

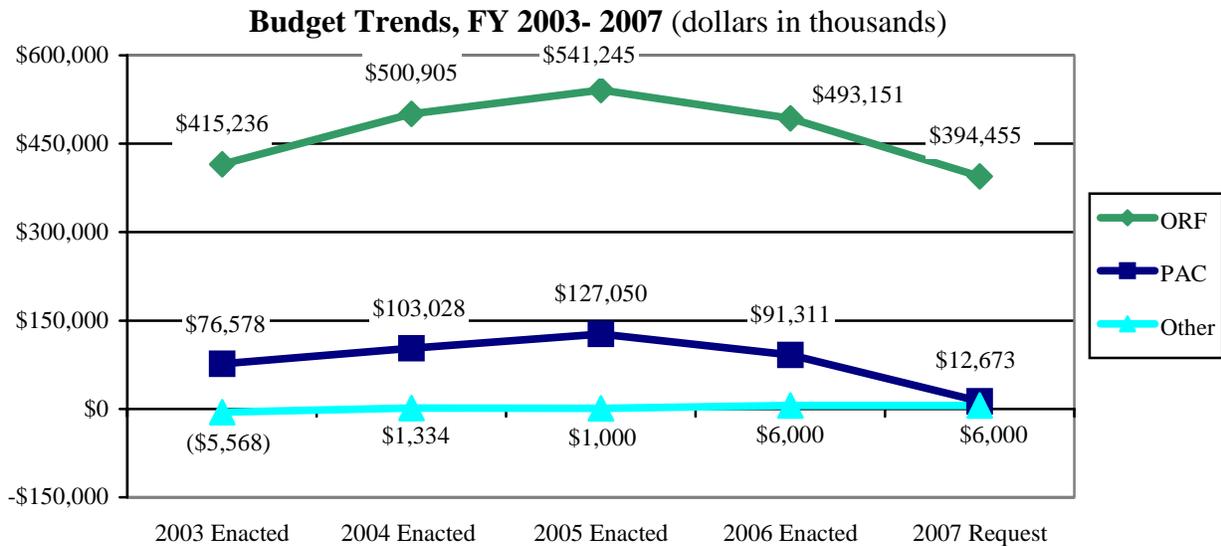
Chapter 4

NOAA Operations, Research and Facilities



National Ocean Service

(Dollars in Thousands)	FY 2006 Enacted	FY 2007 Base	Program Changes	Total Request
National Ocean Service -- Operations, Research and Facilities (ORF)				
Navigation Services	\$149,218	\$120,205	\$19,902	\$140,107
Ocean Resources Conservation and Assessment	210,885	114,776	11,669	126,445
Ocean and Coastal Management	133,048	123,201	4,702	127,903
Total, National Ocean Service - ORF	493,151	358,182	36,273	394,455
Other National Ocean Service Accounts				
Total, National Ocean Service - PAC	91,311	4,873	7,800	12,673
Total, National Ocean Service - Other	6,000	6,000	0	6,000
GRAND TOTAL NATIONAL OCEAN SERVICE (Direct Obligations)	\$590,462	\$369,055	\$44,073	\$413,128
Total FTE	1,235	1,237	6	1,243



ORF: Operations, Research & Facilities
 PAC: Procurement, Acquisition & Construction
 Other: Environmental Improvement and Restoration Fund; Coastal Impact Assistance Fund; Coastal Zone Management Fund; and Damage Assessment and Restoration Revolving Fund



National Ocean Service



The National Ocean Service works to preserve America's coastal and ocean resources through scientific research, navigation services, habitat restoration, and protection of marine ecosystems.

NOAA's National Ocean Service (NOS) is the primary Federal agency working to preserve America's coastal resources. NOS provides observation, measurement, assessment, and management of the Nation's coastal and ocean areas, delivers critical navigation products and services, and conducts response and restoration activities. 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, including the Great Lakes.

An estimated 154 million people lived in coastal counties in 2004. The population in these coastal areas is expected to increase to about 165 million by the year 2015. This increasing density, coupled with the fast-growing economy of coastal areas, makes the task of managing coastal resources increasingly difficult. 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 activities to create the strong science foundation required to advance the sustainable use of our precious coastal systems. NOS contributes significantly to achieving two of NOAA's four Strategic Plan Mission Goals: (1) support the Nation's commerce with information for safe, efficient, and environmentally sound transportation, and (2) protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management. 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: understand climate variability and change to enhance society's ability to plan, respond, and serve society's needs for weather and water information.

NOS provides improvements in the quality, quantity, geographic distribution, and timeliness of ocean and coastal observations. These observations 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 marine commerce and support coastal resource management. NOS protects and restores coastal resources injured by releases of oil and other hazardous materials. NOS also manages marine sanctuaries and, in partnership with the coastal states, helps manage the Nation's valuable coastal zones and nationally significant estuarine reserves. Understanding of the coastal environment is enhanced through coastal ocean activities, which support science and resource management programs. NOS also helps federal, state, local, and international managers build the suite of skills needed to protect, restore, and use coastal ecosystems by providing technical assistance, process and technical skill training, and other capacity building activities.

FY 2007 Budget Summary

NOAA requests a total of \$394,455,000 and 1,227 FTE to support the continued and enhanced operations of the National Ocean Service. The total includes \$416,000 for Adjustments to Base, \$36,273,000 for Program Increases, and \$135,385,000 in Terminations.

ADJUSTMENTS TO BASE:

NOAA requests a net increase of \$416,000 and 2 FTE to fund adjustments to base across all accounts in the National Ocean Service activities. With this increases program totals will fund the estimated FY 2007 Federal pay raise of 2.2 percent and annualize the FY 2006 pay raise of 3.1 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.

In addition, NOAA proposes to elevate three important NOS staff offices to program office status – the National Marine Sanctuary Program, the Center for Operational Oceanographic Products and Services, and the Coastal Services Center. The size of these offices and the importance of their missions require their elevation to program office level. This realignment will improve NOAA's effectiveness in meeting its ocean and coastal responsibilities and bring NOS programs closer to its customers and end-users. In accordance with the goals of the President's Management Agenda, this

realignment enables the organization to further improve front-line service delivery. This proposal does not require any additional funds or FTE to be implemented.

NOS – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2007:

NOAA requests a net increase of \$36,273,000 and 6 FTE over the FY 2007 base for a total request of \$394,455,000 and 1,227 FTE. These changes are summarized at the sub-activity level below and to be concise, do not include descriptions below \$1,000,000. Detailed numeric breakouts are located in Chapter 7, *Special Exhibits*. More detailed descriptions are located in the NOAA FY 2007 Technical Budget.

Navigation Services

\$140,107,000

A net increase of \$19,902,000 and 5 FTE above the base is requested in the Navigation Services subactivity, for a total of \$140,107,000 and 613 FTE. The FY 2007 President’s Budget requests funding for a suite of navigation products and services that help ensure the safety of marine transportation, while improving the economic efficiency and competitiveness of American commerce.



Maritime commerce in the busy Port of Long Beach moves safely and efficiently thanks to a suite of NOAA navigation products and services, including Electronic Navigational Charts, real-time physical oceanographic data, and precise positioning. The value of cargo passing through the port was estimated at \$92 billion in 2004.

- **Mapping and Charting:** \$17,487,000 and 5 FTE in net increases above the base, for a total of \$90,867,000 and 323 FTE, are requested under the Mapping and Charting line item of the Navigation Services subactivity.

- **NOAA requests an increase of \$1,000,000 and 1 FTE to develop and operationalize data collection and processing improvements for hydrographic and shoreline data.** Hydrographic and shoreline data are the most critical and time-sensitive elements of a nautical chart. Due to recent advancements in technology, the trend toward higher resolution datasets, and congressional support for increased data acquisition, NOAA is facing a situation wherein processing and application to charting products has become a bottleneck to making this safety data available to the public and commercial users. To help solve this problem, NOAA will procure and deploy 3 portable GPS-enabled buoys to be used with survey vessels to improve the collection of hydrographic data. This effort will reduce the time required to process hydrographic survey data by up to 10 days per survey — a 5% improvement over current delivery times.

NOAA will also invest in data management research and technology development to improve the speed and accuracy of data acquisition, and accelerate the delivery of navigation information to the maritime community for safe, efficient, and environmentally sound marine transportation. NOAA will begin to implement its research in new technologies and delivery mechanisms, such as geographic information systems (GIS) and web-based interactive programs. NOAA also will improve shoreline data updates by procuring commercial satellite shoreline imagery for change analysis. Satellite imagery is a valuable tool for identifying significant shoreline changes and where new data collection is needed.

- **NOAA requests an increase of \$2,000,000 and 2 FTE to implement the National Vertical Datum Transformation Tool database, or VDatum.** This tool enables *any* user — federal/state/local/individual — to integrate bathymetric and topographic coastal data from different sources and different reference datums. This means that geospatial datasets can be shared more readily, resulting in data that can serve more than one purpose, and thereby save time, money and effort by reducing redundant data collection. VDatum will also allow NOAA to acquire hydrographic and shoreline data more efficiently, thus improving NOAA’s delivery of products and services for navigation safety.

The requested increase will enable NOAA to transition VDatum from successful demonstration projects in areas such as Tampa Bay, Delaware Bay, and South East Louisiana to a national scale. Airborne, land, and marine platforms will be able to exploit GPS technology for vertical location, fuse GPS height with other remote sensing technologies, and map the national coastline both above and below water with greater ease and accuracy. The tool will also improve the efficiency and accuracy of hydrographic surveys for nautical charts by eliminating the need for time-consuming water level corrections and post-processing. VDatum models have multiple uses in addition to mapping. For example, the topping of the New Orleans levees in Hurricane Katrina highlights the need for VDatum to help establish accurate heights for rebuilding the levees in order to

adequately protect against a Category 3 or greater storm surge. VDatum models developed for Puget Sound are also now being used to improve inundation estimates from tsunamis.

- **NOAA requests an increase of \$1,810,000 and 2 FTE to implement eight regional Navigation Response Teams (NRTs).** The requested increase will allow NOAA to fully staff, train, and implement NRTs 5, 6, and 7, and begin building NRT 8 in FY 2007. These funds will provide contract support and FTE for full staffing, as well as funding for NRT launch maintenance and routine equipment replacement in the outyears. Eight regional NRTs will fulfill the requirement for an adequate distributed capacity to respond within 24 hours to incidents in all ports in the contiguous U.S.



NRT 4 staged for Hurricane Rita response

NRTs support critical Electronic Navigational Charts (ENC) field verification, emergency response activities associated with natural and man-made disasters, support to National Homeland Security activities, and Marine Transportation System constituent requirements. These teams have proven their worth time and again for rapid response surveys of U.S. ports and waterways to keep ports open and commerce moving after hurricanes and maritime accidents. NRT contributions during the response and recovery efforts following the devastating hurricanes Katrina, Rita and Wilma were widely acknowledged by maritime community stakeholders such as the American Association of Port Authorities and the U.S. Coast Guard.

The six existing teams are distributed along the Northeast and Southeast Atlantic, the West Coast and Puget Sound, the Great Lakes, and the eastern Gulf of Mexico. NRT 7 is slated to fill the mid-Atlantic gap. Ports in this area contribute significantly to the economy of the Nation and to homeland security; the largest Navy base in the world is located in Hampton Roads, Virginia. NRT 8 will operate in the central and western Gulf. The charting requirements of the western Gulf have not been addressed by NOAA field units in years. This area is part of the petroleum and chemical products corridor of the country. Spills or other interruptions to cargo movement in this area will significantly impact the Nation's environment and economy. The additional NRTs are also essential to support rotations in and out of a stricken area. As NOAA learned with Hurricane Katrina, the duration of the response required that staff rotate in and out to avoid exhaustion and health issues stemming from 18-hour days in rough conditions.

- **NOAA requests an increase of \$1,890,000, for a total of \$6,128,000, for Electronic Navigational Charts (ENCs) to continue the planned incremental investment in the effort to provide full contiguous ENC coverage of U.S. waters.** This increase will allow NOAA to add 70 ENCs in FY 2007, for a total of 620 built and maintained. At the requested funding level, NOAA should achieve complete Electronic Navigational Chart coverage for the Nation by the end of FY 2010. This funding level will allow NOAA to keep the full chart suite under continuous cartographic maintenance. Mariners need the right tools to navigate safely, now more than ever, given the rapid increase in vessel size and use of the U.S. Marine Transportation System (MTS). As the Nation's dependence on the MTS grows, better navigation information is critical to protecting lives, cargo and the environment. It is crucial for mariners to know where and when changes occur in the nation's ports, harbors, waterways, and offshore waters to help prevent accidents and groundings. Reducing these risks would, in part, be achieved by improving the navigation information that NOAA provides to the Nation.
- **NOAA requests an increase of \$10,487,000, for a total of \$31,173,000, for contract hydrographic survey activities.** This increase will allow NOAA to collect approximately 500 additional square nautical miles of hydrographic survey data in FY 2007, and to maintain its planned FY 2007 survey schedule to collect and process approximately 3000 square nautical miles of hydrographic data. The request will fund turnkey contracts for data acquisition, and replaces funding for a vessel time charter. Turnkey contracts have proven to be a more effective and efficient mechanism for NOAA to complement its in-house capacity to collect hydrographic data.

NOAA is responsible for surveying and charting U.S. and territorial waters to the limits of the Exclusive Economic Zone (EEZ), an area of about 3.4 million square nautical miles. NOAA has evaluated the EEZ to determine which areas are

navigationally significant, and of these, which are the top priority for surveying. NOAA has focused primarily on surveying in the highest priority areas, many of which carry heavy commercial traffic, are less than 30 meters deep, and change constantly.

- **Tide and Current Data:** \$2,715,000 in net increases above the base, for a total of \$24,970,000 and 107 FTE, are requested under the Tide and Current Data line item of the Navigation Services subactivity.

- **NOAA requests an increase of \$2,000,000 for the National Water Level Program to rebuild and strengthen the National Water Level Observation Network's (NWLON) ability to provide critical navigation and storm tide information throughout extreme weather and water events.** Hurricanes Katrina, Rita and Wilma destroyed a total of nine tide gauges in the Gulf and southern Florida and inflicted serious damage across the rest of the region's NWLON. The funds will re-establish destroyed stations and make other needed system wide repairs. In addition to filling observation gaps, the funds will significantly improve the NWLON's ability to continue operation and provide critical real time data for storm surge forecasts and emergency response throughout a storm's duration by "hardening" stations. Hardening a station involves elevating and strengthening the underlying support platform so that extreme water levels do not destroy the station or exceed sensor heights. The only two



NOAA's "hardened" NWLON station in Dauphin Island, AL withstood the forces of hurricane Katrina, while the pier it was attached to was destroyed

- out of thirty two) existing hardened NWLON stations in the Gulf (Dauphin Island, Alabama and Grand Isle, Louisiana) successfully operated and provided critical data through both Katrina and Rita despite being outer coast stations exposed directly to the brunt of wind and wave action.
- **NOAA requests an increase of \$715,000 to maintain and continue expanding the cost-shared PORTS® program.** The increase will enable NOAA to maintain the existing thirteen PORTS® as well as to continue expanding the system for the next several years. A number of ports important to the transport of vital energy supplies to the Nation, such as New Orleans, Louisiana, Port Arthur, Texas and Cherry Point, Washington have expressed strong interest in establishing PORTS® but cannot be accommodated with current funding.



