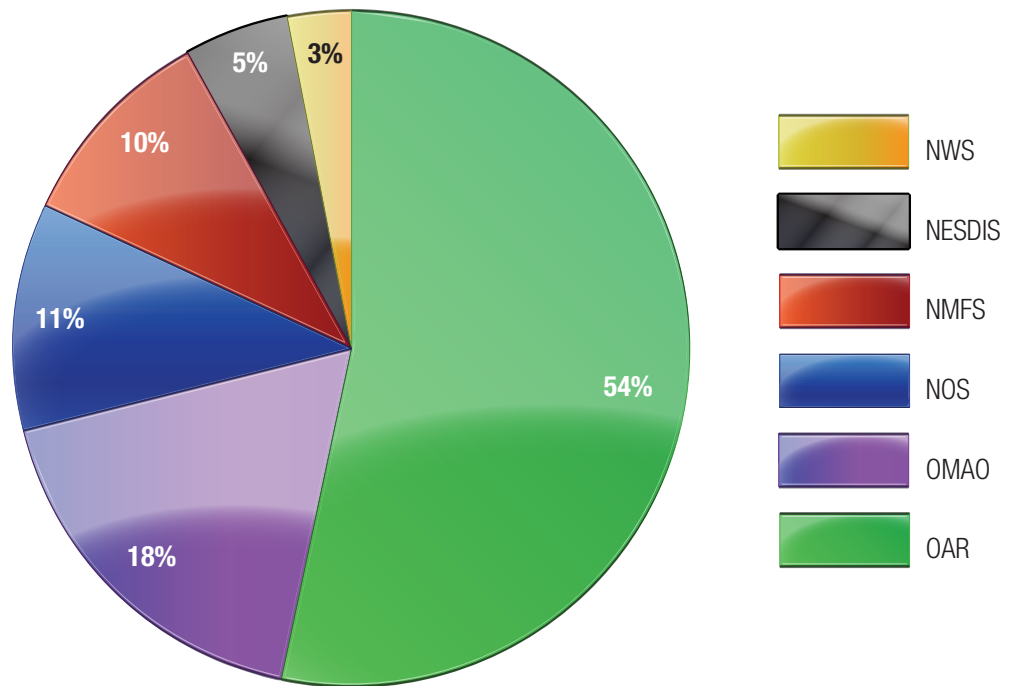




RESEARCH & DEVELOPMENT FUNDING FY 2008-2010

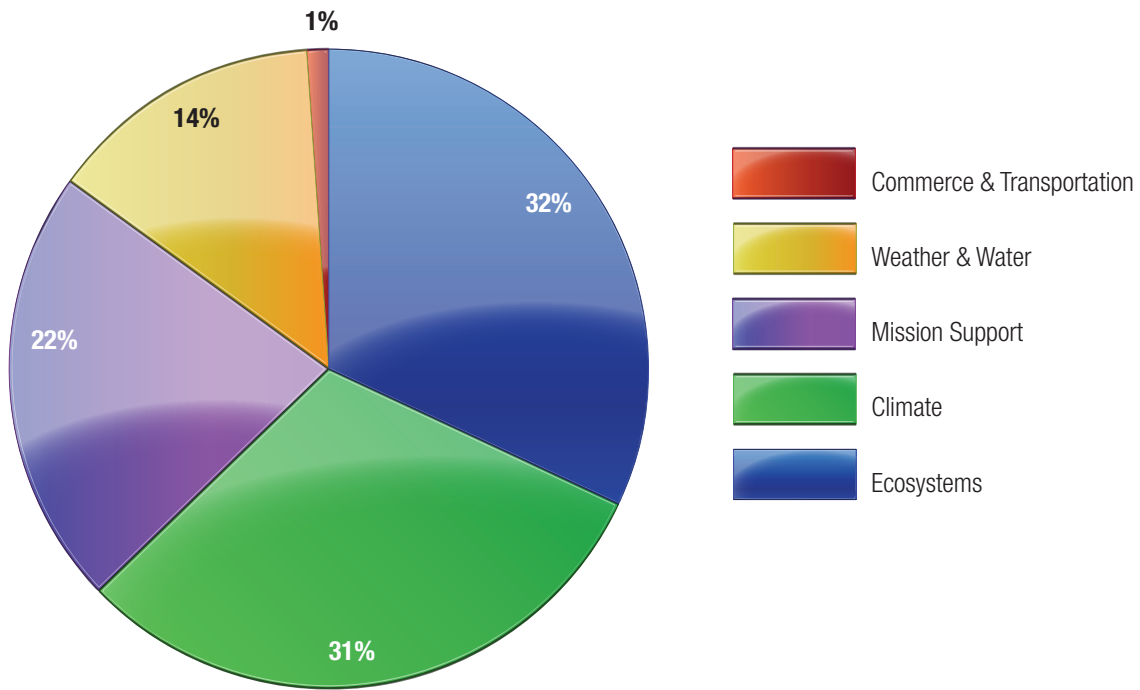


FY 2010 R & D BUDGET BY LINE OFFICE





FY 2010 R & D BUDGET BY GOAL





TERMINOLOGY

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

“FY 2008 Omnibus:”

Fiscal Year (FY) 2008 Appropriations, not including Farm Bill (PL. 110-234) and Continuing Resolution (PL. 110-329) Supplemental Funds

“FY 2009 Omnibus:”

Fiscal Year (FY) 2009 Appropriations, not including American Recovery & Reinvestment Act (ARRA) Supplemental Funds

“FY 2010 Request:”

Fiscal Year (FY) 2009 Enacted, less Terminations, plus Adjustments-to-Base, and Program Changes

“Program Change:”

The increase/decrease over the FY 2010 base, which is the FY 2009 Omnibus minus Terminations, plus Adjustments-to-Base

“Adjustments-to-Base:”

The estimated FY 2010 Federal Pay raise of 2.0% and the annualized FY2009 pay raise of 3.9%. 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.

NATIONAL OCEAN SERVICE
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Navigation Services					
Mapping & Charting					
Mapping & Charting Base	47,639	1,157	0	48,737	1,098
Joint Hydrographic Center		0	0	0	0
Hydrographic Research & Technology Development	7,424	0	0	7,424	0
Electronic Navigational Charts	6,128	0	0	6,128	0
Shoreline Mapping	2,424	0	0	2,424	0
Address Survey Backlog/Contracts	30,000	0	1,173	31,173	1,173
Dune System Assessment & Shoreline Change Analysis		0	0	0	0
California Seafloor Mapping, CA	1,500	0	0	0	(1,500)
Ordance Reef UXO - Buoys, HI	500	0	0	0	(500)
Extended Continental Shelf Mapping, AK	500	0	0	0	(500)
Mapping the Hudson River to Build Resiliency to Climate Change, NY	445	0	0	0	(445)
Subtotal, Mapping and Charting	96,560	1,157	1,173	95,886	(674)
Geodesy					
Geodesy Base	22,860	587	4,000	27,417	4,557
National Height Modernization	2,541	0	0	2,541	0
Geodetic Survey- KY		0	0	0	0
Geodesy/Height Modernization - IL	725	0	0	0	(725)
Alabama Statewide GIS Mapping Program		0	0	0	0
Geospatial Data Analysis Center, AL		0	0	0	0
Coastal & Ocean Navigation & Hazards Assist - SC		0	0	0	0
Regional Geospatial Modeling Grants	7,000	0	0	0	(7,000)
Louisiana Geodetic Spatial Reference Center, LA	700	0	0	0	(700)
Geo-Spatial Analysis of Weather Phenomena and Disaster Recovery, AL	500	0	0	0	(500)
Wisconsin Height Modernization Program, WI	2,150	0	0	0	(2,150)
Gulf Coast Flood Evaluation Study, Baldwin County, AL	1,000	0	0	0	(1,000)
Gulf Coast Flood Evaluation Study, Mobile County, AL	1,000	0	0	0	(1,000)
Subtotal, Geodesy	38,476	587	4,000	29,958	(8,518)
Tide & Current Data					
Tide & Current Data Base	31,337	464	0	29,278	(2,059)
Subtotal, Tide & Current Data	31,337	464	0	29,278	(2,059)
Total, Navigation Services	166,373	2,208	5,173	155,122	(11,251)
Ocean Resources Conservation and Assessment					
Ocean Assessment Program (OAP)					
Ocean Research Priorities Plan Implementation		0	6,000	6,000	6,000
IOOS Regional Observations	20,000	0	0	14,555	(5,445)
Integrated Ocean Observing System		0	0	0	0
NOAA IOOS	6,500	55	0	6,555	55
Regional Geospatial Modeling Grants		0	0	0	0
Gulf of Mexico Regional Collaboration	4,000	0	1,000	5,000	1,000
Alliance for Coastal Technologies	1,000	0	0	0	(1,000)
Coastal Storms	2,000	0	874	2,874	874
Coastal Services Center	20,254	410	0	20,643	389
Pacific Coastal Services Center	4,500	0	0	0	(4,500)
CREST		0	0	0	0
NERRS Research (formerly CICEET - Coop Inst for Coastal & Estuarine Enviro Tech)		0	0	0	0
Hawaii Coral Reef Initiative	700	0	0	0	(700)
Florida Coral Reef	1,000	0	0	0	(1,000)
Coral Reef - Puerto Rico	240	0	0	0	(240)
Coral Reef Program	28,900	98	0	26,727	(2,173)
Ocean Health Initiative	4,000	0	0	1,000	(3,000)
Lake Erie Monitoring	605	0	0	0	(605)
Maui Coral Reef Preservation and Restoration, HI	185	0	0	0	(185)
UTMSI - Center for Biological Indicators of Change in Coastal Ecosystem Health,	500	0	0	0	(500)
Water Quality Improvements in Port Jefferson Harbor, NY	155	0	0	0	(155)
Subtotal, Ocean Assessment Program (OAP)	94,539	563	7,874	83,354	(11,185)