NOAA's air gap sensors allow large ships to pass safely under bridges

Access to accurate real-time water level data allows U.S. port authorities and maritime shippers to make sound decisions regarding vessel safety, maximize tonnage (based on available bottom clearance), and limit passage times, without compromising safety. The thirteen PORTS® provide access to real time data to 39 of the Nation's top 150 seaports; these 150 ports transit over 99% of the Nation's cargo (by tonnage) on an annual basis.

Ocean Resources Conservation and Assessment

\$126,445,000

A net increase of \$11,669,000 above the base is requested in the Ocean Resources Conservation and Assessment subactivity, for a total of \$126,445,000 and 418 FTE.

- **Ocean Assessment Program:** \$2,615,000 in net increases above the base, for a total of \$54,677,000 and 65 FTE, are requested under the Ocean Assessment Program line item of the Ocean Resources Conservation and Assessment subactivity.
 - **NOAA requests an increase of \$1,653,000, for a total of \$2,874,000, to support regional expansion of NOAA's Coastal Storms Program, and to maintain and advance previous investments in the Southern California Bight.** Seventy-one percent (\$7 billion) of annual U.S. disaster losses occur in coastal areas because of dense populations living in the paths of strong storms. As demonstrated by the devastating impacts of Hurricanes Katrina and Rita in 2005, coastal communities need improved, robust products and services to help them plan for, respond to, and recover from coastal storms. Faced with increasing

vulnerability of coastal communities, coastal and emergency managers have expressed a need for comprehensive, timely and accessible information to aid in making decisions at critical times. NOAA's Coastal Storms Program meets this need by reaching out across NOAA's organizational lines to provide a suite of products that help coastal communities increase their resilience to coastal storms. Specific products include integrated oceanographic and meteorological observations, forecast models, on-line decision support tools, and regionally based outreach and training. These products are developed in close coordination with regional partners and, in many cases, in collaboration with them. As a result, regional needs are met and NOAA resources are significantly leveraged with resources from federal, state, and local partners.

With the requested funds, NOAA will begin initial efforts to expand the program into the Northern Gulf of Mexico by identifying regional needs and potential partners. Product development for the Southern California Bight, begun in FY 2005, will continue with projects such as an online, Geographic Information System-based tool to help emergency and coastal managers identify key hazards for the region and tools available to address them (e.g., hazard mitigation planning); a seamless topographic-bathymetric database that will greatly enhance understanding of erosion and inundation due to storm surge and tsunamis; and an assessment of the ecological impacts of storm-water driven non-point source pollution in the region.

- **NOAA requests an increase of \$962,000, for a total of \$25,702,000, to improve the condition of coral reefs.** The requested increase will be used to augment state and territory grants for implementation of Local Action Strategy (LAS) priority projects. In addition, the increase will allow for targeted training and technical assistance to meet LAS-associated needs.

In order to translate broad national goals into on-the-ground action, the U.S. Coral Reef Task Force (USCRTF) initiated the LAS process to develop local conservation initiatives with measurable results in each of the seven U.S. states and territories with coral reefs. The strategies are locally driven roadmaps for collaborative and cooperative action among federal, state or territory and nongovernmental partners to address specific threats to coral reef ecosystems. Each LAS includes a range of projects designed to meet particular objectives for managing these threats. The goals and objectives of the LAS are linked to those found in the U.S. National Action Plan to Conserve Coral Reefs, which was produced and adopted by the USCRTF in 2000. The following six focus areas were identified and prioritized by the USCRTF for local action: fisheries management and over-fishing, land-based sources of pollution, recreational overuse, lack of public awareness, climate change and coral bleaching, and disease. Additional focus areas were included by some jurisdictions to address key local threats to coral health, including invasive species in Hawaii and population pressure in American Samoa. Using the six priority USCRTF focus areas as a guide,



Local Action Strategies developed for Guam target fisheries management, lack of public awareness, and recreational misuse and overuse

Florida, Hawaii, Guam, U.S. Virgin Islands, American Samoa, Puerto Rico, and the Commonwealth of the Northern Mariana Islands led development of specific LAS for each of the locally relevant threats. Applying a collaborative decision-making process based on local needs, concerns, and capacities, each jurisdiction worked with a variety of partners to create strategies containing projects designed to address a particular issue. Implementing LAS projects will significantly reduce specific threats to valuable U.S. coral reefs in each jurisdiction. The requested funding will leverage non-NOAA resources for additional on-the-ground action.

- **Response and Restoration:** \$3,094,000 in net increases above the base, for a total of \$24,736,000 and 112 FTE, are requested under the Response and Restoration line item of the Ocean Resources Conservation and Assessment subactivity.

- **NOAA requests an increase of \$2,794,000, for a total of \$16,321,000, to strengthen the agency’s ability to respond to oil and chemical spills and terror incidents; determine damage to natural resources from contaminant releases; protect and restore marine and coastal ecosystems at hazardous waste sites; and work with communities to address critical local and regional coastal challenges.** This increase will restore NOAA’s response and restoration capacity. NOAA responds to approximately 100 significant oil or chemical spills each year as scientific advisors to the U.S. Coast Guard, and provides solutions to cleanup agencies that protect and restore coastal resources at more than 200 hazardous waste sites each year along the Nation’s ocean and Great Lakes coasts. When oil or hazardous substances threaten or injure coastal and marine resources, NOAA and other state



NOAA pilots and a member of the Louisiana Department of Environmental Quality return to command post after overflights of Mississippi Delta following Hurricane Katrina.

and federal natural resource trustees are responsible for ensuring that cleanup actions protect those resources from further injury; for assessing and recovering natural resource damages to restore the injured resources; and for seeking compensation on behalf of the public for the loss of services that the natural resources provided.

This increase will allow NOAA to rebuild capacity for damage assessment, coastal protection, and hazardous materials response activities. With the requested increase, NOAA will: (1) better protect and restore NOAA trust resources at hazardous waste sites by providing technical assistance and solutions



NOAA Scientific Support Coordinator on over flight mission over Baton Rouge following Hurricane Katrina

that protect and enhance recovery of coastal resources, their supporting habitats, and human health; (2) increase the number of damage assessments of coastal and marine habitats impacted from releases of oil or other hazardous materials; (3) develop tools and training for coastal managers and spill responders to improve the Nation's ability to prepare for and respond to releases of oil, chemicals, and contaminants, and to restore degraded coastal resources; and (4) increase NOAA's capacity to respond to oil and chemical releases.

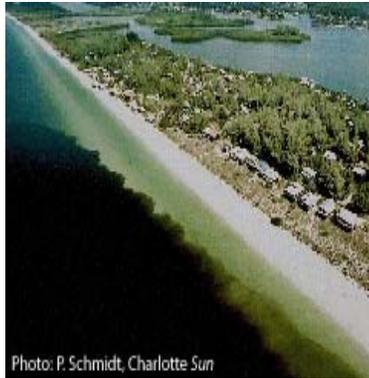
NOAA provides scientific support to other federal agencies and community-level responders for oil and chemical spills and other hazards threatening coastal environments and communities.

- **National Centers for Coastal Ocean Science:** \$5,960,000 in net increases above the base, for a total of \$47,032,000 and 241 FTE, are requested under the National Centers for Coastal Ocean Science line item of the Ocean Resources Conservation and Assessment subactivity.
- **NOAA requests an increase of \$5,960,000 for a total of \$15,801,000, for Extramural Research grants to support efforts to fulfill requirements of the recently reauthorized Harmful Algal Bloom Research and Control Act (HABHRCA).** The requested funds will help to maintain NOAA's large and longstanding regional research investments to develop harmful algal bloom and hypoxia forecasting and response capabilities. These efforts are largely supported

through NOAA's competitive and extramural HAB and hypoxia research programs. These programs have a proven track record of developing the understanding and tools necessary for managers to respond and predict HAB and hypoxia events, such as those affecting the New England and Florida coasts this year.

HAB and hypoxic events (i.e., severe oxygen depletion) are some of the most complex phenomena currently challenging management of aquatic and marine ecosystems. Virtually every coastal state has reported recurring blooms, and a recent national assessment revealed that over half of our Nation's estuaries experience hypoxic conditions. Impacts have included the devastation of critical coastal habitats, loss of economically and culturally vital shellfish resources, illness and death in populations of protected marine species, and serious threats to human health posed by algal toxins.

Just one harmful algal bloom event can cost tens of millions of dollars to local coastal economies and the total costs associated with HABs over the past few decades have been conservatively estimated at over \$1 billion.



“Red tides” occur almost every summer along portions of Florida’s Gulf coast

The additional funds requested will (1) help to maintain and strengthen the suite of NOAA competitive, peer-reviewed programs focused on HAB and hypoxia research, such as Ecology and Oceanography of Harmful Algal Blooms and Monitoring and Event Response for Harmful Algal Blooms; (2) accelerate the development and operationalization of tools and forecasts for the prediction, control, and mitigation of HABs and hypoxia; and (3) facilitate the assessment of and response to HAB and hypoxia events.

Ocean and Coastal Management

\$127,903,000

A net increase of \$4,702,000 and 1 FTE above the base is requested in the Ocean and Coastal Management subactivity, for a total of \$127,903,000 and 196 FTE.

- **Coastal Management:** A net program increase of \$4,702,000 and 1 FTE above the base, for a total of \$92,685,000 and 56 FTE, is requested under the Coastal Management line item of the Ocean and Coastal Management subactivity.
 - **NOAA requests an increase of \$2,849,000, for a total of \$66,146,000, for Coastal Zone Management Grants to address increasing pressures on coastal areas and resources within these areas, including the need to enhance state and local capacity to address these pressures.** These funds will support state participation in implementing key actions of the U.S. Ocean Action Plan. In particular, the increase will enable states to improve regional collaboration and planning, and address such critical coastal issues as ensuring that coastal communities reduce vulnerability to the impacts of coastal hazards and improving management of coastal watersheds. Finally, the funds will assist states in implementing the new coastal management performance measurement system developed in response to Congressional direction, the Administration's Performance Management Agenda, and findings of OMB's Program Assessment and Rating Tool review. In FY 2005, state coastal management programs began implementing performance measures under this system, which is designed to measure progress in achieving the objectives of the Coastal Zone Management Act.

In FY 2007, the Administration proposes to increase the amount of CZM grant funding that is awarded competitively under Sections 306A and 309. Increased competition and funding flexibility will enable the coastal management program to better focus available resources on significant national issues. During the current year, emphasis will be placed on developing resilient coastal communities and supporting regional coastal and ocean management initiatives. The administration plans to double the amount of competitively awarded funding this year (compared to FY 2005), and will work towards having 50% of CZMA funding awarded through a competitive process by FY 2009. NOAA plans to collaborate with its state partners to develop a process by which this goal can be met. NOAA will continue to actively support the Gulf rebuilding efforts through this program.

The coastal zone continues to be an economic engine for the Nation, as well as home to some of the Nation's most valuable natural resources. At the same time, these areas are facing increasing pressures from population growth and resource use. State and local coastal management programs are at the forefront of safeguarding the economic and environmental health of these areas. These

programs requires additional resources to respond to increasing coastal pressures and competing demands for limited space within the coastal zone for working waterfronts, coastal recreation, and protection of important habitats and land features, such as wetlands, dunes and floodplains.

- **NOAA requests an increase of \$575,000, for a total of \$16,806,000, for the National Estuarine Research Reserve System (NERRS).** The increase will allow NOAA to improve monitoring through a new Texas NERR, which is scheduled for designation in late 2006. This new reserve is located in a biogeographic region that is not currently represented within the



Many alligators inhabit the proposed 235,000 acre Texas NERR in the Mission Bay-Capano Bay-Aransas Bay system

System. This increase will provide operational funds for education, stewardship and research activities at the new Reserve. Specifically, funding will provide equipment and staffing support for physical and biological monitoring to implement the NERRS System Wide Monitoring Program. It will also support implementation of NERRS education and coastal training programs at the reserve, as well as stewardship programming to support NERRS strategic goals and objectives.

- **NOAA requests an increase of \$628,000, and 1 FTE, for a total of \$7,605,000, and 48 FTE, in Coastal Zone Management Act Program Administration to administer the Coastal Zone Management Act and support an expanded National Estuarine Research Reserve System that includes a new reserve in Texas, as described above.** The increase will support NOAA staff at the Office of Ocean and Coastal Resource Management to work with the new reserve and fund the associated travel, equipment, training, rent, and supply costs. When new reserves are designated, it is important that NOAA be able to provide technical assistance in research, monitoring, education, and resource stewardship to give new reserve programs a solid start. In addition, the increase will cover printing of revised reserve system information to include the Texas reserve, and contractual funds to update reserve system plans and performance measures for facilities, land acquisition, research and education to cover the addition of a new reserve.
- **NOAA requests an increase of \$650,000, for a total of \$2,128,000, to support key science and analysis efforts fundamental to meeting NOAA's mandate under Executive Order 13158 to develop an effective national system of Marine Protected Areas (MPAs) built through integrating the sites and capabilities of existing federal, state, and tribal programs.** With the requested

increase, NOAA's MPA Center will be able to advance several critical components of the National System of MPAs, including the completion of methodologies and tools to complete a natural and cultural resource characterization and analysis of human uses and impacts on the marine environment for the West Coast as a pilot study; beginning a process to work with stakeholders to use this information to identify priority areas for conservation of significant natural and cultural resources; and partially restore support for public outreach and the MPA Federal Advisory Committee, a diverse group of stakeholders and scientific experts providing advice to the Departments of Commerce and the Interior on National System development.

The U.S. has long used marine protected areas to manage and conserve some of our most important ocean areas. Executive Order 13158 was created to address the need identified by scientists and others for an effective, representative, National System of MPAs. The Executive Order established the MPA Center to lead this effort, coordinating across agencies, levels of government, and stakeholders. The requested funds are critical for supporting the capabilities needed to fulfill this mission. Without these funds, the MPA Center will lose momentum on developing the National System, and the long-term credibility of and support for NOAA's leadership on MPAs will be diminished.

- **Ocean Management:**

No changes from the base, for a total of \$35,218,000 and 140 FTE, are requested under the Ocean Management line item of the Ocean and Coastal Management subactivity. Through this line item, NOAA administers the National Marine Sanctuary System under authority of the NMSA. There are 13



Channel Islands National Marine Sanctuary

designated national marine sanctuaries, ranging in size from one-quarter square mile in Fagatele Bay, American Samoa to over 5,300 square miles in Monterey Bay, California which is one of the largest marine protected areas in the world. Together, these sanctuaries encompass over 18,000 square miles of waters and marine habitats. In addition, the NMSP administers and manages the 131,818 square mile Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve that is undergoing the

sanctuary designation process. The special habitats of the sanctuaries include deep ocean and near-shore corals, live bottom, whale migration corridors, deep sea canyons, areas of deep water upwelling, submerged banks that rise close to the ocean surface, kelp forests, and sea grass beds. With the increasing environmental pressures on our Nation's coastal areas, the importance of maintaining a system of marine protected areas is evident. The National Marine Sanctuary System is increasing our knowledge and understanding of complex marine ecosystems. NOAA's sanctuaries help monitor both human and natural changes in the environment that can help us preserve our marine environments.

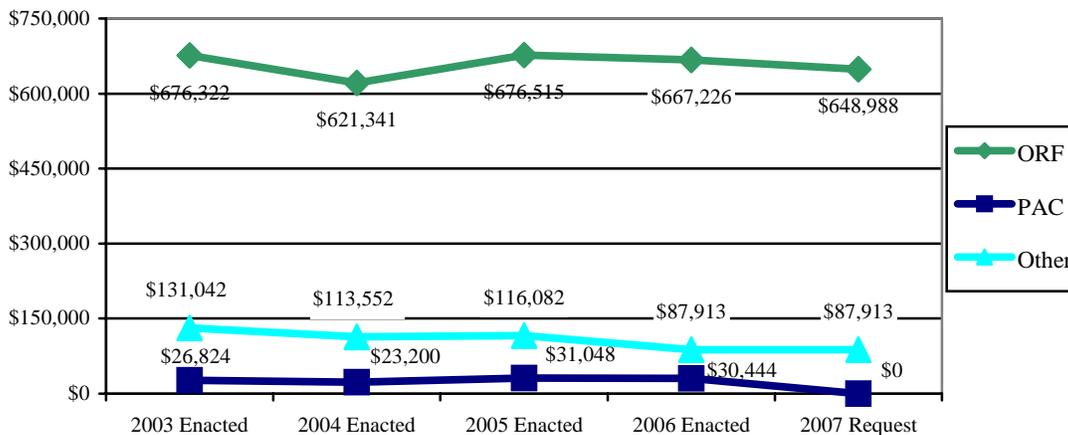
[Page intentionally left blank]



National Marine Fisheries Service

(Dollars in Thousands)	FY 2006 Enacted	FY 2007 Base	Program Changes	Total Request
National Marine Fisheries Service -- Operations, Research and Facilities (ORF)				
Protected Species Research and Management	\$145,039	\$122,428	\$22,496	\$144,924
Fisheries Research and Management	282,408	265,746	25,916	291,662
Enforcement and Observers	72,675	73,224	7,473	80,697
Habitat Conservation and Restoration	46,629	28,698	11,198	39,896
Other Activities Supporting Fisheries	70,177	48,104	7,257	55,361
Alaska Composite R&D	50,298	29,724	6,724	36,448
Total, National Marine Fisheries Service - ORF	667,226	567,924	81,064	648,988
Other National Marine Fisheries Service Accounts				
Total, National Marine Fisheries Service - PAC	30,444	0	0	0
Total, National Marine Fisheries Service - Other	106,150	87,913	0	87,913
GRAND TOTAL NATIONAL MARINE FISHERIES SERVICE (Direct Obligations)	\$803,820	\$655,837	\$81,064	\$736,901
Total FTE	2,557	2,552	35	2,587

Budget Trends, FY 2003 – 2007 (dollars in thousands)



ORF: Operations, Research & Facilities
 PAC: Procurement, Acquisition & Construction
 Other: Fishermen’s Contingency Fund; Foreign Fishing Observer Fund; Fisheries Finance Program; Promote and Develop; Pacific Coastal Salmon Recovery Fund; Pacific Coastal Salmon Treaty; and Environmental Improvement and Restoration 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). 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 that are aimed at sustaining long-term use and promoting the health of coastal and marine ecosystems.

NMFS' ultimate mission and the focus of its day-to-day efforts is to maximize the benefits to the Nation from the protection and use (commercial, recreational, and aesthetic) of living marine resources. Under its numerous mandates, NMFS works to ensure the long-term health, productivity, and diversity of our Nation's ocean and coastal resources—fish, sea turtles, whales, and a myriad of other marine and coastal species and

their habitats. At the same time, NMFS is charged with balancing multiple needs and interests, including commercial, recreational, and subsistence fishing; aquaculture; and marine and coastal observation and research. These activities rely on a strong scientific and research competency to support the challenging public policy decision process associated with NOAA's stewardship responsibility.

NMFS continues to develop and track key performance measures that demonstrate meaningful results to our constituents and the American public. In FY 2007, NMFS will continue to focus resources on improving the status of overfished fisheries and endangered and threatened species; increasing the number of fish stocks and protected species whose population status is known; putting in place rebuilding, recovery, and conservation plans for major fish stocks and protected species; and restoring habitat for NOAA trust resources.

The FY 2007 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 2007 Budget Summary

NOAA requests a total of \$648,988,000 and 2,587 FTE to support the continued and enhanced operations of the National Marine Fisheries Service. The total includes \$4,557,000 for Adjustments to Base, \$81,064,000 for Program Increases, and \$103,859,000 in Terminations.

ADJUSTMENTS TO BASE:

NOAA requests a net increase of \$4,557,000 and 0 FTE to fund adjustments to base across all accounts in the National Marine Fisheries Service activities. With this increase program totals will fund the estimated FY 2007 Federal pay raise of 2.2 percent and annualize the FY 2006 pay raise of 3.1 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. The above amount includes a transfer of \$28,000,000 to the Office of Marine and Aviation Operations within Program Support.

NMFS – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2007:

NOAA requests a net increase of \$81,064,000 over the FY 2007 base for a total request of \$648,988,000. These changes are summarized at the subactivity level below. Detailed numeric breakouts are located in Chapter 7, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2007 Technical Budget.

Gulf of Mexico Initiative

NOAA requests \$19.7 million for activities in the Gulf of Mexico. The major components of this initiative are incorporated in the following programs: Protected Species Research and Management, Fisheries Research and Management, Expand Annual Stock Assessments, Observers, and Other Activities Supporting Fish line items. The increase will support activities that are largely research driven such as Observers, Southeast Cooperative Research, Stock Assessments, Catch and Release Mortality, Economics and Social Science, and Highly Migratory Species. Expected benefits are increased knowledge of fish species through stock assessment studies; increased knowledge of impacts to fishing communities through socio-cultural surveys; and increased knowledge of the impacts of hurricanes on the commercial and recreational fisheries in the Gulf of Mexico ecosystem. As the Gulf region rebuilds, these programs will ensure that adequate science and management resources are available to promote and support sustainable and robust fisheries.

Protected Species Research and Management

\$144,924,000

A net increase of \$22,496,000 and 11 FTE above the base is requested in the Protected Species Research and Management subactivity, for a total of \$144,924,000 and 657 FTE. In addition to the programs listed below this net increase includes \$650,000 for Marine Turtles.

- **Protected Species Research and Management Programs:** \$5,825,000 (including a decrease of \$3,000 for conservation and recovery with states) and 7 FTE in net increases above the base, for a total of \$31,817,000 and 381 FTE, are requested under the Protected Species Research and Management Programs line item of the Protected Species Research and Management subactivity.
- **NOAA requests \$1,100,000 and 2 FTE to investigate ocean noise and its effects on the recovery of protected species.** Rising levels of ocean noise and their potential effects on marine species, particularly on protected species, has



Humpback Whale Breaching

become a significant emerging issue in marine conservation. Sources of ocean noise include natural events (e.g., earthquakes) and anthropogenic activities (e.g., seismic exploration, military sonars, and commercial shipping). Research on human and non-human species indicates that some levels of noise and chronic exposure to

noise may affect health, reproduction, behavior, and survival. Recent strandings of marine mammals suggest there may be a relationship between some anthropogenic sound sources and these stranding events. Specific research will be directed at determining the characteristics of noise experienced by marine animals underwater, measuring the behavioral and auditory effects of exposure to ocean noise, and developing cost-effective mitigation measures for ocean noise effects.

- **NOAA requests \$1,728,000 and 0 FTE to complete take reduction planning, recovery planning, ESA section 7 consultations, permitting, and mandatory ESA 5-year status reviews.** This request will allow the Protected Species Program to continue court-ordered take reduction planning, complete Endangered Species Act (ESA) consultation on federal actions, develop programmatic National Environmental Policy Act (NEPA) documents for permits and Incidental Harassment Authorizations, revise recovery plans for sea turtles, and complete ESA 5-year status reviews for marine mammals and sea turtles.
- **NOAA requests \$3,000,000 and 5 FTE to expand and modernize protected resources stock assessments by implementing Tier II of the Protected Resources Stock Assessment Improvement Plan.** Currently, the status of more than 200 protected and at-risk marine species is unknown. The requested funding will allow NMFS to increase the number and quality of stock surveys and assessments on which to base regulatory decisions. These assessments provide timely and reliable estimates of distribution, abundance, and mortality for listed species. Imprecise estimates increase the possibility that species will be misclassified under the ESA or Marine Mammal Protection Act (MMPA), resulting in increased risk to the species, delay of recovery, and additional mitigation measures which, in turn, pose significant economic losses to the regulated community. NOAA is required to evaluate the status of listed species every year for MMPA listings and every 5 years for ESA listings, and to reclassify the affected listings as appropriate following these status reviews. Stock assessment priorities include large whales, Hawaiian cetaceans, loggerhead sea turtles, beaked and sperm whales, and coastal and oceanic bottlenose dolphins. This funding increase would enable NMFS to expand studies of stock structure through genetic profiling, improve telemetry techniques (e.g., satellite tagging) for documenting range and habitat use, and deploy new assessment technologies such as towed and autonomous passive acoustic arrays.
- **Marine Mammals:** \$1,759,000 and 0 FTE in net increases above the base, for a total of \$23,110,000 and 0 FTE, are requested under the Marine Mammals line item of the Protected Species Research and Management Subactivity—\$500,000 for recovery of large whales and \$1,260,000 for dolphin encirclement activities.
- **NOAA requests \$1,260,000 and 0 FTE to fully fund continued long-term monitoring of the Eastern Tropical Pacific dolphin stocks.** NMFS is required

to conduct research to support the International Dolphin Conservation Program (IDCP). NMFS is the primary provider of information on the Eastern-Tropical Pacific (ETP) dolphin stocks for the IDCP. In addition to completing the population abundance monitoring cruise, in FY 2007 NMFS will start a cruise to determine the stock structure of coastal spotted dolphins. This funding will allow NMFS to maintain the tuna-tracking and verification program, which ensures that tuna sold as “dolphin-safe” meets that standard.



Common Dolphin

- **Other Protected Species (Marine Fish, Plants, and Invertebrates):** \$3,153,000 and 4 FTE in net increases above the base, for a total of \$8,085,000 and 45 FTE, are requested under the Other Protected Species (Marine Fish, Plants, and Invertebrates) line item of the Protected Species Research and Management Subactivity—\$853,000 for recovering those ESA-listed species that are not funded under a separate program and \$2,300,000 to initiate pilot proactive conservation efforts. The funding is critical to recovering those NMFS ESA-listed species that are not funded under a separate program, as well as those species nearing the need for ESA listing (Species of Concern).
 - **NOAA requests \$2,300,000 and 1 FTE to initiate pilot proactive conservation efforts for species nearing the need for listing under the ESA.** This pilot program aims to implement threat-reducing, on-the-ground conservation actions or management agreements to lower the risk of extinction for two species. These conservation efforts include close partnerships with state and federal agencies, industry, environmental groups, and academia. Adequate and statistically valid stock assessment information will be provided by observer coverage to determine which two species will be addressed. On average, NOAA spends approximately \$5 million per year on fulfilling consultations and permitting requirements for each listed species. NOAA intends to use this \$2.3 million investment to implement measures that will prevent a listing of either species, thereby eliminating the need to complete costly ESA consultations and permitting requirements. The outcomes of these conservation efforts will serve as case studies and the basis for other pilot projects. In addition, NOAA will develop a performance measurement system to evaluate the success of the pilot’s conservation efforts in decreasing the number of listed species.

- **Atlantic Salmon:** \$1,445,000 and 0 FTE in net increases above the base, for a total of \$5,850,000 and 12 FTE, are requested under the Atlantic Salmon line item of the Protected Species Research and Management subactivity. This request will be used to implement the Atlantic salmon recovery plan, including research and management activities within NMFS that will provide additional capacity and resources for managers to protect the Atlantic salmon stocks.



Atlantic Salmon

- **Pacific Salmon:** \$9,664,000 and 0 FTE in net increases above the base, for a total of \$66,416,000 and 193 FTE, are requested under the Pacific Salmon line item of the Protected Species Research and Management subactivity.
 - **NOAA requests \$2,000,000 and 0 FTE to support section 7 consultations in response to Environmental Protection Agency (EPA) Pesticide Court Decisions.** This increase will be used for necessary costs to meet court-ordered time lines for conducting ESA Section 7 consultations with EPA. Section 7 consultations are required by rulings on pesticide lawsuits in California, Oregon, Idaho, and Washington State. Other lawsuits are pending. NMFS can generally complete a draft biological opinion of average complexity in 135 days. However, because pesticide consultations are relatively new and often complex, NMFS estimates that initial development of draft biological opinions on pesticides may take significantly longer. NMFS and EPA are conducting a pilot consultation to test EPA's risk assessment methodology, which is the foundation of the new EPA Section 7 Counterpart Regulations. To date, NMFS has received more than 500 requests for consultation from EPA on approximately 40 pesticides subject to the aforementioned litigation. NMFS anticipates reviewing at least 100 pesticides each year for EPA, per standard Section 7 procedures, the Counterpart Regulations, and other general technical assistance. Where appropriate, NMFS' concurrence on actions not likely to adversely affect ESA-listed species and designated critical habitat will be incorporated into biological opinions with other pesticides to avoid the need to develop additional consultation documents.
 - **NOAA requests an increase of \$7,664,000 and 0 FTE for recovery implementation and management actions and improved scientific advice for Pacific salmon recovery.** This request will allow NMFS to complete habitat conservation planning, ESA Section 7 consultations, and recovery implementation. Efforts will also be focused on predicting ocean survival of

Pacific salmon, evaluating management actions, improving research on the effects of hatcheries on salmon recovery, and evaluations of the cost-effectiveness of various recovery actions. The requested funding will allow NMFS to fulfill its mandates of completing and implementing recovery plans for species threatened and endangered with extinction. This new funding will strengthen the ongoing management efforts currently in place for many species.

Fisheries Research and Management

\$291,662,000

A net increase of \$25,916,000 and 22 FTE above the base is requested in the Fisheries Research and Management subactivity, for a total of \$291,662,000 and 1,444 FTE. In addition to the programs listed below this net increase includes \$500,000 for Fisheries Oceanography, \$100,000 for Anadromous Grants, and a program decrease of \$1,905,000 for Salmon Management Activities.