NATIONAL OCEAN SERVICE
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Response and Restoration					
Response and Restoration Base	19,266	493	1,400	19,134	(132)
Estuary Restoration Program	2,188	0	0	1,188	(1,000)
Marine Debris	4,000	0	0	4,000	0
Marine Debris Removal - Alaska	0	0	0	0	0
Aquatic Resources Environmental Initiative	1,000	0	0	0	(1,000)
Lake Pontchartrain Initiatives	250	0	0	0	(250)
Narragansett Bay and Little Narragansett Bay Watershed Restoration, RI	1,000	0	0	0	(1,000)
Subtotal, Response and Restoration	27,704	493	1,400	24,322	(3,382)
National Centers for Coastal Ocean Science (NCCOS)					
Nat'l Ctrs for Coastal Ocean Science (NCCOS)		33,327	2,861	36,188	36,188
Competitive Research	15,801	0	0	15,801	0
Ctr for Coastal Environ Health & Bimolecular Rsch	11,500	(11,300)	0	0	(11,500)
Oxford, MD	5,000	(2,358)	0	0	(5,000)
Ctr for Coastal Fisheries Habitat Research	5,000	(5,000)	0	0	(5,000)
Center for Coastal Monitoring & Assessment	5,000	(5,000)	0	0	(5,000)
Center for Sponsored Coastal Ocean Research	2,700	(2,700)	0	0	(2,700)
NCCOS Headquarters	3,800	(3,800)	0	0	(3,800)
Center for Human Health Risk (formerly known as Marine Env Health Research L	4,100	(2,400)	0	0	(4,100)
Western Pacific Coral Reef Ecosystems Studies Program (CSCOR-NCCOS), Guar	350	0	0	0	(350)
Subtotal, NCCOS	53,251	769	2,861	51,989	(1,262)
Total, Ocean Resources Conserv. & Assess.	175,494	1,825	12,135	159,665	(15,829)
Ocean and Coastal Management					
Coastal Management					
CZM Grants	66,146	0	0	66,146	0
CZM and Stewardship	7,000	295	3,140	10,435	3,435
Nat'l Estuarine Rsrch Reserve Sys - NERRS	22,326	0	0	22,326	0
Non-point Pollution Implementation Grants	3,900	0	0	0	(3,900)
Baldwin Educational Program	0	0	0	0	0
Marine Protected Areas	2,900	0	0	2,128	(772)
Energy Licensing and Appeals	0	0	1,900	1,900	1,900
Subtotal, Coastal Management	102,272	295	5,040	102,935	663
Ocean Management					
Marine Sanctuary Program					
Marine Sanctuary Program Base (Nacy Foster Scholarship 1% of base)	47,378	601	0	44,949	(2,429)
Northwest Straits Citizens Advisory Commission	1,600	0	0	0	(1,600)
City of Mobile Nat'l Maritime Museum of the Gulf of Mexico, AL	500	0	0	0	(500)
Point Loma Enhanced Monitoring Program, CA	0	0	0	0	0
Urban Coast Institute, NJ	0	0	0	0	0
Hawaii Inst. Of Marine Biology Coral Research, HI	2,000	0	0	0	(2,000)
Thunder Bay, NMS lease buydown, MI	1,000	0	0	0	(1,000)
Lake Winnepesaukee Watershed Management Plan, NH	100	0	0	0	(100)
Perdido Pass Inlet Management Study, AL	250	0	0	0	(250)
Subtotal, Ocean Management	52,828	601	0	44,949	(7,879)
Total, Ocean and Coastal Management	155,100	896	5,040	147,884	(7,216)
Total, National Ocean Service - ORF	496,967	4,929	22,348	462,671	(34,296)
Other National Ocean Service Accounts					
Total, National Ocean Service - PAC	46,188	0	0	24,385	(21,803)
Total, National Ocean Service - Other	15,600	0	0	15,600	0
GRAND TOTAL NOS	558,755	4,929	22,348	502,656	(56,099)

NATIONAL MARINE FISHERIES SERVICE
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Protected Species Research and Management					
Protected Species Research and Management Programs Base	35,800	(442)	5,550	39,850	4,050
Species Recovery Grants		987	60,000	60,987	60,987
Marine Mammals	41,340	741	5,300	47,351	6,011
Marine Turtles	10,003	235	0	10,228	225
Other Protected Species (Marine Fish, Plants, and Invertebrates)	8,257	118	0	8,375	118
Atlantic Salmon	6,000	83	2,996	9,079	3,079
Pacific Salmon (for Salmon Management Activities, see Fisheries Rese	59,000	1,343	7,325	67,668	8,668
Cook Inlet Beluga Whale Research	700	0	0	0	(700)
SE Seiners Capacity Reduction Program, AK (transfer from FFPA)	495	0	0	0	(495)
Alaska Sea Life Center, AK	1,500	0	0	0	(1,500)
Alaska Sea Otter and Steller Sea Lion Commission, AK	300	0	0	0	(300)
Hawaiian Monk Seals, HI	2,600	0	0	0	(2,600)
Hawaiian Sea Turtles, HI	7,100	0	0	0	(7,100)
Ice Seal Research, AK	250	0	0	0	(250)
Provincetown Center for Coastal Studies Right Whale Conservation, M	500	0	0	0	(500)
Seals as Sentinels, ME	100	0	0	0	(100)
Subtotal, Protected Species Research and Management	173,945	3,065	81,171	243,538	69,593
Fisheries Research and Management					
Fisheries Research and Management Programs	155,526	2,998	39,109	197,633	42,107
Expand Annual Stock Assessments - Improve Data Collection	40,504	609	9,900	50,995	10,491
Economics & Social Sciences Research	7,387	86	3,271	10,744	3,357
Salmon Management Activities	24,000	66	16,876	40,942	16,942
Regional Councils and Fisheries Commissions	27,289	612	4,000	31,855	4,566
Fisheries Statistics	15,868	429	4,771	21,068	5,200
Fish Information Networks	22,013	58	0	22,066	53
Survey and Monitoring Projects	17,000	508	6,251	23,759	6,759
Fisheries Oceanography	995	4	1,000	1,999	1,004
American Fisheries Act	5,351	158	0	5,503	152
Interjurisdictional Fisheries Grants	2,569	5	0	2,574	5
National Standard 8	1,035	25	0	1,060	25
Reduce Fishing Impacts on Essential Fish Habitat (EFH)	517	12	0	529	12
Reducing Bycatch	3,360	38	0	3,398	38
Product Quality and Safety	7,127	222	0	7,342	215
Maine and New Hampshire Inshore Trawl Survey	250	0	0	0	(250)
Reef Fish Monitoring and Research, FL Fish & Wildlife Conservation C	1,000	0	0	0	(1,000)
Narraganset Bay Window Program, University of Rhode Island Coastal	1,000	0	0	0	(1,000)
Oyster Hatchery Economic Pilot Program, Morgan State University, M	500	0	0	0	(500)
Hawaii Seafood Safety and Inspections, HI	1,500	0	0	0	(1,500)
Horseshoe Crab Research, Virginia Tech, VA	400	0	0	0	(400)
Oregon Salmon Weak Stock Solutions Research, OR	200	0	0	0	(200)
Scallop Fishery Assessment, MA	1,000	0	0	0	(1,000)
New England Fisheries Assistance	10,000	0	0	0	(10,000)
Chesapeake Bay Blue Crab Disaster Assistance, MD and VA	10,000	0	0	0	(10,000)
Maine Groundfish Industry Emergency Economic Assistance, ME	300	0	0	0	(300)
Gear Conversion Assistance, ME	100	0	0	0	(100)
Alaska King Crab Research, AK	200	0	0	0	(200)
Fishery Advisory Bodies, AK	150	0	0	0	(150)
Florida Marine Replenishment Program, FL	295	0	0	0	(295)
Disease Reduction in Klamath River Salmon, OR	640	0	0	0	(640)
Blue Crab Research, MD	50	0	0	0	(50)
Bluefin Tuna Tagging and Research Program, CA	250	0	0	0	(250)
California Marine Fisheries Replenishment Program	250	0	0	0	(250)
Shrimp Industry Fishing Effort Research Continuation, MD	200	0	0	0	(200)
Virginia Trawl Survey, VA	150	0	0	0	(150)
West Coast Weak Stock Salmon Solutions, CA	200	0	0	0	(200)
Ecosystem Based Fisheries Management, AL	900	0	0	0	(900)
Hawaii Fisheries Development, HI	750	0	0	0	(750)
Subtotal, Fisheries Research and Management	360,826	5,830	85,178	421,467	60,641
Enforcement & Observers/Training					
Enforcement	56,405	1,098	7,600	65,073	8,668
Observers/Training	32,680	397	5,000	38,059	5,379
Pilot Red Snapper Observer Program, FL	1,000	0	0	0	(1,000)
Subtotal, Enforcement & Observers/Training	90,085	1,495	12,600	103,132	13,047
Habitat Conservation & Restoration					
Sustainable Habitat Management	20,952	439	1,000	22,376	1,424
Fisheries Habitat Restoration (CBRP & Open Rivers)	22,953	202	0	21,647	(1,306)
Bronx River Restoration, NY	1,000	0	0	0	(1,000)
Port Aransas Nature Preserve, TX	300	0	0	0	(300)