- **Fisheries Research and Management Programs:** \$6,829,000 and 7 FTE in net increases above the base, for a total of \$131,620,000 and 1,360 FTE, are requested under the Fisheries Research and Management program line item.

- **NOAA requests an increase of \$2,829,000 and 7 FTEs for a total request of \$5,798,000 for Regulatory Streamlining and Modernization.**

NOAA will add additional staff, and the Regional Fishery Management Councils will receive additional support, dedicated to the development and review of regulations within timeframes required by law. The additional support will allow NMFS and the Councils to frontload development, analysis, evaluation, and implementation of fishery management actions. This increase will improve the quality and timeliness of the regulatory processes that affect fisheries at the state and local level by reducing the time required for consultations, permits and other regulatory requirements. NOAA will also develop and maintain an electronic rulemaking system to speed up the processing of rules and regulations and increase public participation. Improved quality and



Commercial landings (edible and industrial) by U.S. fisherman in the 50 states were 9.6 billion pounds valued at \$3.7 billion in 2004

timeliness of regulatory processes combined with policy development will result in better-managed stocks and decreased litigation.

- **Expand Annual Stock Assessments—Improve Data Collection:** \$7,550,000 and 8 FTE in net increases above the base, for a total of \$32,100,000 and 59 FTE, are requested under the Expand Annual Stock Assessments—Improve Data Collection line item of the Fisheries Research and Management subactivity. The request will strengthen stock assessment efforts and initiate new ecosystem-based fish stock assessments and fishery-dependent sampling programs in the Gulf of Mexico. Additionally, NOAA requests \$500,000 for the Southeast Data, Assessment, and Review process and \$300,000 to sustain national stock assessment initiatives.

Monitoring programs collect data on landings, fishing effort, discarded bycatch, and life history data (growth, longevity, and mortality). NOAA will enhance existing monitoring programs by collecting data on the location of fishing activities and the co-occurrence of different species in Gulf of Mexico commercial and recreational fisheries. NOAA requests \$1,750,000 to improve existing fishery-dependent data management systems (e.g., equipment purchases and expansion of sampling



Measuring the catch

activities) and to develop new modes of disseminating expanded data sets to constituents and policymakers (e.g., computer programming and technical support).

A requested increase of \$2,000,000 within this line will enhance the Strengthen Living Marine Resources program. This effort provides additional charter vessel days-at-sea for expanded fishery resource surveys, restores cutbacks in historical survey effort, and partially offsets rapid increases in annual fuel costs for current surveys. It continues operational development of the Fisheries Scientific Computer System (FSCS), a project to automate at-sea data collections and error checks for fishery-independent surveys, linking biological and physical data streams.

- **Economics and Social Sciences Research:** \$6,518,000 and 7 FTE in net increases above the base, for a total of \$10,529,000 and 25 FTE, are requested under the Economics and Social Sciences Research line item of the Fisheries Research and Management subactivity. NOAA will concentrate its socioeconomic survey activities in the commercially important Gulf shrimp and reef fish fisheries; the Pacific Coast, Alaska, and Northeast groundfish fisheries; the Atlantic sea scallops fishery; and the Atlantic, Gulf of Mexico, Pacific, and Western Pacific Highly Migratory Species fisheries.

Of this request, 2,500,000 will increase the number of economic surveys conducted in commercial fisheries by supporting economists, anthropologist, and survey technicians. This will allow us to initiate new economic data collection programs that will provide data for 20 fishery management plans (FMP). The increase in economic surveys will enable NOAA to meet 100% of the economic and sociocultural monitoring goals for 32 commercial FMPs. These socioeconomic surveys will enable NOAA to conduct integrated assessments of benefits derived from the marine resource; assess the economic effects of large-scale environmental events such as hurricanes, hypoxia, and red tide; and evaluate the costs and benefits from proposed management options, including adopting market-based management approaches such as Dedicated Access Privileges (DAP). An additional \$1,100,000 will provide for community profiles on labor trends, dependence on fishing and other marine resource-dependent industries, and coastal community migration patterns.

- **Regional Councils and Fisheries Commissions:**

\$3,047,000 and 0 FTE in net increases above base, for a total of \$26,312,000 and 0 FTE, are requested for the Regional Councils and Fisheries Commissions line item of the Fisheries Research and Management subactivity. This funding will expand the Regional Fisheries Management Councils (RFMCs) operational capability to analyze a greater range of alternatives and more fully consider the impacts of proposed actions on the marine ecosystem as they develop new Fishery Management Plans (FMPs) or amendments to current plans.



Beach Anglers

With this funding, NMFS 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. The improvements in the regulatory process obtained through this funding will reduce the legal challenges to NOAA regulatory actions. NOAA will also make \$1,000,000 available for RFMCs to develop DAP programs, such as individual fishing quotas (IFQs). Development of DAP programs requires significant resources for economic analysis and design of programs for eligibility determination, permit issuance, and fishery monitoring. These funds will be made available on a competitive basis to support Councils with projects that advance DAP systems.

- **Fish Information Networks:** \$2,109,000 and 0 FTE in net increases above the base, for a total of \$22,184,000 and 0 FTE, are requested under the Fish Information Networks line item of the Fisheries Research and Management subactivity. NOAA's request will support three activities—the Gulf Fisheries Information Network (Gulf

FIN) program; the Marine Fisheries Initiative Network (MARFIN) program; and the Fisheries Information System program. This request will enable the expansion of standard commercial fisheries “trip ticket” dealer reporting programs to Texas and Mississippi; support pilot testing of new survey methods for recreational shore and private/rental boat fishing effort; provide MARFIN grants for research and development projects that optimize the use of fisheries in the Gulf of Mexico and South Atlantic; and expand standardized electronic dealer reporting of commercial fishery landings data to one additional state. The request will improve NOAA’s ability to increase the quantity of data and improve the quality of statistics that are used to inform regulatory decisions for marine commercial and recreational fisheries located off the coasts of Alabama, Florida, Georgia, Louisiana, Mississippi, and Texas.

- **Survey and Monitoring Projects:** \$1,168,000 and 0 FTE in net increases above the base, for a total of \$15,223,000 and 0 FTE, are requested under the Survey and Monitoring Projects line item of the Fisheries Research and Management subactivity. The request will to enable NOAA to: (1) effectively manage West Coast groundfish fisheries by maintaining the ability to monitor and estimate discards of overfished stocks; (2) continue tagging activities currently related to bluefin tuna research in order to estimate the distribution and abundance of bluefin tuna stocks; and (3) enable scientists to continue research on the factors governing the apparent decline in bluefish abundance along the Atlantic coast.

Enforcement and Observers/Training

\$80,697,000

A net increase of \$7,473,000 and 2 FTE above the base is requested in the Enforcement and Observers/Training subactivity, for a total of \$80,697,000 and 251 FTE.

- **Enforcement:** \$3,979,000 and 0 FTE in net increases above the base, for a total of \$53,901,000 and 188 FTE, are requested under the Enforcement line item of the Enforcement and Observer/Training subactivity.
 - **NOAA requests an increase of \$2,268,000 and 0 FTE for a total of \$24,255,000 for Enforcement and Surveillance.** The requested increase in the Enforcement and Surveillance base will allow NOAA’s Enforcement Program to address the increased workload of the new regulations in the Northeast Region (Northeast Shelf Large Marine Ecosystem (LME)) and Southeast Region (Gulf of Mexico LME). At the same time, the efficiency, effectiveness, and capacity of the Investigations Capability and the Monitoring Capability will be improved. The expanded investigative and analytical capacity is expected to increase efficiencies within NOAA’s homeland security program while supporting the Department of Homeland Security (DHS) efforts and the homeland security and commercial fishing regulation activities of the U.S. Coast Guard.

Commission under the Federal Power Act. The increase will help pay the U.S. Coast Guard for use of its Administrative Law Judges, and to augment technical and legal capabilities (attorneys) in NMFS Headquarters and Regional Offices to address the workload generated by the new processes.

- **Fisheries Habitat Restoration:** \$7,500,000 and 0 FTE in net increases above the base, for a total of \$21,136,000.

- NOAA Fisheries Service requests a \$1,500,000 increase to establish a Great Lakes Habitat Restoration Program. In 2004, Executive Order 13340 was signed creating the Great Lakes Interagency Task Force establishing a regional collaboration of federal partners, including DOC, to restore the Great Lakes. This increase will enable NOAA to establish a Great Lakes Habitat Restoration Program, thereby mobilizing NOAA's restoration assets to restore the Great Lakes' aquatic resources. NOAA will identify an optimal restoration plan and its intended benefits, evaluate the socio-economic consequences, and monitor the success of the restoration effort in achieving its goals. To monitor the effectiveness of NOAA's Great Lakes Habitat Restoration Program, the program targeted an increase to the GPRA performance measure target (i.e., acres restored per year). Additionally, the Great Lakes Restoration Program will provide the necessary outreach, facilitation and technical assistance to stakeholders and communities participating in the restoration activities. Overall, this program will develop a strong NOAA presence and leadership in habitat restoration within the Great Lakes region.

- NOAA Fisheries Service requests an increase of \$6,000,000 to support the Open Rivers Initiative (ORI). ORI supports the President's Cooperative Conservation Initiative (Executive Order 13352) which directs federal agencies to promote cooperative conservation in full partnership with state, local governments, tribes and individuals. This increase enhances the repair of vital riverine ecosystems; benefits communities; and enhances populations of key NOAA trust species. ORI will be



Mill Creek dam removal

a competitive grant program that builds on NOAA's capabilities and utilizes a community-based model to remove obsolete river barriers in coastal states. While most U.S. dams serve their intended functions, many no longer provide the benefits for which they were built. ORI is expected to provide an economic boost for communities, enhance public safety, and improve populations of NOAA trust resources (e.g., Atlantic and Pacific Salmon). All barrier-removal projects will

benefit from a collaborative process that engages a wide array of partners, including municipalities, state government, and private owners.

Other Activities Supporting Fisheries **\$55,361,000**

A net increase of \$7,257,000 and 0 FTE above the base is requested in the Other Activities Supporting Fisheries subactivity, for a total of \$55,361,000 and 0 FTE. In addition to the programs listed below this net increase includes \$626,000 for Information Analyses and Dissemination, and \$501,000, for Climate Regimes and Ecosystem Productivity.

- **Computer Hardware and Software:** \$1,383,000 and 0 FTE in net increase above the base are requested, for a total of \$3,355,000 for Computer Hardware and Software. These funds will restore NMFS' ability to fund required maintenance contracts on software and to maintain software products currently used to support critical mission requirements. In addition, funding will provide support for essential contract staff in Headquarters and Regional sites involved in processing NOAA's scientific and law enforcement data for enterprise applications. These data are central to the stewardship of commercial and recreational fishing and of protected species and their habitats. Restoring these funds will allow for the essential maintenance of crucial security hardware and software used for preventing and monitoring security risks and vulnerabilities to NMFS' network.

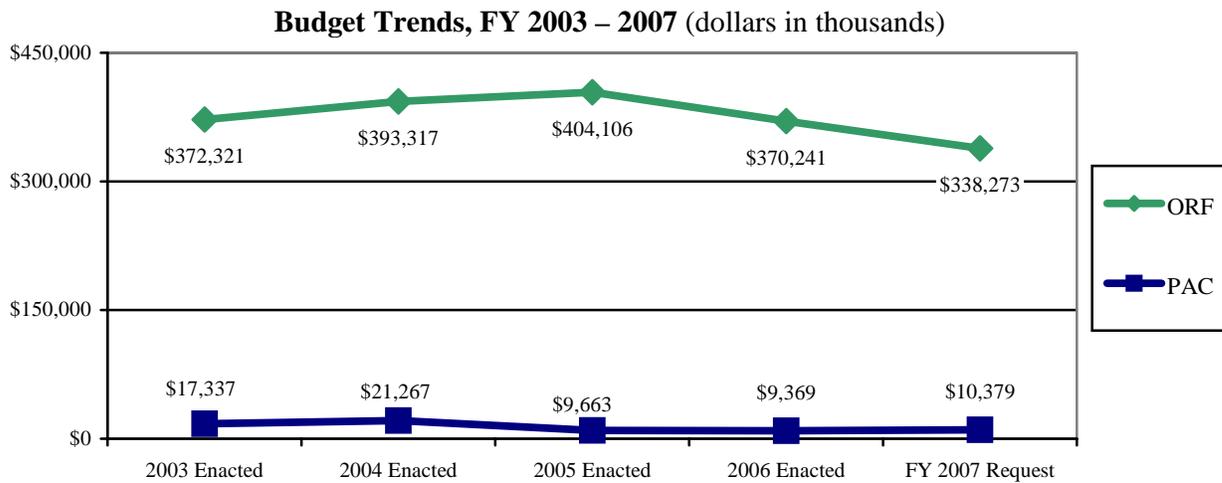
Alaska Composite Research and Development Program **\$36,448,000**

A net increase of \$6,724,000 and 0 FTE above the base is requested in the Alaska Composite Research and Development Program subactivity, for a total of \$36,448,000 and 0 FTE. Of the \$36,448,000, \$29,479,000 provides base funds to the Alaska Regional Office and Alaska Fisheries Science Center to conduct assessment and management activities for Alaska finfish (pollock and other groundfish, halibut/sablefish), crustaceans (crab), and salmon. Two of the Nation's top three fishing ports, in terms of highest dollar value for commercial landings, are in Alaska. These base funds also support assessment and conservation activities for Alaska whales, seals and sea lions. The remaining \$6,969,000 will be provided to the state of Alaska, Non-Governmental Organizations, and Alaska native partners for research and co-management activities.



Office of Oceanic & Atmospheric Research

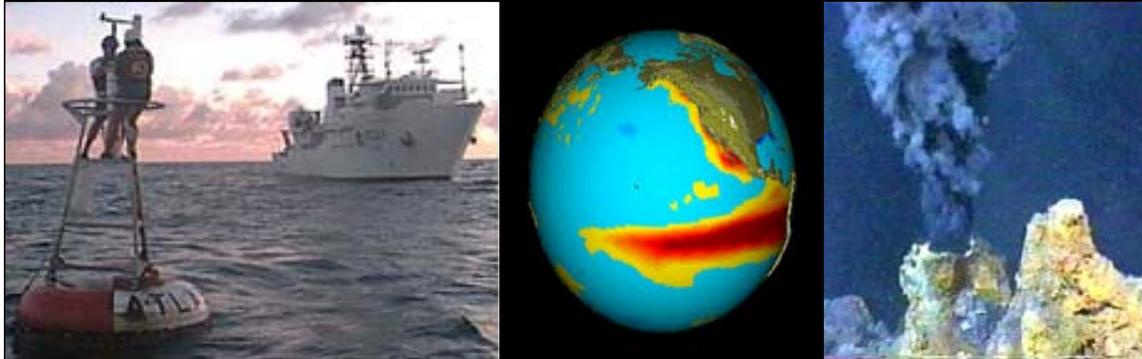
(Dollars in Thousands)	FY 2006 Enacted	FY 2007 Base	Program Changes	Total Request
Office of Oceanic & Atmospheric Research -- Operations, Research and Facilities (ORF)				
Climate Research	\$169,584	\$163,442	\$17,709	\$181,151
Weather and Air Quality Research	67,570	36,796	4,434	41,230
Ocean, Coastal, and Great Lakes Research	126,676	94,347	8,629	102,976
Information Technology, R&D, and Science Education	6,411	6,442	6,474	12,916
Total, Office of Oceanic & Atmospheric Research - ORF	370,241	301,027	37,246	338,273
Other Office of Oceanic & Atmospheric Research Accounts				
Total, Office of Oceanic & Atmospheric Research - PAC	9,369	9,395	984	10,379
Total, Office of Oceanic & Atmospheric Research - Other	0	0	0	0
GRAND TOTAL OFFICE OF OCEANIC & ATMOSPHERIC RESEARCH (Direct Obligations)	\$379,610	\$310,422	\$38,230	\$348,652
Total FTE	710	714	0	714



ORF: Operations, Research & 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 30 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.