NATIONAL MARINE FISHERIES SERVICE
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Chesapeake Bay Oyster Restoration, MD	4,600	0	0	0	(4,600)
Alabama Oyster Bed Reseeding & Fishery Habitat Enhancement	800	0	0	0	(800)
Merrimack River Fish Habitat, NH	100	0	0	0	(100)
Pioneer Valley Planning Commission to est Lower Connecticut River J	150	0	0	0	(150)
NU Great Lakes Restoration, IL	1,000	0	0	0	(1,000)
Southern New England Seagrass Research and Restoration Project, CT	500	0	0	0	(500)
Natural Stream Restoration Program, WV	750	0	0	0	(750)
Chesapeake Bay Blue Crab Research, MD	550	0	0	0	(550)
Subtotal, Habitat Conservation & Restoration	53,655	641	1,000	44,023	(9,632)
Other Activities Supporting Fisheries					
Antarctic Research	2,639	79	0	2,718	79
Aquaculture	4,052	50	2,000	6,102	2,050
Climate Regimes & Ecosystem Productivity	2,055	56	2,700	4,811	2,756
Computer Hardware and Software - FY 2004 Omnibus Funded in PAC	3,417	43	0	3,460	43
Cooperative Research	11,455	119	6,000	17,567	6,112
Information Analyses & Dissemination	19,328	596	0	19,905	577
Marine Resources Monitoring, Assessment & Prediction Prgm (MarMa	842	0	0	842	0
National Environmental Policy Act (NEPA)	8,211	132	0	8,336	125
NMFS Facilities Maintenance	6,477	78	0	6,535	58
Southwest Fisheries Science Center	1,000	0	0	1,000	0
Regional Studies	8,048	82	0	7,206	(842)
Bering Sea Fishermen's Association	190	0	0	0	(190)
Yukon River Drainage Association	180	0	0	0	(180)
Gulf of Alaska Coastal Communities Coalition	150	0	0	0	(150)
New England Multi-Species Survey	3,000	0	0	0	(3,000)
Science Consortium for Ocean Replenishment at Mote marine Lab	500	0	0	0	(500)
Lobster Institute CORE Initiative - Univ of Maine	150	0	0	0	(150)
Summer Flounder Initiative, NJ	1,000	0	0	0	(1,000)
Consortium for Wildlife Bycatch Reduction MA & NH	1,250	0	0	0	(1,250)
Joint Institute for Marine and Atmospheric Research, HI	1,250	0	0	0	(1,250)
James J. Howard Marine Sciences Laboratory	300	0	0	0	(300)
Subtotal, Other Activities Supporting Fisheries	75,494	1,235	10,700	78,482	2,988
Total, National Marine Fisheries Service - ORF	754,005	12,266	190,649	890,642	136,637
Other National Marine Fisheries Service Accounts					
Total, National Marine Fisheries Service - PAC	4,600	0	0	0	(4,600)
Total, National Marine Fisheries Service - Other	120,369	(17,263)	(35,000)	21,110	(99,259)
GRAND TOTAL NMFS	878,974	(4,997)	155,649	911,752	32,778

OFFICE of ATMOSPHERIC RESEARCH
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Climate Research						
Laboratories & Cooperative Institutes						
Laboratories & Cooperative Institutes	53,500	51,576	1,141	(4)	52,648	1,072
NOAA Joint Institute for Northern Gulf of Mexico		1,761	0	0	0	(1,761)
Subtotal, Laboratories & Cooperative Institutions	53,500	53,337	1,141	(4)	52,648	(689)
Climate Data & Information						
Climate Data & Information	0	8,299	30	3,751	12,080	3,781
Subtotal, Climate Data & Information	0	8,299	30	3,751	12,080	3,781
Competitive Research Program						
Competitive Research Program (incl. NIDIS)	130,116	132,000	368	11,831	144,199	12,199
Subtotal, Competitive Research Program	130,116	132,000	368	11,831	144,199	12,199
Climate Operations						
Climate Operations	0	900	13	0	913	13
Subtotal, Climate Operations	0	900	13	0	913	13
Other Partnership Programs						
Climate Research						
Climate System Research Center		650	0	0	0	(650)
Climate Change and Air Pollutant Impacts to New England's Rare Alpine Zone, NH		350	0	0	0	(350)
Advanced Study Institute for Environmental Prediction, MD		1,000	0	0	0	(1,000)
Subtotal, Other Partnership Programs	1,128	2,000	0	0	0	(2,000)
Total, Climate Research	192,812	196,536	1,552	15,578	209,840	13,304
Weather & Air Quality Research						
Laboratories & Cooperative Institutes						
Laboratories & Cooperative Institutes	46,000	49,089	815	4,592	54,450	5,361
Nutrient & Mercury Speciation Measurement Stations		250	0	0	0	(250)
Subtotal, Laboratories & Cooperative Institutes	46,000	49,339	815	4,592	54,450	5,111
Weather & Air Quality Research Programs						
U.S. Weather Research Program (USWRP) (THORPEX)		5,500	0	0	5,500	0
Tornado Severe Storm Research / Phased Array Radar	2,901	2,972	0	1,000	3,972	1,000
Subtotal, Weather & Air Quality Research Programs	2,901	8,472	0	1,000	9,472	1,000
Other Partnership Programs						
Wind Hazards Reduction Program, IA	613	850	0	0	0	(850)
Coastal & Inland Hurricane Monitoring & Protection Program, AL	611	700	0	0	0	(700)
National Weather Radar Testbed Phased Array Radar, OK		350	0	0	0	(350)
Redstone UAS Development for Weather and Atmospheric Research, AL		750	0	0	0	(750)
Flooding/Storm Surge Disaster Mitigation, MS		500	0	0	0	(500)
AIRMAP at Univ. of New Hampshire, NH		300	0	0	0	(300)
Tornado and Hurricane Operations and Research, AL		800	0	0	0	(800)
Boise Center Aerospace Laboratory (BCAL) Watershed Modeling Utilizing LiDAR, ID		350	0	0	0	(350)
Univ of Tennessee - Atmospheric Science Research, TN		500	0	0	0	(500)
Southeastern Mercury Consortium, FL		500	0	0	0	(500)
Subtotal, Other Partnership Programs	3,169	5,600	0	0	0	(5,600)
Total, Weather & Air Quality Research	52,070	63,411	815	5,592	63,922	511
Ocean, Coastal, and Great Lakes Research						
Laboratories & Cooperative Institutes						
Laboratories & Cooperative Institutes	23,000	20,806	565	501	21,840	1,034
NOAA Joint Institute for Northern Gulf of Mexico		3,440	0	0	0	(3,440)
Subtotal, Laboratories & Cooperative Institutes	23,000	24,246	565	501	21,840	(2,406)
National Sea Grant College Program						
National Sea Grant College Program Base	57,100	54,997	88	0	55,085	88
Subtotal, National Sea Grant College Program	57,100	54,997	88	0	55,085	88
Nat'l Undersea Rsrch Program (NURP)						
Nat'l Undersea Research Program (NURP)	10,000	8,850	(8,850)	0	0	(8,850)
Subtotal, National Undersea Research Program (NURP)	14,700	8,850	(8,850)	0	0	(8,850)
Ocean Exploration and Research						
Ocean Exp & Rsrch (NURP moved in FY08)	19,522	18,591	8,875	350	27,816	9,225
Subtotal, Ocean Exploration and Research	19,522	18,591	8,875	350	27,816	9,225