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:

- Understand complex climate systems to improve predictions.
- Understand atmospheric events to assist in saving lives and property worldwide.
- Explore, investigate, and understand the complexities of all our coastal, Great Lakes, and ocean habitats and resources.
- 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 network 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.
- 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.

FY 2007 Budget Summary

NOAA requests a total of \$338,273,000 and 714 FTE to support the continued and enhanced operations of the Office of Oceanic & Atmospheric Research. The total includes \$37,246,000 in Program Increases as well as \$75,400,000 in program decreases within the base.

ADJUSTMENTS TO BASE:

NOAA requests a net increase of \$6,203,000 and 0 FTE to fund adjustments to base across all accounts in the Office of Oceanic and Atmospheric Research activities. With this increase program totals will fund the estimated FY 2007 Federal pay raise of 2.2 percent and annualize the FY 2006 pay raise of 3.1 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 2007:

NOAA requests a net increase of \$37,246,000 and 0 FTE over the FY 2007 base for a total request of \$338,273,000 and 714 FTE. These changes are summarized at the sub-activity level below and to be concise, do not include descriptions below \$1,000,000. Detailed numeric breakouts are located in Chapter 7, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2007 Technical Budget.

Climate Research

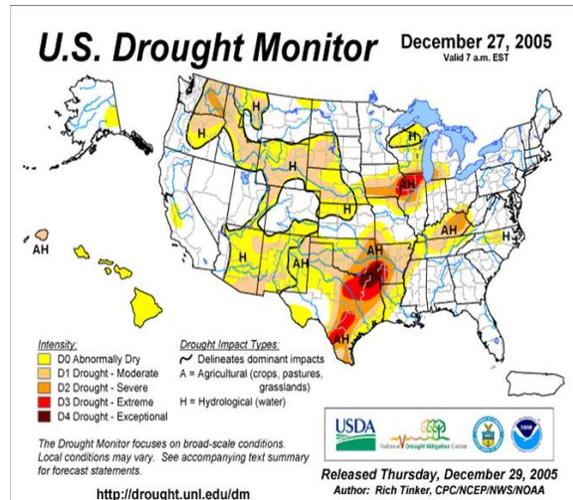
\$181,151,000

An increase of \$17,709,000 and 0 FTE above the base is requested in the Climate Research subactivity, for a total of \$181,151,000 and 354 FTE.

- **Competitive Research Program:** \$12,052,000 and 0 FTE in net increases above the base, for a total of \$125,712,000 and 102 FTE, are requested under the Climate Observations & Services line item of the Climate Research subactivity.

- **Integrated Ocean Observing System (IOOS): Global Ocean Observing System for Climate.** NOAA requests an increase of \$6,052,000 and 0 FTE to continue building and maintaining the Global Ocean Observing System for climate, which is the global component of the Integrated Ocean Observing System and the ocean component of the Global Earth Observation System of Systems (GEOSS). This program change will complete 59% of the planned ocean observing system, keeping us on track with our international commitment of completing the ocean climate observing system by 2010. In 2007, NOAA, in cooperation with national and international partners, will make incremental advancements across all ocean observing networks with emphasis on these priority areas: (1) ocean circulation to monitor for possible indications of abrupt climate change, and for monitoring the climate's influence on marine ecosystems; (2) ocean storage of carbon in support of National policy decisions; (3) oceanic contributions to the global water cycle especially in support of drought early warning and diagnostics. This request responds to the long-term observational requirements of the operational forest centers, international research programs, and major scientific assessments. This investment is one of the high priority investments required for NOAA's implementation of IOOS as the ocean component of GEOSS in response to the U.S. Ocean Action Plan. To augment current activities in establishing a natural, sustainable Data Management and Communications (DMAC) standards infrastructure, ongoing standards development will lead to interoperable data access and dissemination across observing systems. The immediate plan will be to establish as an element of the Global Ocean Data Assimilation Experiment (GODAE). The server capability must be continued in support of sustained earth observation.

- NOAA requests an increase of \$4,000,000 and 0 FTE to support drought impact research for the National Integrated Drought Information System (NIDIS) and Regional Decision Support Partnerships: Coping with Drought. The NIDIS Plan, endorsed by the Western Governors' Association, states that the development, integration, and maintenance of "a suite of drought decision support and simulation tools is fundamental for the success of NIDIS." NOAA will sponsor integrated, problem-focused research and research-to-operations transition projects addressing the effects of drought on society and economically productive sectors of the U.S. economy. Specifically, this effort will: (1) provide the resources for a new Regional Integrated Sciences and Assessments (RISA) award in a region sensitive to drought; (2) implement a targeted cross-regional Drought Research Initiative to focus and enhance research and stakeholder interaction in support of local and regional entities addressing the impacts of the severe, sustained drought in the western United States; (3) identify via a sector-based impacts research effort the economic and social effects of drought (across and outside the United States); (4) conduct an examination of drought decision support and water management in a river basin (e.g., Colorado River Basin) to assess the present use of climate information and gaps in our knowledge, and recommend improvements for more effective management of river basin resources; and (5) meet user requirements for the development of end-stage climate information tailored for specific decision needs associated with operational activities. This investment will produce climate service products for use by local, state, and regional decision makers in sectors affected by drought. The effort will also enable an evaluation of the economic impact of new operational information and/or services, which will allow NOAA to more efficiently and effectively deliver optimized decision support tools for drought.



- Explain Climate Conditions to Improve Predictions.** NOAA requests \$2,000,000 and 0 FTE to develop new climate reanalysis data sets that will improve operational climate prediction. This effort represents a key NOAA contribution to the interagency U.S. Climate Change Science Program (CCSP) goal of improving knowledge of Earth's climate and environment (both past and present) and the causes of observed variability, whether natural or human-induced. These datasets will: (1) substantially reduce current uncertainty about

historical climate variations and (2) improve our ability to detect and analyze interannual-to-decadal variability and weather-climate trends for the entire 20th century and emerging 21st century trends, providing a better understanding of mechanisms leading to climate extremes, e.g., the 1930's Dust Bowl. The dynamic Climate Forecast System at NOAA's National Centers for Environmental Prediction is calibrated against the current reanalysis data sets. Updating the reanalysis will yield better model calibration, verification, and initialization. Ultimately, this will provide better climate outlooks. An improved

ability to interpret causes of observed climate variability will provide policy-makers with critically needed explanations of current and future regional climate conditions, including major droughts, floods, prolonged warm or cold conditions, climate trends and extremes, and multi-decadal variability.

- **Climate Data & Information:** \$3,904,000 and 0 FTE in net increases above the base, for a total of \$6,266,000 and 4 FTE, are requested under the Climate Data & Information line item of the Climate Research subactivity.

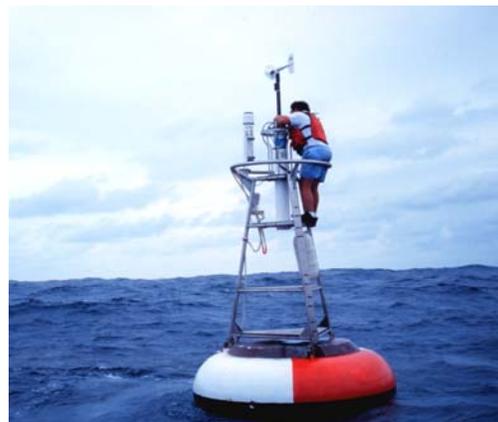
- **NOAA requests an increase of \$1,161,000 and 0 FTE in support of the Climate Reference Network (CRN).** This increase will document long-term changes in climate (50-100 years) by making available a more robust climate record and better climate benchmarks. The CRN is an integral component of NOAA's plans for an Integrated Surface Observing System (ISOS) and directly contributes to the U.S. Global Environmental Observation Integrated Earth Observing System (IEOS). CRN data serve over 100,000



CRN Site

users each year from government, academia, and the private sector. Specifically, NOAA will install and commission the remainder of the full network of 114 stations and provide adequate life-cycle operations and maintenance. NOAA will continue completing its plan for the full implementation of the network, tracking more than 95% of the variability in our national annual precipitation and 98% of annual temperature variability.

- **NOAA requests an increase of \$2,743,000 and 0 FTE in support of the Global Climate Observing System (GCOS).** The U.S. GCOS project directly supports NOAA's goal to develop an Integrated Global Environmental Observation and Data Management System. GCOS proactively seeks to increase the number of partnerships promoting regional and local cooperation in global observations (land and open/coastal ocean regions) and data management programs. GCOS represents the Administration's commitment in supporting global observing system partnerships with



Maintaining Atlas TOGA-TAO buoys on the equatorial El Niño array

developing nations: “[a global observing system to monitor climate] must include developing countries that have limited resources to make the necessary measurements the United States must provide resources to help build climate observation systems in developing countries throughout the world, and call upon other developed countries to provide matching funds for such an investment” (President Bush, The White House Rose Garden, June 11, 2001). Funding will: (1) retrofit GCOS Upper-Air Network (GUAN) sites in developing nations; (2) provide expendable equipment (e.g., radiosondes and balloons); (3) install new reference GCOS Surface Network (GSN) sites in developing nations and unique climate regimes; (4) support the Pacific Islands Regional GCOS Program and its sister program, the Pacific Islands Regional Global Ocean Observing Program, which have proven to be invaluable in maintaining a sustainable and robust regional observing program in a climate-sensitive region; (5) continue other associated GCOS activities to improve quality and calibration of global datasets on precipitation chemistry, solar radiation, and regional precipitation networks; and (6) continue NOAA’s role as the GCOS Lead Center for GCOS Surface Network (GSN), which is critical in managing the data from the various global GCOS networks.

- **Climate Operations:** \$528,000 and 0 FTE in net increases above the base, for a total of \$886,000 and 0 FTE, are requested under the Climate Operations line item of the Climate Research subactivity.
 - **NOAA requests an increase of \$528,000 and 0 FTE to support Climate Services activities.** NOAA’s Regional Climate Services activities provide NOAA customers (farmers, utilities, land managers, business owners, energy, re-insurance, weather-risk industry, and decision makers) with operational service outlets and customer interfaces for climate data and information products and climate forecasts and their regional impacts. For example, the Pacific El Niño Southern Oscillation (ENSO) Applications Center (PEAC) in Honolulu works to improve climate products and services for the western Pacific islands and Hawaii. This activity forms the backbone of the customer service and information distribution to be leveraged for the National Integrated Drought Information System (NIDIS). The restored funding will: (1) continue training programs that ensure (a) efficient and optimal use NOAA climate products and data services, (b) easily explained forecasts, and (c) expanded field support for NIDIS resulting from enhanced understanding of drought; (2) enhance web tools and forecast product development to expand use of NOAA climate data information, predictions, and services; and (3) sustain customer interactions to ensure NOAA climate products are readily accessible, well understood, and optimally used.

Weather and Air Quality Research

\$41,230,000

An increase of \$4,434,000 and 0 FTE above the base is requested in the Weather and Air Quality Research subactivity, for a total of \$41,230,000 and 184 FTE.

- **Laboratories & Joint Institutes:** \$2,420,000 and 0 FTE increase above the base, for a total of \$38,258,000 and 182 FTE, are requested under the Laboratories & Joint Institutes line item of the Weather and Air Quality Research subactivity.



Houston skyline on hazy day

- **NOAA requests an increase of \$2,420,000 and 0 FTE to characterize processes that produce particulate matter in the atmosphere as part of an extended regional air quality assessment capability.** There is growing evidence that airborne particulate matter (PM), including dust, soot, and sulfates, can trigger cardiac problems—leading to tens of thousands of deaths annually. NOAA’s two most essential contributions to the Nation’s response to air quality issues are: (1) providing objective scientific information about the causes of problems to inform effective decision-making; and (2) providing air quality forecast guidance so communities can effectively respond to episodes of poor air quality. This increase would enable NOAA to extend its biennial regional air quality assessments to include characterization of key PM processes. This information will allow policy-makers at all levels of government, environmental managers, and regulated parties to focus their efforts on the main drivers of PM problems, leading to improved air pollution strategies that both protect public

health and maintain a vital economy. Past NOAA assessments for ozone have led to significant modifications of strategies with associated economic savings of billions of dollars. The information about key PM processes will also support NOAA's initiation of PM predictions by providing the scientific basis for developing accurate PM models.

The requested funding will allow NOAA to develop and apply advanced particulate matter instrumentation to characterize the sources and processes responsible for the emission, atmospheric formation, growth, and transport of PM. These instruments will measure key characteristics of particulate matter, such as concentrations, composition, and transformation rates. Once developed and tested, these instruments will be deployed during month-long field experiments to study processes that are important in a region. Significant findings will be reported to air quality decision-makers in a form that enables them to understand and apply new scientific insights. To leverage available resources, the field studies will be conducted in collaboration with NOAA's climate program (PM—also known as "aerosols"—has a significant influence on climate) and with other agencies, universities, and the private sector.

- **NOAA requests an increase of \$2,014,000 and 0 FTE to for Tornado/Severe Storm Research (Phased-Array Radar).** NOAA is developing new technologies for forecasting and detecting tornadoes and other forms of severe weather and to disseminate this information to emergency managers, the media, and the general public for appropriate action. Phased-array radar has the potential to significantly extend lead times for tornadoes and other forms of severe and hazardous weather. Faster scan rates can reduce the time it takes to make a complete Doppler radar observation from six minutes to less than one minute. Coupled with artificial-intelligence-based decision-support systems, tornado lead times could be almost doubled from 12 to 22 minutes.



Installation of the SPY-1A antenna and radome on the NWRT

Major components of this program are continued research support and the construction of and experimentation with a phased-array research test bed at the National Severe Storms Laboratory (NSSL) in Norman, OK. Congress established a joint R&D program for NOAA, DOD, and FAA to investigate the feasibility and benefits of using military phased- array radars for improving severe weather forecast and warning systems. U.S. Navy SPY-1 Phased-Array Radar technology holds considerable promise for making significant improvements to the existing WSR-88D system. Using multiple beams and frequencies, The SPY-1 Phased-Array Radar reduces the scan time for severe weather from six minutes to less than one minute, which can lead to increased lead times for warnings of tornadoes

and other forms of hazardous weather. NOAA/NSSL is designated to operate and maintain the equipment, provide facilities, approve associated research.

Ocean, Coastal, and Great Lakes Research

\$102,976,000

An increase of \$8,629,000 and 0 FTE above the base is requested in the Ocean, Coastal, and Great Lakes Research subactivity, for a total of \$102,976,000 and 163 FTE.

- **NOAA requests an increase of \$4,990,000 and 0 FTE for a total of \$9,152,000 and 6 FTE for the National Undersea Research Program (NURP).** This will

restore NURP's capability to provide state-of-the-art undersea research capabilities that are geographically balanced across the U.S. In FY 2006, NURP maintained only minimal support and, thus, a very limited capability to support undersea research off the Atlantic coast and in the Gulf of Mexico and Caribbean regions. The West Coast and Polar Regions also operated under reduced funding and provided limited research support to this large region. NURP complies with Congressional mandates and Ocean Action Plan recommendations and serve scientists and the general public by providing cutting-edge undersea research and technologies which better enable managers and stakeholders to serve as stewards of our Nation's natural resources. This initiative will allow NURP to provide such support across both ocean basins in an efficient, balanced, and cost-effective manner on both East and West coasts and will include:



NURP undersea technology is used to investigate deep-sea corals & how to protect them

- Establishing sufficient capability to meet NOAA's undersea research technology needs for the East coast, Gulf of Mexico, and the Caribbean.
 - Restoring funding to the West Coast and Polar Regions center to meet research requirements in support of the region and NOAA/NURP missions.
- **NOAA requests an increase of a total of \$1,513,000 and 0 FTE for the Ocean Exploration Program for a total program of \$15,128,000 and 11 FTE.** This increase will restore key investments in the Nation's only program dedicated to systematically exploring the world's oceans. It will support NOAA's ability to fulfill its scientific, environmental assessment, and technology development responsibilities.

In response to the U.S. Commission on Ocean Policy's recommendations for a National Ocean Exploration Program, the U.S. Ocean Action Plan highlighted the development of a new NOAA vessel dedicated to ocean exploration. In September of 2004, NOAA obtained this vessel, the *Okeanos Explorer*.



**The soon-to-be NOAA Ship
*OKEANOS EXPLORER***

Specifically, the increase will provide funding for ocean exploration projects using the University National Oceanographic Laboratory System (UNOLS) fleet and National Deep Submergence Facility (NDSF) facilities:

- UNOLS and NDSF Facilities (\$1,000,000) - Funds will continue Ocean Exploration (OE) investments in UNOLS fleet and NDSF assets. Based on budget projections for FY 2007, \$1,000,000 will lease approximately 20 days of ship and submersible time using a Class-I UNOLS ship and either the ALVIN submersible or JASON ROV. The specific ship/submersible combination will be based on the scientific requirements of the project.
- Extramural Scientific Support (\$513,000) – Funds will enable extramural scientists to participate in two ocean exploration missions. One major expedition focusing on deep-water habitat characterization will use the UNOLS/NDSF asset combination. The second project will leverage funding for an existing research cruise by providing add-on funds dedicated for an exploratory component. Final project selections will be made through a peer-reviewed grant proposal process.
- **NOAA requests an increase of \$1,506,000 and 0 FTE for its Aquatic Invasive Species (AIS) Program.** This increase will provide a total of 4 FTE and \$4,083,000 for NOAA's Aquatic Invasive Species Program and will augment current NOAA's efforts to address invasive species, a worldwide threat that has implications for our marine resources, and add a critical new component, namely preventing invasive species before they occur. Funding will support research to increase NOAA's capability to identify and assess species and pathways that pose the highest invasion threat to U.S. coastal, estuarine, and Great Lakes resources and will develop tools to prevent invasion by



Aquatic Invasive Species (such as zebra mussels) cause billions of dollars in damage

these pathways. These improved prediction skills and interdiction tools will help meet NOAA's legal invasive species mandates and will move NOAA from a reactive to a proactive mode to reduce the number of new invasions in the targeted pathways. It is essential for the Nation's economic and ecological welfare that we develop the scientific basis to identify and assess the level of risk associated with different pathways on a regional basis in order to focus resources where they are most needed and will do the most good.

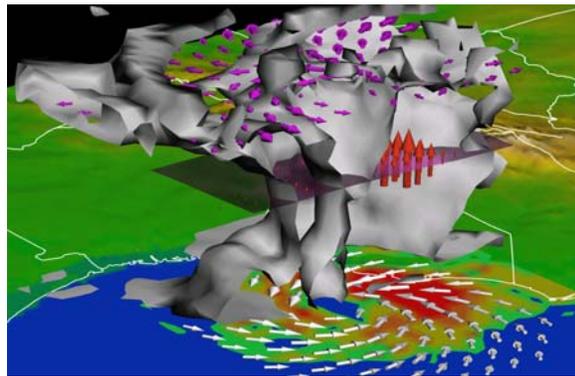
- **NOAA requests an increase of \$741,000 and 0 FTE for the NOAA's National Sea Grant.** NOAA's National Sea Grant College Program enhances the development, use, and conservation of the Nation's marine and Great Lakes resources through a network of Sea Grant Colleges that conduct education, training, and research in all fields of marine and Great Lakes study. The 30 state Sea Grant programs, located in every coastal and Great Lakes state and Puerto Rico, serve as the core of a dynamic national network of more than 300 participating institutions involving more than 3,000 scientists, engineers, outreach experts, educators and students. The Sea Grant network addresses key issues and opportunities in areas such as aquaculture, aquatic invasive species, coastal community development, estuarine research, fisheries management, coastal hazards, marine biotechnology, marine engineering, seafood safety and water quality. As a non-regulatory program, Sea Grant focuses on generating and disseminating science-based information to a wide range of groups. Some of these include: commercial and recreational fishermen, educators, fish farmers, state and local planning officials, port and harbor commissioners, seafood processors and retailers, and natural resource, water and environmental quality managers.

Information Technology, R&D, and Science Education

\$12,916,000

An increase of 0 FTE and \$6,474,000 is requested above the base, for a total of \$12,916,000, and 13 FTE in this subactivity.

- **NOAA requests an increase of 0 FTE and \$6,474,000 to restore funding for High Performance Computing and Communication to its prior level of 13 FTE and \$12,916,000.** These funds will be used to make major improvements in the NOAA's ability to forecast the Nation's weather and climate, to model ecosystems and the ocean, and to disseminate environmental information. Improvements in the accuracy and timeliness of NOAA's



High-performance computing enables improved hurricane forecasts

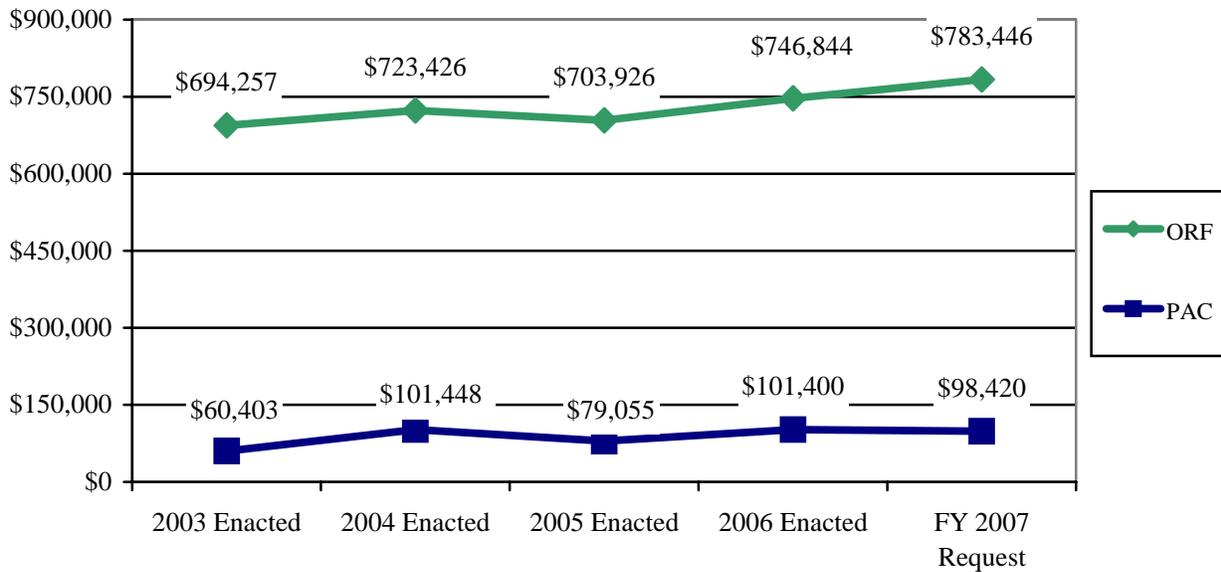
short-term weather warnings, seasonal forecasts, and regional and global climate predictions are heavily dependent on major advances in high-end computing power, advanced information technology, and the availability of environmental data and information.



National Weather Service

(Dollars in Thousands)	FY 2006 Enacted	FY 2007 Base	Program Changes	Total Request
National Weather Service -- Operations, Research and Facilities (ORF)				
Operations and Research	\$661,780	\$659,202	\$28,654	\$687,856
Systems Operation & Maintenance (O&M)	85,064	86,799	8,791	95,590
Total, National Weather Service - ORF	746,844	746,001	37,445	783,446
Other National Weather Service Accounts				
Total, National Weather Service - PAC	101,400	92,355	6,065	98,420
Total, National Weather Service - Other	0	0	0	0
GRAND TOTAL NATIONAL WEATHER SERVICE (Direct Obligations)	\$848,244	\$838,356	\$43,510	\$881,866
 Total FTE	 4,651	 4,651	 9	 4,660

Budget Trends, FY 2003 – 2007 (dollars in thousands)



ORF: Operations, Research & Facilities
PAC: Procurement, Acquisition & Construction



National Weather Service



The National Weather Service (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 which can be used by other government agencies, the private sector, the public, and the global community.

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 6 deadly hurricanes. Some 90% of all Presidentially-declared disasters are weather related, causing approximately 500 deaths per year and \$14 billion in damage. According to the American Meteorological Society, weather is directly linked to public safety and about one-third of the U.S. economy (about \$3 trillion) is weather sensitive.

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.

With about 4,700 employees in 122 weather forecast offices (WFO), 13 river forecast centers, 9 national centers and other support offices around 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 2007 President's Budget Request supports the funding and program requirements necessary to address established NOAA strategic goals and sets NWS on a path to achieve its vision: Produce and deliver forecasts that can be trusted; use cutting-edge technologies; provide services in a cost-effective manner; strive to eliminate weather-related fatalities; and improve the economic value of weather, water, and climate information.

FY 2007 Budget Summary

NOAA requests total of \$783,446,000 million and 4,606 FTE to support the continued and enhanced operations of the National Weather Service. The total includes \$24,754,000 for Adjustments to Base, \$37,445,000 million for Program Increases, and \$25,597,000 in Terminations.

ADJUSTMENTS TO BASE:

NOAA requests a net increase of \$24,754,000 and 0 FTE to fund adjustments to base across all accounts in the National Weather Service activities. With this increase program totals will fund the estimated FY 2007 Federal pay raise of 2.2 percent and annualize the FY 2006 pay raise of 3.1 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 also requests the following transfers between line offices or appropriations for a net change to NOAA of zero:

- \$2,291,000 is transferred from the National Tsunami Hazard Mitigation Program to the Strengthen the U.S. Tsunami Warning Network Program Planning Activity (PPA) within the Local Warnings and Forecasts Line Item. This transfer has no net effect on overall NWS or NOAA funding and was done simply to consolidate all NWS Tsunami funding into one PPA.
- \$3,000,000 is transferred from the Local Warning and Forecasts line to benefit the Oceanic and Atmospheric Research (OAR) Competitive Research Program.
- \$21,500,000 is transferred from the National Data Buoy Center to the Local Warnings and Forecasts base and Alaska Data Buoy PPAs within the Local Warnings and Forecasts line item.
- \$5,800,000 is transferred from the National Hurricane Center to the Central Forecasts Guidance PPA within the Central Forecasts Guidance line item.

NWS – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2007:

NOAA requests a net increase of \$37,445,000 and 9 FTE over the FY 2007 base for a total request of \$783,446,000 and 4,606 FTE. These changes are summarized at the subactivity level below and to be concise, do not include descriptions below \$1,000,000. Detailed numeric breakouts are located in Chapter 7, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2007 Technical Budget.

Operations and Research \$687,856,000

A net increase of \$28,654,000 and 9 FTE above the base is requested in the Operations and Research subactivity, for a total of \$687,856,000 and 4,424 FTE.

Local Warnings and Forecasts: \$ 28,654,000 and 9 FTE in net increases above the base, for a total of \$636,793,000 and 4,125 FTE, are requested under the Local Warnings and Forecasts line item of the Operations and Research subactivity.

- **NOAA requests 0 FTEs and \$1,400,000 to operate and maintain the seven new weather data buoys funded/deployed under the FY 2005 Hurricane Supplemental Appropriation.** These buoys support enhanced real time hurricane data observations and storm monitoring in the Caribbean, Gulf of Mexico, and the Atlantic Ocean to support the NOAA hurricane warning and forecast mission. The FY 2005 Hurricane Supplemental provided one-time funding to procure and deploy these buoys. This program adjustment requests the funding required to support the long-term operation and maintenance of these platforms. This investment is required for NOAA's implementation of the Integrated Ocean Observing System (IOOS) as the coastal and open ocean

component of the Global Earth Observation System of Systems (GEOSS). Combined with other like-identified IOOS investments across NOAA, it is part of NOAA's strategy to provide initial benefits of an integrated ocean observing system, focusing on enhancing key observational capabilities throughout NOAA, and our ability to provide customers with enhanced coastal data and information. The seven newly installed data buoys, consisting of one 3-meter, two 6-meter, two 10-meter, and two 12-meter buoys, require annual maintenance and shore-side operating/infrastructure support to maintain reliable data output. Funds will be used to provide: field service and maintenance; shore-side operation/infrastructure support; and to maintain spare equipment/buoy to support field maintenance strategy.