OFFICE of ATMOSPHERIC RESEARCH
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Other Ecosystems Programs						
Aquatic Invasive Species Program	4,600	988	11	0	999	11
Marine Aquaculture Program	4,881	1,622	0	0	1,622	0
Subtotal, Other Ecosystems Programs	9,481	2,610	11	0	2,621	11
Invasive Species & Partnership Programs						
Lake Champlain Research Consortium	250	350	0	0	0	(350)
Lake Champlain Emerging Threats	400	250	0	0	0	(250)
Coastal Vulnerability to Climate Change Study, AK	940	100	0	0	0	(100)
Collaborate R&D Initiative for the Gulf of Mexico, AL	752	750	0	0	0	(750)
National Institute of Undersea Science and Technology, MS		5,000	0	0	0	(5,000)
National Sea Grant Law Center, MS		750	0	0	0	(750)
Tropical Ecosystem Science and Technology (TEST), MS		850	0	0	0	(850)
New Hampshire Lakes Association Aquatic Weed Control Program, NH		100	0	0	0	(100)
Nanotoxicology: The Biological Response to Nanoparticle Exposure, AL		700	0	0	0	(700)
Coupled Remote Sensing and Biological Monitoring of Invasive Plant Species, MI		650	0	0	0	(650)
Maumee Bay Fish Kill Study, OH		750	0	0	0	(750)
National Undersea Research Program NURP, CT		350	0	0	0	(350)
Inner Space Center, RI		300	0	0	0	(300)
Environmental Center, WV		1,750	0	0	0	(1,750)
Transforming New England, ME		200	0	0	0	(200)
Great Lakes Water Education STEM Project		500	0	0	0	(500)
County of Hawaii Coastal Land Use Extension Project		115	0	0	0	(115)
Subtotal, Other Partnership Programs	6,598	13,465	0	0	0	(13,465)
Total, Ocean, Coastal, & Great Lakes Rsrch	130,401	122,759	689	851	107,362	(15,397)
Info Tech, R&D, & Science Education						
High Performance Computing Initiatives	12,659	14,028	53	0	13,081	(947)
Total, Info Tech, R&D, & Science Education	12,659	14,028	53	0	13,081	(947)
Total, Office of Atmospheric Research - ORF	387,942	396,734	3,109	22,021	394,205	(2,529)
Other Office of Atmospheric Research Accounts						
Total, Office of Atmospheric Research - PAC	10,131	11,579	0	0	10,379	(1,200)
Total, Office of Atmospheric Research - Other	0	0	0	0	0	0
GRAND TOTAL OAR	398,073	408,313	3,109	22,021	404,584	(3,729)

NATIONAL WEATHER SERVICE
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Operations and Research					
Local Warnings and Forecasts Base	601,876	13,857	2,700	617,842	15,966
Air Quality Forecasting	5,445	0	0	5,445	0
Alaska Data Buoys	1,683	0	0	1,683	0
Sustain Cooperative Observer Network	1,871	0	0	1,871	0
Susquehanna River Basin Flood System	2,000	0	0	0	(2,000)
Urbanet III, MD	11,000	0	0	0	(11,000)
New England Weather Technology Initiative	200	0	0	0	(200)
NOAA Profiler Network	4,736	20	0	4,756	20
Pacific Island Compact	3,515	0	0	3,515	0
Strengthen U.S. Tsunami Warning Network	23,196	68	0	23,264	68
Western Kentucky Environmental Monitoring Network	700	0	0	0	(700)
Hawaii Rain Gages for NWS Pacific Region HQ, HI	360	0	0	0	(360)
Bryan County Oklahoma Nexrad Doppler Radar	175	0	0	0	(175)
Meteorological Equipment, Pierce College Weather Station, CA	85	0	0	0	(85)
Storm Surge Model, FL	500	0	0	0	(500)
Subtotal, Local Warnings and Forecasts	657,342	13,945	2,700	658,376	1,034
Advanced Hydrological Prediction Services	6,037	0	0	6,037	0
Aviation Weather	5,253	0	6,110	11,363	6,110
WFO Maintenance	7,316	0	0	7,316	0
Improved Hydro Modeling of Water Resources, ID	350	0	0	0	(350)
Remote Infrasonic Monitoring of Natural Hazards, MS	1,500	0	0	0	(1,500)
Regional Ensembling Sys for Atmosph Dispersion, MS	1,500	0	0	0	(1,500)
Joint Center for Hurricane Research, FL	250	0	0	0	(250)
Flood Awareness and Emergency Preparedness Education Campaign	250	0	0	0	(250)
Weather Radio Transmitters					
Weather Radio Transmitters Base	2,297	0	0	2,297	0
Subtotal, Weather Radio Transmitters	2,532	0	0	2,297	(235)
Subtotal, Local Warnings and Forecasts	682,330	13,945	8,810	685,389	3,059
Central Forecast Guidance					
Central Forecast Guidance	67,253	2,321	10,000	79,525	12,272
Subtotal, Central Forecast Guidance	67,253	2,321	10,000	79,525	12,272
Total, Operations and Research	749,583	16,266	18,810	764,914	15,331
Systems Operation & Maintenance (O&M)					
NEXRAD	45,121	144	1,029	46,248	1,127
ASOS	9,657	58	1,500	11,202	1,545
AWIPS	38,065	57	1,239	39,346	1,281
NWSTG Backup - CIP	5,512	0	0	5,512	0
Total, Systems Operation & Maintenance	98,355	259	3,768	102,308	3,953
Total, National Weather Service - ORF	847,938	16,525	22,578	867,222	19,284
Other National Weather Service Accounts					
Total, National Weather Service - PAC	110,951	(1,000)	(633)	96,658	(14,293)
Total, National Weather Service - Other	0	0	0	0	0
GRAND TOTAL NWS	958,889	15,525	21,945	963,880	4,991

NATIONAL ENVIRONMENTAL SATELLITE, DATA and INFORMATION SERVICE
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Environmental Satellite Observing Systems						
Satellite Command and Control	36,084	38,729	873	0	39,562	833
NSOF Operations	7,351	7,652	164	0	7,810	158
Subtotal, Satellite Command and Control	43,435	46,381	1,037	0	47,372	991
Product Processing and Distribution						
Product Processing and Distribution	29,681	31,457	390	880	32,698	1,241
Subtotal, Product Processing and Distribution	29,681	31,457	390	880	32,698	1,241
Product Development, Readiness & Application						
Product Development, Readiness & Application	19,537	20,415	277	0	20,671	256
Prod Devel, Read & App (Ocean Remote Sensing)	3,769	3,930	49	0	3,979	49
Joint Center/Accelerate Use of Satellites	3,180	3,294	26	0	3,320	26
Subtotal, Product Development, Readiness & Application	26,486	27,639	352	0	27,970	331
Commercial Remote Sensing Licensing & Enforcement	1,232	1,285	16	0	1,301	16
Office of Space Commercialization	597	634	15	0	649	15
Group on Earth Observations (GEO)	488	500	0	0	500	0
Total, Environmental Satellite Observing Sys	101,919	107,896	1,810	880	110,490	2,594
Data Centers & Information Services						
Archive, Access & Assessment	33,848	35,526	595	7,000	43,076	7,550
KY	6,917	6,910	0	0	1,361	(5,549)
MD	5,241	5,236	0	0	993	(4,243)
NC - Quality Assurance/Quality Control	1,467	1,504	0	0	275	(1,229)
WV	7,337	7,330	0	0	1,434	(5,896)
Subtotal, Archive, Access & Assessment	54,810	56,506	595	7,000	47,139	(9,367)
Coastal Data Development	4,398	4,559	38	0	4,597	38
Regional Climate Centers	3,572	3,900	0	0	0	(3,900)
International Pacific Research Ctr (U of H)	1,786	1,750	0	0	0	(1,750)
Environmental Data Systems Modernization	9,179	9,511	6	0	9,511	0
Integrated Environ Applications & Info Ctr	2,456	2,500	0	0	0	(2,500)
Coop Institue for Remote Sensing Applications, AL	1,034	800	0	0	0	(800)
Total, Data Centers & Information Services	77,235	79,526	639	7,000	61,247	(18,279)
Total, NESDIS - ORF	179,154	187,422	2,449	7,880	171,737	(15,685)
Other NESDIS Accounts						
Total, NESDIS - PAC	775,922	990,579	0	276,269	1,256,857	266,278
Total, NESDIS - Other	0	0	0	0	0	0
GRAND TOTAL NESDIS	955,076	1,178,001	2,449	284,149	1,428,594	250,593

PROGRAM SUPPORT
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Corporate Services					
Under Secretary and Associate Offices					
Under Secretary and Associate Offices Base	27,676	813	949	29,438	1,762
Subtotal, Under Secretary and Assoc. Ofc	27,676	813	949	29,438	1,762
NOAA Wide Coporate Services & Agency Management					
NOAA Wide Coporate Services & Agency Management Base	109,329	5,414	6,108	120,851	11,522
DOC Accounting System	10,171	0	0	10,171	0
Payment to the DOC Working Capital Fund	36,583	5,392	0	41,944	5,361
Subtotal, NOAA Wide Corporate Srvc & Agency Mgmt	156,083	10,806	6,108	172,966	16,883
Office of Chief Information Officer					
IT Security	22,050	39	0	2,089	(19,961)
Subtotal, Office of Chief Information Officer	22,050	39	0	2,089	(19,961)
Total, Corporate Services	205,809	11,658	7,057	204,493	(1,316)
NOAA Education Program					
Education Program / Initiative	1,574	20	0	1,287	(287)
JASON Education and Outreach	5,600	0	0	0	(5,600)
BWET California	2,500	0	0	0	(2,500)
BWET Regional Programs	7,200	0	0	0	(7,200)
Educ Partnership Prog/Minority Serving Institutions (EPPMSI)	15,000	62	0	14,323	(677)
Chesapeake Bay Interpretive Buoys	500	0	0	0	(500)
Narragansett Bay Marine Education (Save the Bay)	1,000	0	0	0	(1,000)
Training Next Generation Weather Forecasters - San Jose State Univ.	115	0	0	0	(115)
Competitive Educational Grants	8,500	43	4,000	5,043	(3,457)
Science Education on the Tennessee - Tombigbee Waterway, MS	375	0	0	0	(375)
Hawaii Education Program, HI	1,500	0	0	0	(1,500)
Base to Campus Conversion, ME	500	0	0	0	(500)
Partnership to Advance Environmental Literacy, NY	250	0	0	0	(250)
Sea Grant Education Outreach, AL	500	0	0	0	(500)
Savannah State Univ HBCU Marine Sciences expansion	450	0	0	0	(450)
Valapariso University for Meteorological Equipment, IN	250	0	0	0	(250)
University of Evansville Conservation Park Programs for Environment	300	0	0	0	(300)
Total, NOAA Education Program	46,114	125	4,000	20,653	(25,461)
Facilities					
NOAA Facilities Management & Construction and Safety	21,000	570	8,776	30,346	9,346
Subtotal, NOAA Fac Mgmt, Const& Maint	21,000	570	8,776	30,346	9,346
Total, Facilities	21,000	570	8,776	30,346	9,346
Marine Operations & Maintenance					
Marine Services					
Data Acquisition	118,511	1,975	2,199	117,625	(886)
Subtotal, Marine Services	118,511	1,975	2,199	117,625	(886)
Fleet Planning and Maintenance					
Fleet Planning and Maintenance	28,000	0	0	17,034	(10,966)
Subtotal, Fleet Planning and Maintenance	28,000	0	0	17,034	(10,966)
Total, Marine Operations & Maintenance	146,511	1,975	2,199	134,659	(11,852)
Aviation Operations					
Aircraft Services	31,544	(526)	0	29,509	(2,035)
Total, Aviation Operations	31,544	(526)	0	29,509	(2,035)
Total, Office of Marine & Aviation Operations	178,055	1,449	2,199	164,168	(13,887)
Total, Program Support - ORF	450,978	13,802	22,032	419,660	(31,318)
Other Program Support Accounts					
Total, Program Support - PAC	81,750	0	(60,750)	5,000	(76,750)
Total, Program Support - Other	25,946	2,104	0	28,050	2,104
GRAND TOTAL PS	558,674	15,906	(38,718)	452,710	(105,964)

ORF SUMMARY
LINE OFFICE DIRECT OBLIGATIONS
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
National Ocean Service	467,930	496,967	4,929	22,348	462,671	(34,296)
National Marine Fisheries Service	708,340	754,005	12,266	190,649	890,642	136,637
Office of Atmospheric Research	387,942	396,734	3,109	22,021	394,205	(2,529)
National Weather Service	805,294	847,938	16,525	22,578	867,222	19,284
National Environmental Satellite Data & Information Srv.	179,154	187,422	2,449	7,880	171,737	(15,685)
Program Support	392,382	450,978	13,802	22,032	419,660	(31,318)
SUBTOTAL LO DIRECT OBLIGATIONS	2,941,042	3,134,044	53,080	287,508	3,206,137	72,093

ORF ADJUSTMENTS
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Operations, Research and Facilities	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
SUBTOTAL LO DIRECT OBLIGATIONS	2,941,042	3,134,044	53,080	287,508	3,206,137	72,093
FINANCING						0
Recoveries from Prior Year			0		0	0
Cash Refunds/Prior Year Recoveries			0		0	0
De-Obligations	(5,000)	(6,000)	(5,000)		(11,000)	(5,000)
Unobligated Balance Rescission Adj BA	(5,108)		0		0	0
Unobligated Balance, EOY			0		0	0
Unobligated Balance, not apportioned			0		0	0
Unobligated Balance, Expiring			0		0	0
Unobligated Balance Adj SOY (start of year)			0		0	0
Total ORF Financing	(10,108)	(6,000)	(5,000)	0	(11,000)	(5,000)
SUBTOTAL BUDGET AUTHORITY	2,930,934	3,128,044	48,080	287,508	3,195,137	67,093
TRANSFERS						
Unobligated Balance Rescission / Approp Adj	5,108		0		0	0
Transfer to ORF from PAC - Hollings Scholarship			0		0	0
Transfer from PAC			0		0	0
Transfer to PAC from ORF			0		0	0
Transfer to FFPA	235	(495)	495		0	495
Transfer from DOD			0		0	0
Transfer from P&D to ORF	(77,000)	(79,000)	(25,600)		(104,600)	(25,600)
Transfer from CZMF to ORF	(3,000)	(3,000)	0		(3,000)	0
Transfer to ORF from Pacific Salmon	0		0		0	0
Transfer to Dept of Interior - Bureau of Indian Affairs			0		0	0
Transfer to CCSP (USDA Farm Bill)					0	0
Total ORF Transfers	(74,657)	(82,495)	(25,105)	0	(107,600)	(25,105)
SUBTOTAL APPROPRIATION	2,856,277	3,045,549	22,975	287,508	3,087,537	41,988