NOMAD Weather Buoy

- **NOAA requests \$12,360,000 and 4 FTE to strengthen the U.S. tsunami warning program.** In response to the 2004 Indian Ocean Tsunami, the Administration proposed expanding the U.S. Tsunami Warning Program to protect U.S. lives and property along all coasts (Pacific, Gulf of Mexico, Atlantic and the Caribbean). In order to continue the Administration's commitment to strengthening the U.S. Tsunami Warning Program and mitigate a similar seismic/tsunami event in the U.S., NOAA needs to build upon the foundation laid in FY 2005 and FY 2006 and continue to accelerate and improve its: (1) Tsunami Hazard Assessment Programs (including comprehensive coastal US risk assessments/inundation mapping, modeling and forecasting efforts); (2) Tsunami Warning Guidance Programs (including 24/7 tsunami detection and warning systems and the dissemination of accurate and timely tsunami forecasts and warnings); and (3) Tsunami Mitigation Programs (including community-based emergency response plans) and public education/awareness (TsunamiReady communities and inundation/evacuation mapping). Funds will be used to operate and maintain the newly expanded DART systems, new sea-level monitoring stations, the upgraded



Crew servicing a Tsunami buoy

local seismic networks supporting the West Coast /Alaska Tsunami Warning Center (WC/ATWC) and the Richard H. Hagemeyer Pacific Tsunami Warning Center (PTWC), and to operate both the WC/ATWC and PTWC as 24/7 Operation Centers.

- **NOAA requests \$3,500,000 and 5 FTE to transfer the Wind Profilers from research to operations.** Wind Profilers, vertical looking radars, installed in

1988, are used for a variety of analytical forecasting tasks. Wind profile data are used as input for numerical (computer) weather models that predict clouds, precipitation, and temperature. The data also provide important indicators of where severe weather such as tornadoes and winter storms may form,



NOAA Wind Profiler

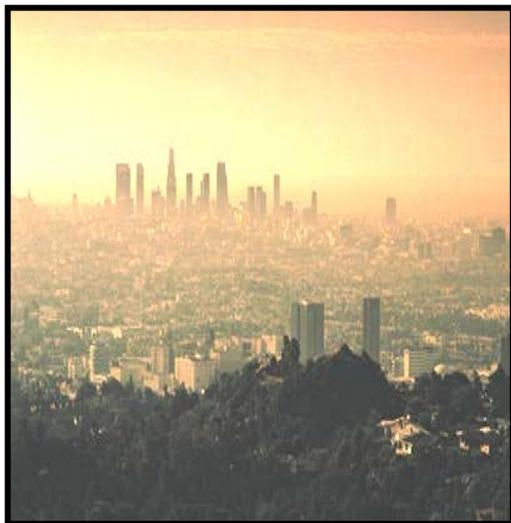
- requiring weather advisories, watches, or warnings. Weather forecasters also use wind profiler data for issuing aviation Significant Meteorological (SIGMET) advisories and wildfire predictions. The NOAA Profiler Network (NPN) must be upgraded to operate at a different frequency because of interference with signals from new search and rescue (SAR) satellites expected to launch by the European Space Agency in FY 2006. Currently, the SAR beacons and the NPN operate at the same frequency. Consequently, the SAR beacon will interfere with NPN wind profiling radars whenever a satellite is overhead. The NPN wind profile information improves NWS operational warning and watch performance capability. Performance statistics indicate that tornado, winter storm, severe storm, flash flood forecasts and warnings, and aviation weather and fire weather warnings for NWS WFOs with wind profilers are more accurate and are able to provide longer warning lead-times. In FY 2007 NWS will: initiate engineering design and development contract for new frequency compliant transmitters; coordinate with data users the development of contingency plans for interference issues that may arise; and, provide operations and maintenance support for the current Profiler network.
- **NOAA Requests \$1,200,000 and 0 FTE to expand the multi-year effort to improve aviation weather services.** This requested increase will enable procurement and fielding of 75 additional water vapor sensors as part of an Integrated Upper Air Observing system, and transition additional products to a digital environment. Today, weather accounts for 70% of all air traffic delays

within the U.S. National Airspace System (NAS), resulting in a \$10B impact to the U.S. economy, \$4B of which the Federal Aviation Administration (FAA) has determined is preventable. The Aviation Weather program must continue to implement projects and training opportunities that improve both the accuracy of weather information and the way in which weather information is utilized. Pilots, controllers and flight planners require products in digital formats to facilitate and expand their use in the cockpit and to convey forecast specifics graphically lending to better, more informed decision making. The Aviation Program must be prepared to enable the NWS to transition and sustain FAA Research and Development (R&D) efforts in aviation weather that are valued over \$24M/year. In addition, the Aviation Program is supporting the Joint Planning and Development Office (JPDO) effort to develop the Next Generation Air Transportation Systems (NGATS), with the Department of Commerce (DOC) leading a 5-agency [Department of Defense (DOD), Department of Transportation (DOT), Department of Homeland Security (DHS), National Aeronautics and Space Administration (NASA), and DOC] Weather Integrated Process Team.

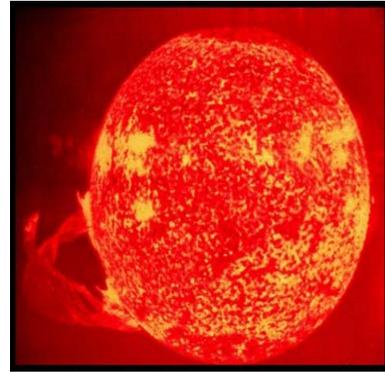


**Mounted flush on the side of 25 UPS (B-757) aircraft, the air sampler produces little in-flight drag.
(Photo courtesy UPS)**

- **NOAA requests \$2,500,000 and 0 FTE for the Air Quality Forecasting Program.** This program provides air quality forecast guidance with the implementation of NOAA's Air Quality Forecast capability. This increase will be used for nationwide deployment of ozone forecasts in FY 2009, and for initial PM forecast capability in FY 2012. The air quality forecast capability for next-day ground-level ozone, first deployed operationally in September 2004 over the Northeastern U.S., and now covering Eastern US, will be extended through phased development and testing nationwide in FY 2009.



- **NOAA requests \$3,199,000 and 0 FTE for the Space Environment Center.** SEC provides real-time monitoring and forecasting of solar and geophysical events, conducts research in solar-terrestrial physics, and develops techniques for forecasting solar and geophysical disturbances. SEC provides services to a broad user community of government agencies, industries, public institutions, and private individuals involved in satellite operation, space exploration, radio navigation, high-altitude polar flights, high-frequency communications, remote intelligence gathering, long-line power and data transmissions, and geophysical exploration.



Solar Flare

- **NOAA requests \$890,000 and 0 FTE for the Cooperative Observer Program.** This request funds Operations and Maintenance (O&M) support for NOAA legacy Cooperative Observer program. This program provides observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS. More than 11,000 volunteers take observations on farms, in urban and suburban areas, national parks, seashores, and mountaintops and the data that are collected are truly representative of where people live, work and play.
- **NOAA requests \$2,457,000 and 0 FTE for U.S. Weather Research Program.** This request will accelerate hurricane research, air quality research for particulate matter forecasts, and to expand The Observing System Research and Predictability Experiment (THORPEX). The hurricane research activities include improving forecasts of hurricane intensity at landfall.

- **NOAA requests \$1,098,000 and 0 FTE for the Advanced Hydrological Prediction Services (AHPS).** This funding allows continued nationwide implementation of AHPS, with deployment at an additional 309 forecast points in these areas. AHPS information comes from the combined use of remote sensing, data automation and advanced computer modeling to analyze river data, and create graphical



1997 Ohio Flood

displays of flood probability forecasts, including flood-forecast maps, pinpointing areas where flooding may occur. The FY 2007 budget also supports extramural

partnerships to carry out operationally-oriented hydrologic research, deployment of new flash-flood forecasting tools, and introduction of more effective river forecasting models.

Systems Operation & Maintenance (O&M)

\$95,590,000

A net increase of \$8,791,000 and 0 FTE above the base is requested in the Systems Operation & Maintenance subactivity, for a total of \$95,590,000 and 182 FTE.

NOAA requests an increase of \$2,500,000 and 0 FTE, to implement a telecommunications network solution that resolves an existing single-point-of-failure associated with the NWS Telecommunications Gateway Critical Infrastructure Protection (NWSTG-CIP). This investment will ensure uninterrupted delivery of critical meteorological data necessary for the protection of life and property, and the economic well being of the Nation. The NWSTG-CIP is the hub for all NWS/NOAA weather, water and climate data and information, and has been identified as an essential government resource in Presidential Decision Directive – 67 Enduring Constitutional Government and Continuity of Government Operations. The geographically disparate backup system will be connected to the NWSTG primary and user community through a telecommunications network. Funds will be used for operations and maintenance (O&M) in FY 2007 which includes annual recurring telecommunications costs for switching all NWSTG circuits through a switch located at the Local Exchange Carrier (LEC) central office. The Department of Commerce Chief Information Office (CIO) mandated that the connectivity between the NWSTG and NWSTG-CIP eliminates all single-points-of-failure. In order for this to transpire, a network was designed to bypass the LEC central office. Without full network connectivity, the NWSTG will remain a single point of failure, risking the delivery of critical meteorological data necessary for the protection of life and property, vital to the economic well being of the Nation.

- **NOAA requests \$3,461,000 and 0 FTE for Advanced Weather Interactive Processing System (AWIPS).** This request will fund continued operations and maintenance for the network of 169 fielded systems. AWIPS integrates satellite and NEXRAD Doppler weather radar data and provides to the local field forecaster capabilities to significantly improve forecasts and warnings.

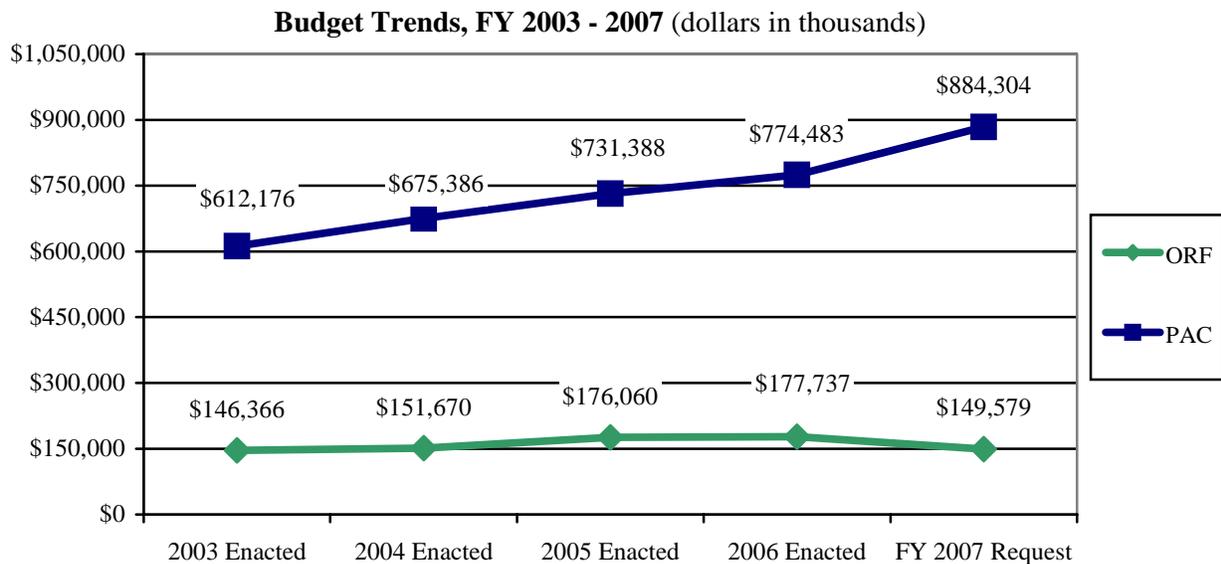


- **NOAA requests \$2,830,000 and 0 FTE for NEXRAD.** This request will restore funding necessary for continued operations and maintenance for the network of 123 NEXRAD systems. NEXRAD systems are critical for real-time observations and forecasts of severe weather events, including tornadoes, heavy precipitation, and hurricanes.



National Environmental Satellite, Data, and Information Service

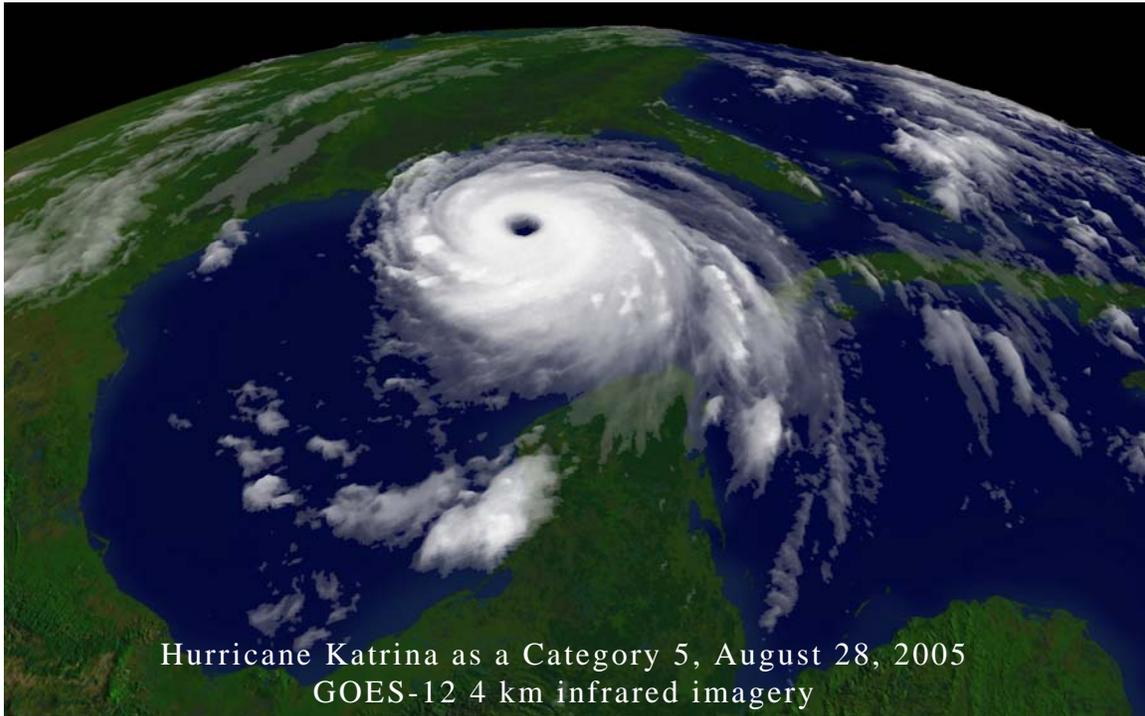
(Dollars in Thousands)	FY 2006 Enacted	FY 2007 Base	Program Changes	Total Request
National Environmental Satellite, Data, and Information Service -- Operations, Research and Facilities (ORF)				
Environmental Satellite Observing Systems	\$106,769	\$99,515	(\$1,845)	\$97,670
NOAA's Data Centers & Information Services	70,968	45,079	6,830	51,909
Total, NESDIS - ORF	177,737	144,594	4,985	149,579
Other National Environmental Satellite, Data, and Information Service Accounts				
Total, NESDIS - PAC	774,483	771,848	112,456	884,304
Total, NESDIS - Other	0	0	0	0
GRAND TOTAL NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE (Direct Obligations)	\$952,220	\$916,442	\$117,441	\$1,033,883
Total FTE	832	832	0	832



ORF: Operations, Research & Facilities
PAC: Procurement, Acquisition & Construction



National Environmental Satellite, Data, and Information Service



The NOAA National Environmental Satellite, Data, and Information Service (NESDIS), is responsible for managing all aspects of remotely gathered environmental data. This includes procurement, launch, operation, product development, and product distribution for the Nation's civil operational environmental satellites. Additionally, NESDIS manages the NOAA environmental data collections, and disseminates data and information to meet the needs of users in commerce, industry, agriculture, science and engineering, as well as federal, state, and local governments.