PROCUREMENT, ACQUISITION, and CONSTRUCTION
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Procurement, Acquisition and Construction	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
NOS					
CELCP Acquisition					
Coastal and Estuarine Land Conservation Program	15,000	0	0	15,000	0
Subtotal, Acquisition	15,000	0	0	15,000	0
NERRS Construction:					
National Estuarine Rsrch Reserve Construction & Land Acq (NERRS)	7,043	0	0	3,890	(3,153)
Lake Superior Nat'l Estuarine Rsch Reserve		0	0	0	0
Great Bay Partnership, NH	3,000	0	0	0	(3,000)
Subtotal, NERRS Construction	10,043	0	0	3,890	(6,153)
Marine Sanctuaries Construction:					
Marine Sanctuaries Base	12,995	0	0	5,495	(7,500)
Thunder Bay NMS Exhibit	500	0	0	0	(500)
Subtotal, Marine Sanctuary Construction	13,495	0	0	5,495	(8,000)
Other NOS Construction/Acquisition					
NGI Science Center Bldg - Stennis, MS	4,500	0	0	0	(4,500)
Dauphin Island East End Coastline Restoration Project, AL	400	0	0	0	(400)
Real Time Satellite Data Receiving Station, DE	750	0	0	0	(750)
Horn Point Laboratory, MD	2,000	0	0	0	(2,000)
Subtotal, Other NOS Construction	7,650	0	0	0	(7,650)
Subtotal, Construction	31,188	0	0	9,385	(21,803)
Total NOS - PAC	46,188	0	0	24,385	(21,803)
NMFS					
Construction					
Center for Aquatic Resources Management - AL	1,500	0	0	0	(1,500)
Center for Marine Education and Research, MS	1,500	0	0	0	(1,500)
Mississippi Center for Conservation and Biodiversity, MS	1,600	0	0	0	(1,600)
Subtotal, NMFS Construction	4,600	0	0	0	(4,600)
Total, NMFS - PAC	4,600	0	0	0	(4,600)
OAR					
Systems Acquisition					
Research Supercomputing/ CCRI	10,379	0	0	10,379	0
Pell Library and Undersea Exploration Center - research equipment, RI	1,200	0	0	0	(1,200)
Subtotal, OAR Systems Acquisition	11,579	0	0	10,379	(1,200)
Total, OAR - PAC	11,579	0	0	10,379	(1,200)
NWS					
Systems Acquisition					
ASOS	1,635	0	0	1,635	0
AWIPS	19,064	0	5,300	24,364	5,300
NEXRAD	8,376	0	(400)	7,976	(400)
NWSTG Legacy Replacement	1,195	0	0	1,195	0
Radiosonde Network Replacement	4,014	0	0	4,014	0
Weather and Climate Supercomputing	26,169	0	3,000	29,169	3,000
Cooperative Observer Network Modernization (NERON)	3,734	0	0	3,734	0
Complete and Sustain NOAA Weather Radio	10,000	0	1,337	11,337	1,337
NOAA Profiler Conversion	7,500	0	2,230	9,730	2,230
Henderson County Weather Sirens, KY	110	0	0	0	(110)
NOAA West Coast Doppler Radar, WA	2,000	0	0	0	(2,000)
Cooperative Institute and Research Center for Southeast Weather, AL	10,550	0	0	0	(10,550)
Subtotal, NWS Systems Acquisition	94,347	0	11,467	93,154	(1,193)
Construction					
WFO Construction	12,504	0	(9,000)	3,504	(9,000)
NOAA Center for Weather & Climate Prediction	4,100	(1,000)	(3,100)	0	(4,100)
Subtotal, NWS Construction	16,604	(1,000)	(12,100)	3,504	(13,100)
Total, NWS - PAC	110,951	(1,000)	(633)	96,658	(14,293)

PROCUREMENT, ACQUISITION, and CONSTRUCTION
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Procurement, Acquisition and Construction	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
NESDIS					
Systems Acquisition					
NOAA Satellite and Climate Sensors					
Geostationary Systems - N	73,263	0	(15,662)	57,601	(15,662)
Geostationary Systems - R	465,000	0	272,000	737,000	272,000
Subtotal, NESDIS - GOES	538,263	0	256,338	794,601	256,338
Polar Orbiting Systems - POES	65,419	0	(22,284)	43,135	(22,284)
JASON-3	0	0	20,000	20,000	20,000
Polar Orbiting Systems - NPOESS	287,985	0	94,215	382,200	94,215
EOS & Advanced Polar Data Processing, Distribution & Archiving Sys	990	0	0	990	0
Subtotal, NESDIS - EOS	990	0	0	990	0
CIP - single point of failure	2,772	0	0	2,772	0
Subtotal, NESDIS - CIP	2,772	0	0	2,772	0
Comprehensive Large Array Data Stewardship Sys (CLASS)	16,467	0	0	6,476	(9,991)
NPOESS Preparatory Data Exploitation	2,455	0	2,000	4,455	2,000
Restoration of Climate Sensors - Data Records	74,000	0	(74,000)	0	(74,000)
Subtotal, NESDIS Systems Acquisition	988,351	0	276,269	1,254,629	266,278
Construction					
Satellite CDA Facility	2,228	0	0	2,228	0
Subtotal, NESDIS Construction	2,228	0	0	2,228	0
Total, NESDIS - PAC	990,579	0	276,269	1,256,857	266,278
Program Support / Corporate Services / Acquisition					
Program Support / Construction					
Pacific Region Center	60,250	0	(54,250)	0	(60,250)
Construction Projects	10,000	0	0	0	(10,000)
Subtotal, Construction	70,250	0	(54,250)	0	(70,250)
Program Support / OMAO					
OMAO - Fleet Replacement					
FSV Calibration	1,000	0	(1,000)	0	(1,000)
Hydro Survey Launch Construction	2,400	0	(2,400)	0	(2,400)
Temporary Berthing for HENRY B. BIGELOW	1,000	0	0	1,000	0
Fleet Capital Improvements & Tech Infusion (formerly known as Vessel Equipment & Technology Refreshment)	1,000	0	0	1,000	0
Ship Acquisition, Conversion & Maintenance	6,100	0	(6,100)	0	(6,100)
New Vessel Construction	0	0	3,000	3,000	3,000
Subtotal, OMAO Fleet Replacement	11,500	0	(6,500)	5,000	(6,500)
Total, Program Support - PAC	81,750	0	(60,750)	5,000	(76,750)
GRAND TOTAL PAC	1,245,647	(1,000)	214,886	1,393,279	147,632

PAC ADJUSTMENTS
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN Procurement, Acquisition and Construction	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
SUBTOTAL DIRECT OBLIGATIONS	979,207	1,245,647	(1,000)	214,886	1,393,279	147,632
FINANCING						
De-Obligations		(2,000)	0		(2,000)	0
Unobligated Balance Rescission Adj BA	(6,264)		0		0	0
Total PAC Financing	(6,264)	(2,000)	0	0	(2,000)	0
SUBTOTAL BUDGET AUTHORITY	972,943	1,243,647	(1,000)	214,886	1,391,279	147,632
TRANSFERS/RESCISSIONS						
Unobligated Balance Rescission Adj Approp	6,264		0		0	0
Total PAC Transfers/Rescissions	6,264	0	0	0	0	0
SUBTOTAL APPROPRIATION	979,207	1,243,647	(1,000)	214,886	1,391,279	147,632

GRAND TOTAL SUMMARY
Discretionary Appropriations
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN ORF, PAC, and Other Discretionary Appropriations	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Operations, Research and Facilities	2,856,277	3,045,549	22,975	287,508	3,087,537	41,988
Procurement, Acquisition and Construction	979,207	1,243,647	(1,000)	214,886	1,391,279	147,632
Coastal Zone Management Fund	3,000	3,000	0	0	3,000	0
Pacific Coastal Salmon Fund	67,000	80,000	0	(35,000)	0	(80,000)
Medicare Eligible Retiree Health Care Fund	1,802	1,674	260	0	1,934	260
GRAND TOTAL DISCRETIONARY APPROPRIATION	3,907,286	4,373,870	22,235	467,394	4,483,750	109,880

OTHER ACCOUNTS (DISCRETIONARY)
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
<u>NOS</u>						
Coastal Zone Management Fund Obligations	0	0	0	0	0	0
Coastal Zone Management Fund Budget Authority	0	0	0	0	0	0
Coastal Zone Management Fund Appropriation	3,000	3,000	0	0	3,000	0
Subtotal, NOS Oth Disc Direct Obligation	0	0	0	0	0	0
Subtotal, NOS Oth Disc Budget Authority	0	0	0	0	0	0
Subtotal, NOS Oth Disc Appropriation	3,000	3,000	0	0	3,000	0
<u>NMFS</u>						
Foreign Fishing Observer Fund Obligations	0	0	261	0	261	261
Foreign Fishing Observer Fund Budget Authority	0	0	0	0	0	0
Foreign Fishing Observer Fund Appropriation	0	0	0	0	0	0
Fisheries Finance Program Account Obligations	235	0	0	0	0	0
Fisheries Finance Program Account Budget Authority	235	(495)	495	0	0	495
Fisheries Finance Program Account Appropriation	0	0	0	0	0	0
Promote and Develop Fisheries Obligations	0	0	0	0	0	0
Promote and Develop Fisheries Budget Authority	(77,000)	(79,000)	(25,600)	0	(104,600)	(25,600)
Promote and Develop Fisheries Appropriation	0	0	0	0	0	0
Pacific Coastal Salmon Fund Obligations	67,000	80,000	0	(35,000)	0	(80,000)
Pacific Coastal Salmon Fund Budget Authority	67,000	80,000	0	(35,000)	0	(80,000)
Pacific Coastal Salmon Fund Appropriation	67,000	80,000	0	(35,000)	0	(80,000)
Marine Mammal Unusual Mortality Event Fund Obligations	0	0	286	0	286	286
Marine Mammal Unusual Mortality Event Fund Budget Authority	0	0	0	0	0	0
Marine Mammal Unusual Mortality Event Fund Appropriations	0	0	0	0	0	0
Subtotal, NMFS Oth Disc Direct Obligation	67,235	80,000	547	(35,000)	547	(79,453)
Subtotal, NMFS Oth Disc Budget Authority	(9,765)	505	(25,105)	(35,000)	(104,600)	(105,105)
Subtotal, NMFS Oth Disc Appropriation	67,000	80,000	0	(35,000)	0	(80,000)
<u>OMAO</u>						
Medicare Eligible Retiree Healthcare Fund Acct Obligations	1,802	1,674	260	0	1,934	260
Medicare Eligible Retiree Healthcare Fund Acct Budget Authority	1,802	1,674	260	0	1,934	260
Medicare Eligible Retiree Healthcare Fund Acct Appropriations	1,802	1,674	260	0	1,934	260
Subtotal, OMAO Oth Disc Direct Obligations	1,802	1,674	260	0	1,934	260
Subtotal, OMAO Oth Disc Budget Authority	1,802	1,674	260	0	1,934	260
Subtotal, OMAO Oth Disc Appropriation	1,802	1,674	260	0	1,934	260
TOTAL, OTHER DISC DIRECT OBLIGATIONS	69,037	81,674	807	(35,000)	2,481	(79,193)
TOTAL, OTHER DISC BUDGET AUTHORITY	(7,963)	2,179	(24,845)	(35,000)	(102,666)	(104,845)
TOTAL, OTHER DISC APPROPRIATION	71,802	84,674	260	(35,000)	4,934	(79,740)

OTHER ACCOUNTS (MANDATORY)

(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
NOS						
Coastal Zone Management Fund Obligations	0	0	0	0	0	0
Coastal Zone Management Fund Budget Authority	(1,500)	(1,500)	0	0	(1,500)	0
Coastal Zone Management Fund Appropriation	(3,000)	(3,000)	0	0	(3,000)	0
Damage Assessment & Restoration Revolving Fund Obligations	11,600	15,600	0	0	15,600	0
Damage Assessment & Restoration Revolving Fund Budget Authority	1,000	2,000	0	0	2,000	0
Damage Assessment & Restoration Revolving Fund Appropriation	0	0	0	0	0	0
Subtotal, NOS Oth Mand Direct Obligations	11,600	15,600	0	0	15,600	0
Subtotal, NOS Oth Mand Budget Authority	(500)	500	0	0	500	0
Subtotal, NOS Oth Mand Appropriation	(3,000)	(3,000)	0	0	(3,000)	0
NMFS						
Promote and Develop Fisheries Obligations	7,594	29,510	(20,110)	0	9,400	(20,110)
Promote and Develop Fisheries Budget Authority	84,594	108,510	5,490	0	114,000	5,490
Promote and Develop Fisheries Appropriation	0	0	0	0	0	0
Fisheries Finance Program Account Obligations	27,389	1,996	0	0	0	(1,996)
Fisheries Finance Program Account Budget Authority	27,389	1,996	0	0	0	(1,996)
Fisheries Finance Program Account Appropriation	27,389	1,996	0	0	0	(1,996)
Federal Ship Financing Obligations	1,000	221	(221)	0	0	(221)
Federal Ship Financing Budget Authority	(1,000)	(773)	773	0	0	773
Federal Ship Financing Appropriation	(1,000)	(773)	773	0	0	773
Environmental Improve & Restoration Fund Obligations	8,060	1,198	2,521	0	3,719	2,521
Environmental Improve & Restoration Fund Budget Authority	8,060	1,198	2,521	0	3,719	2,521
Environmental Improve & Restoration Fund Appropriation	8,060	1,198	2,521	0	3,719	2,521
Limited Access System Administration Fund Obligations	7,444	7,444	0	0	7,444	0
Limited Access System Administration Fund Budget Authority	7,444	7,444	0	0	7,444	0
Limited Access System Administration Fund Appropriation	7,444	7,444	0	0	7,444	0
Subtotal, NMFS Oth Mand Direct Obligations	51,487	40,369	(17,810)	0	20,563	(19,806)
Subtotal, NMFS Oth Mand Budget Authority	126,487	118,375	8,784	0	125,163	6,788
Subtotal, NMFS Oth Mand Appropriation	41,893	9,865	3,294	0	11,163	1,298
OMAO						
NOAA Corp Commissioned Officers Retirement Obligations	23,119	24,272	1,844	0	26,116	1,844
NOAA Corp Commissioned Officers Retirement Budget Authority	23,119	24,272	1,844	0	26,116	1,844
NOAA Corp Commissioned Officers Retirement Budget Appropriation	23,119	24,272	1,844	0	26,116	1,844
Subtotal, OMAO Oth Mand Direct Obligations	23,119	24,272	1,844	0	26,116	1,844
Subtotal, OMAO Oth Mand Budget Authority	23,119	24,272	1,844	0	26,116	1,844
Subtotal, OMAO Oth Mand Appropriation	23,119	24,272	1,844	0	26,116	1,844
TOTAL, OTH MAND DIRECT OBLIGATIONS	86,206	80,241	(15,966)	0	62,279	(17,962)
TOTAL, OTH MAND BUDGET AUTHORITY	149,106	143,147	10,628	0	151,779	8,632
TOTAL, OTH MAND APPROPRIATION	62,012	31,137	5,138	0	34,279	3,142

SUMMARY OF DISCRETIONARY RESOURCES
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
Discretionary Direct Obligations						
ORF Direct Obligations	2,941,042	3,134,044	53,080	287,508	3,206,137	72,093
PAC Direct Obligations	979,207	1,245,647	(1,000)	214,886	1,393,279	147,632
OTHER Direct Obligations	69,037	81,674	807	(35,000)	2,481	(79,193)
TOTAL Discretionary Direct Obligations	3,989,286	4,461,365	52,887	467,394	4,601,897	140,532
Discretionary Budget Authority						
ORF Budget Authority	2,930,934	3,128,044	48,080	287,508	3,195,137	67,093
PAC Budget Authority	972,943	1,243,647	(1,000)	214,886	1,391,279	147,632
OTHER Budget Authority	(7,963)	2,179	(24,845)	(35,000)	(102,666)	(104,845)
TOTAL Discretionary Budget Authority	3,895,914	4,373,870	22,235	467,394	4,483,750	109,880
Discretionary Appropriations						
ORF Appropriations	2,856,277	3,045,549	22,975	287,508	3,087,537	41,988
PAC Appropriations	979,207	1,243,647	(1,000)	214,886	1,391,279	147,632
OTHER Appropriations	71,802	84,674	260	(35,000)	4,934	(79,740)
TOTAL Discretionary Appropriation	3,907,286	4,373,870	22,235	467,394	4,483,750	109,880

NOAA SUMMARY
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
TOTAL Direct Obligations (Discretion & Mand)	4,075,492	4,541,606	36,921	467,394	4,664,176	122,570
TOTAL Budget Authority (Discretion & Mand)	4,045,020	4,517,017	32,863	467,394	4,635,529	118,512
TOTAL Appropriation (Discretion & Mand)	3,969,298	4,405,007	27,373	467,394	4,518,029	113,022
Reimbursable Financing	242,444	242,000	0	0	242,000	0
TOTAL OBLIGATIONS (Direct & Reimbursable)	4,317,936	4,783,606	36,921	467,394	4,906,176	122,570
Offsetting Receipts					(5,969)	(5,969)
TOTAL OBLIGATIONS (Direct, Reimb & Offsetting Receipts)	4,317,936	4,783,606	36,921	467,394	4,900,207	116,601

LINE OFFICE SUMMARY
(\$ in Thousands)

FY 08 PROPOSED OPERATING PLAN	FY 2008 ENACTED	FY 2009 OMNIBUS	FY 2010 ATBs	FY 2010 Program Changes	FY 2010 PRESIDENT'S BUDGET	FY 2010 PRES BUD vs FY 2009 OMNIBUS
National Ocean Service						
ORF	467,930	496,967	4,929	22,348	462,671	(34,296)
PAC	56,599	46,188	0	0	24,385	(21,803)
OTHER	11,600	15,600	0	0	15,600	0
TOTAL, NOS	536,129	558,755	4,929	22,348	502,656	(56,099)
National Marine Fisheries Service						
ORF	708,340	754,005	12,266	190,649	890,642	136,637
PAC	2,021	4,600	0	0	0	(4,600)
OTHER	118,722	120,369	(17,263)	(35,000)	21,110	(99,259)
TOTAL, NMFS	829,083	878,974	(4,997)	155,649	911,752	32,778
Oceanic and Atmospheric Research						
ORF	387,942	396,734	3,109	22,021	394,205	(2,529)
PAC	10,131	11,579	0	0	10,379	(1,200)
OTHER	0	0	0	0	0	0
TOTAL, OAR	398,073	408,313	3,109	22,021	404,584	(3,729)
National Weather Service						
ORF	805,294	847,938	16,525	22,578	867,222	19,284
PAC	106,112	110,951	(1,000)	(633)	96,658	(14,293)
OTHER	0	0	0	0	0	0
TOTAL, NWS	911,406	958,889	15,525	21,945	963,880	4,991
NESDIS						
ORF	179,154	187,422	2,449	7,880	171,737	(15,685)
PAC	775,922	990,579	0	276,269	1,256,857	266,278
OTHER	0	0	0	0	0	0
TOTAL, NESDIS	955,076	1,178,001	2,449	284,149	1,428,594	250,593
Program Support/Corp Srv, Edu, Fac						
ORF	240,541	272,923	12,353	19,833	255,492	(17,431)
PAC	23,163	70,250	0	(54,250)	0	(70,250)
OTHER	0	0	0	0	0	0
TOTAL, PS/Corp Srv, Edu, Fac	263,704	343,173	12,353	(34,417)	255,492	(87,681)
Program Support/OMAO						
ORF	151,841	178,055	1,449	2,199	164,168	(13,887)
PAC	5,259	11,500	0	(6,500)	5,000	(6,500)
OTHER	24,921	25,946	2,104	0	28,050	2,104
TOTAL, PS/OMAO	182,021	215,501	3,553	(4,301)	197,218	(18,283)
Total PS ORF	392,382	450,978	13,802	22,032	419,660	(31,318)
Total PS PAC	28,422	81,750	0	(60,750)	5,000	(76,750)
Total PS Other	24,921	25,946	2,104	0	28,050	2,104
TOTAL, PS	445,725	558,674	15,906	(38,718)	452,710	(105,964)
DIRECT OBLIGATIONS						
ORF	2,941,042	3,134,044	53,080	287,508	3,206,137	72,093
PAC	979,207	1,245,647	(1,000)	214,886	1,393,279	147,632
OTHER	155,243	161,915	(15,159)	(35,000)	64,760	(97,155)
TOTAL, DIRECT OBLIGATIONS	4,075,492	4,541,606	36,921	467,394	4,664,176	122,570
ORF Adjustments (Deobligations / Rescissions)	(10,108)	(6,000)	(5,000)	0	(11,000)	(5,000)
ORF Transfers	(75,703)	(82,495)	(25,105)	0	(107,600)	(25,105)
PAC Adjustments (Deobligations / Rescissions)	(6,264)	(2,000)	0	0	(2,000)	0
PAC Transfers	7,243	0	0	0	0	0
OTHER Discretionary Adjustments	2,832	3,000	(547)	0	2,453	(547)
Mandatory Accounts Excluded	(86,206)	(80,241)	15,966	0	(62,279)	17,962
TOTAL, DISCRETIONARY APPROPRIATIONS	3,907,286	4,373,870	22,235	467,394	4,483,750	109,880

Back Cover: The National Oceanographic Data Center in partnership with the University of Miami analyzes POES sea surface temperature data for climatological trends (East Hemisphere Projection).

Image created by the NOAA Environmental Visualization Lab.

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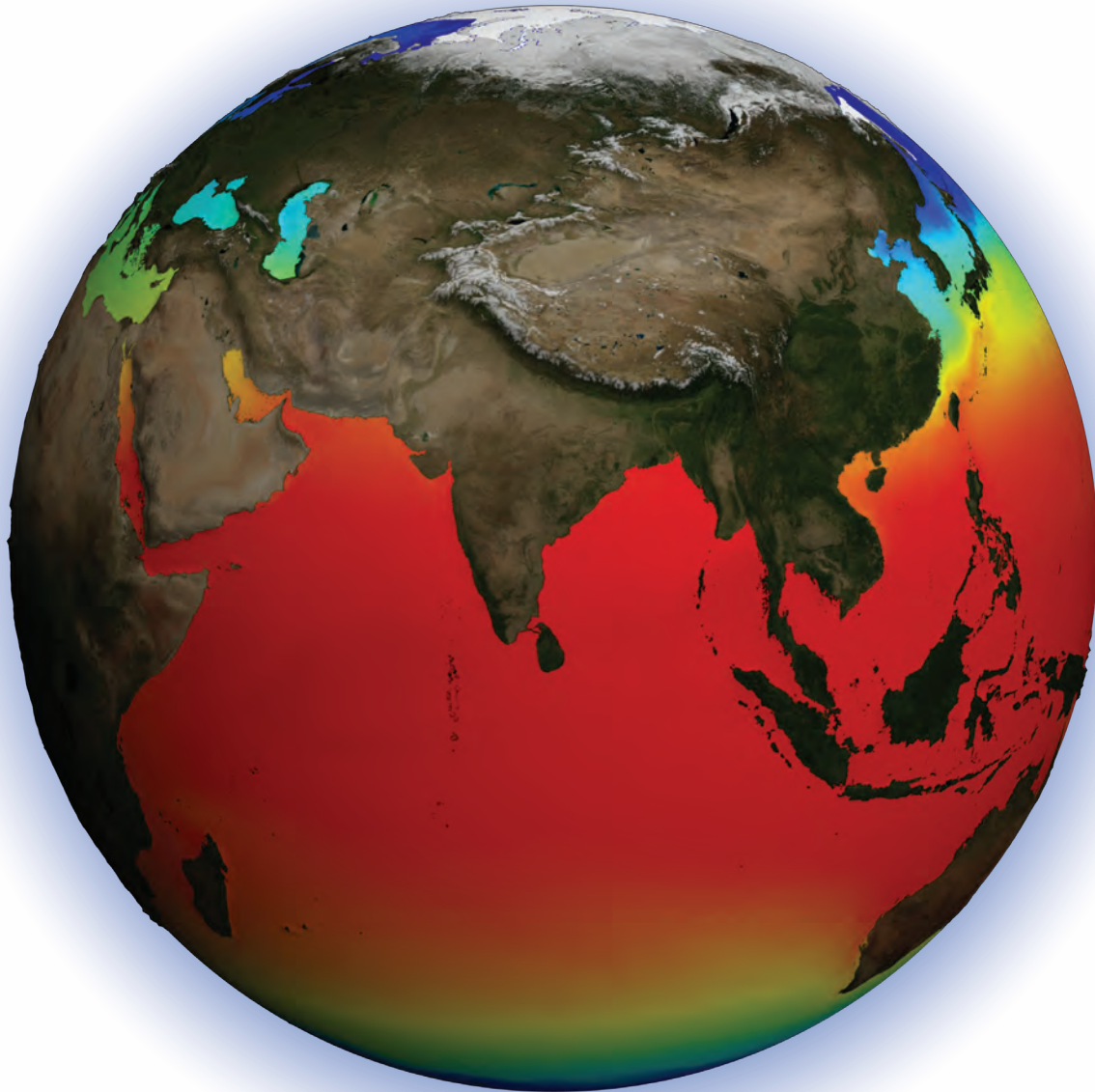
National Weather Service
www.nws.noaa.gov

National Marine Fisheries Service
www.nmfs.noaa.gov

National Environmental Satellite, Data and Information Service
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