Through NESDIS, NOAA manages the Nation's operational environmental satellite systems; takes in, processes, and distributes satellite-derived products and services; and archives and provides global environmental meteorological, oceanographic, solid-earth geophysics, and solar-terrestrial data. NOAA's polar-orbiting satellites work together with geostationary satellites stationed at the equator over the Americas to provide daily global data on weather conditions, atmospheric temperature structure, volcanic activity, sea surface temperature, forest fires, ozone levels, hurricanes, and typhoons. These

satellites monitor storms and support NOAA's National Weather Service and Federal and local emergency management agencies, enabling them to provide advance warnings of emerging severe weather such as hurricanes, tornadoes, flash floods, winter storms, wildland fires, and floods. The satellites and the products and services NESDIS provides are essential to protect human life, property, and critical infrastructure. In support of the Nation's environmental data needs, NESDIS gathers global data about the oceans, Earth, air, space, the sun, and their interactions to describe and predict the state of the physical environment. NOAA's data centers archive the data which are necessary for scientists and industry to fully understand Earth's systems and long-term climatic, oceanographic, and geophysical effects on the environment and the economy. Through the Office of Space Commercialization, NESDIS manages the commercialization of space activities for the Federal government. NESDIS supports the President's priorities in climate sciences, ocean and coastal management, energy, and forest resources protection by developing products from its satellite and data archives to meet user needs. As an important part of this support, NESDIS seeks opportunities to transition research satellite capabilities to operational products and services.

FY 2007 Budget Summary

NOAA requests a total of \$149,579,000 and 717 FTE to support the continued and enhanced operations of the National Environmental Satellite, Data, and Information Service. The total includes \$2,075,000 for Adjustments to Base, \$4,985,000 for Program Increases, and \$35,218,000 in Terminations.

ADJUSTMENTS TO BASE:

NOAA requests a net increase of \$2,075,000 and 0 FTE to fund adjustments to base across all accounts in the National Environmental Satellite, Data, and Information Service's activities. With this increase program totals will fund the estimated FY 2007 Federal pay raise of 2.2 percent and annualize the FY 2006 pay raise of 3.1 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 2007:

NOAA requests a net increase of \$4,985,000 over the FY 2007 base for a total request of \$149,579,000. These changes are summarized at the sub-activity level below and to be concise, do not include descriptions below \$1,000,000. Detailed numeric breakouts are located in Chapter 7, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2007 Technical Budget.

Environmental Satellite Observing Systems

\$97,670,000

A net decrease of \$1,845,000 and 0 FTE is requested in the Environmental Satellite Observing Systems subactivity, for a total of \$97,670,000 and 414 FTE.

- **Satellite Command and Control:** \$800,000 and 0 FTE in net decreases, for a total of \$43,788,000 and 179 FTE, are requested under the Satellite Command and Control line item. This decrease reflects reduced operational support for non-NOAA satellites to offset increases for higher priority core programs.
- **Product Processing and Distribution:** \$400,000 and 0 FTE in net decreases, for a total of \$27,270,000 and 126 FTE, are requested under the Product Processing and Distribution line item. This decrease reflects reduced operational support for non-NOAA satellites to offset increases for higher priority core programs.
- **Product Development, Readiness & Application:** \$645,000 and 0 FTE in net decreases, for a total of \$24,771,000 and 103 FTE, are requested under the Product Development, Readiness & Application line item.
 - **NOAA requests a decrease of \$400,000 and 0 FTEs for Product Development, Readiness and Application activities.** This decrease reflects reduced operational support for non-NOAA satellites to offset increases for higher priority core programs.
 - **NOAA requests an increase of \$737,000 and 0 FTEs for Coral Reef Monitoring.** NOAA requests an increase of \$737,000 and 0 FTE for a total request of \$737,000 to carry out the coral reef monitoring activities. These resources support the development and maintenance of operational satellite products aimed at near real-time observation, monitoring and forecasting of environmental conditions conducive to deterioration of coral reef health, often resulting from coral reef bleaching events. These products are necessary to comply with Executive Order 13089, the Coral Reef Conservation Act of 2000, and the U.S. Ocean Action Plan, which all direct Federal agencies to use programs and authorities to protect and enhance coral reef ecosystems. This funding enables production of models to integrate satellite / in situ measurements with the efforts of the Coral Reef



Coral Reef

Ecosystem Integrated Observing System within other NOAA line offices. The Coral Reef Watch Program is a collaborative effort under the auspices of NOAA's Coral Reef Matrix Team.

- **NOAA requests a decrease of \$982,000 and 0 FTE for the Global Winds Demonstration Project.** The proof of concept for the Global Winds Demonstration Project was completed in FY 2006, and this program will be phased out.

NOAA's Data Centers & Information Services

\$51,909,000

A net increase of \$6,830,000 and 0 FTE above the base is requested in the NOAA Data Centers and Information Services subactivity, for a total of \$51,909,000 and 303 FTE.

- **NOAA requests an increase of \$8,697,000 and 0 FTE, for a total request of \$38,017,000 for the Archive, Access, and Assessment program** to carry out data archive, access and assessment activities. This additional funding will be used to maintain critical operations at NOAA's National Data Centers, to ensure timely and quality service for more than 50,000 users per year. Users from the private sector, academia and government rely on NOAA data centers for access to environmental records ranging from oceanographic and geophysical data to atmospheric and solar-terrestrial information.
- **NOAA requests a decrease of \$1,867,000 and 0 FTE for a total request of \$4,063,000 for the Climate Database Modernization Program (CDMP)** to partially offset increases in other, high priority areas. Through the CDMP contractors, NOAA and the NCDC manage the conversion of historical data records to electronic format and accessibility via the Internet. This funding will support basic operational efforts such as processing and keying incoming NOAA records, image access, subscription services and accounts receivable. The current CDMP contract is in its final year and the follow-on contract will be negotiated or competed for competitive pricing.

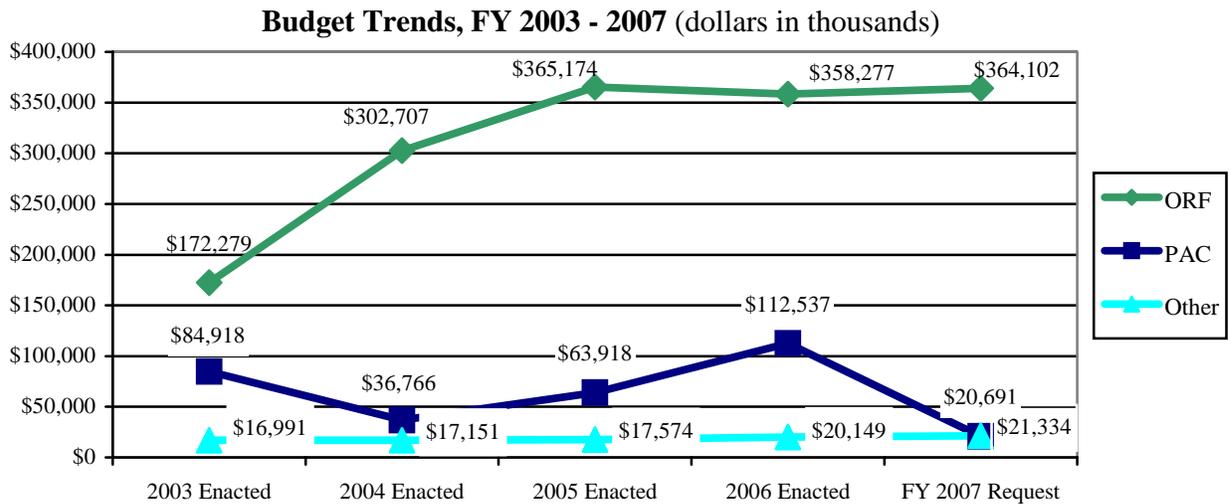
[Page intentionally left blank]



Program Support

(Dollars in Thousands)	FY 2006 Enacted	FY 2007 Base	Program Changes	Total Request
Program Support -- Operations, Research and Facilities				
Corporate Services	\$176,574	\$178,180	\$13,746	\$191,926
NOAA Education Program	37,514	15,212	\$4,100	\$19,312
Facilities	10,849	11,927	\$11,082	\$23,009
NOAA Marine and Aviation Operations	133,341	122,895	\$6,960	\$129,855
Total Program Support - ORF	358,278	328,214	35,888	364,102
Other Program Support Accounts				
Total Program Support - PAC	112,537	35,542	(14,851)	20,691
Total Program Support - Other	20,149	21,334	0	21,334
GRAND TOTAL PROGRAM SUPPORT (Direct Obligations)	\$490,964	\$385,090	\$21,037	\$406,127
Total FTE	1,991	1,991	16	2,007

ORF: Operations, Research & Facilities



PAC: Procurement, Acquisition & Construction
 Other: NOAA Corps Commissioned Officers Retirement



Program Support



Program Support consists of Corporate Services, Facilities, and the Office of Marine and Aviation Operations (OMAO). NOAA Program Support provides the administrative, financial, and infrastructure services that are essential to the successful performance of NOAA's mission. In addition to NOAA-wide policy formulation and direction, the Program Support activities specifically support the *people* 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. Program Support through OMAO provides data collection at sea and in the air to support NOAA program requirements.

CORPORATE SERVICES

The Under Secretary and Associate Offices (USAO), including the Office of General Counsel, provide the top leadership and management for NOAA. USAO formulates and executes policies and programs for achieving the objectives of NOAA; develops, plans, and coordinates major program efforts; exercises delegated authority in committing NOAA to courses of action; and represents NOAA in executive level liaison with other federal agencies, the Congress, and private industry. The Under Secretary, Assistant Secretary, and Deputy Under Secretary comprise the top level of NOAA leadership. The Associate Offices, more commonly known as NOAA's Staff Offices, are described below.

Office of Public, Constituent, and Intergovernmental Affairs (OPCIA) provides advice and counsel on media, constituent, and intergovernmental relations. The OPCIA consists of four elements, each addressing a unique audience: Public Affairs (media relations), Constituent Affairs (non-government organizations), Intergovernmental Affairs (state, tribal, territorial, regional, and local government), and Outreach.

The Office of Education and Sustainable Development (OESD) is dedicated to achieving success on NOAA's strategic cross-cutting priorities of promoting environmental literacy and to developing, valuing, and sustaining a World-class workforce. OESD consults within NOAA to improve coordination across Line, Program, and Staff Offices, while promoting NOAA services and products, and their benefits to the public. OESD also implements targeted education programs on behalf of the Agency. Such activities include administration of the Ernest F. Hollings Undergraduate Scholarship Program, enacted by Congress in the Consolidated Appropriation Act 2005, and development of Education Partnership Program with Minority Serving Institution (EPP/MSI). Both of these programs are specifically focused on increasing education and training opportunities for individuals pursuing NOAA-related fields of study with the goal of encouraging students to pursue applied research and education in atmospheric and oceanic sciences, and science education. The EPP program funding also directly supports the development of NOAA-related research capability in MSIs.

Office of Legislative Affairs (OLA) serves as the primary liaison for NOAA with the Members and staff of Congress. The Office is also responsible for the planning, direction, and coordination of legislative programs that are of immediate concern to the Office of the Under Secretary.

Office of International Affairs (OIA) plans and coordinates NOAA's international programs and carries out, as directed by the Office of the Under Secretary, tasks of special interest related to international activities. The Deputy Assistant Secretary for International Affairs exercises a leadership role in establishing policies, guidelines, and procedures for NOAA's international programs.

Office of the Federal Coordinator for Meteorology (OFCM) establishes procedures for systematic and continuing review of national basic and specialized meteorological and oceanographic requirements for services and supporting research, and brings federal agencies concerned with international activities and programs in meteorological and oceanographic programs into close consultation and coordination.

Office of General Counsel (OGC) provides legal advice and counsel for all matters arising in connection with the functions of NOAA, except for legal issues common to all Department bureaus, which are handled by the Department of Commerce General Counsel.

The NOAA Office of the Chief Administrative Officer (OCAO) provides management and support services essential to NOAA's program mission success. The OCAO is responsible for NOAA's facility management program, including capital facilities investment planning and management; facility construction and maintenance; and, real and personal property management. The OCAO also manages NOAA's technology and deemed export control program, and oversees audit coordination, Freedom of Information Act compliance, executive correspondence management and civil rights protection for all NOAA employees. These programs provide basic services essential for NOAA to achieve its mission.

The Office of the Chief Financial Officer (CFO) serves as the principal financial manager for the NOAA organization with approximately \$7 billion in capital assets. The CFO's office, containing Budget and Finance functions, has primary responsibility for budget formulation and execution, resource management, financial systems development and financial management. The CFO Act of 1990 requires the CFO's Office to provide the leadership necessary for NOAA to obtain a yearly unqualified opinion in the audit of its consolidated financial statements. Under the direction of the CFO, the Budget and Finance Offices perform methods and procedures analysis and systems and organizational research to support senior management in making executive decisions to ensure operational efficiencies within NOAA.

The Office of Acquisition and Grants (OAG) provides support to NOAA line offices with planning, solicitation, award, administration and closeout of acquisitions, grants, and cooperative agreements. It works closely with mission partners (universities, individuals, non-profit and for-profit organizations, as well as state, tribal, and local government entities).

The Office of the Chief Information Officer and High Performance Computing and Communication (OCIO & HPCC) supports all NOAA and DOC programs and missions by providing information technology (IT) policy, planning and management. The Office provides oversight of the implementation of NOAA's IT program as required under the Clinger-Cohen Act, the Federal Information Management Security Act (FISMA), and the Paperwork Reduction Act; other statutory and legal requirements; and Department of Commerce policies. The Office also provides management of NOAA's Homeland Security activities, enterprise network services, the NOAA IT Center, and IT security for NOAA's systems; administration of the IT Capital Planning and Investment Control process; and oversight of High Performance Computing and Communications activities.

The Office of Human Resources (HR) services NOAA's most important asset - its people. HR provides the policies, programs, and processes that facilitate the recruitment, hiring, development, and retention of a diverse, highly skilled, motivated, and effective workforce capable of accomplishing NOAA's mission.

The Office of Program Analysis and Evaluation (PA&E) provides independent and objective analysis in support of corporate management. This Office makes NOAA more efficient and effective in its programmatic decision making process.

The Office of Program Planning and Integration (PPI) is responsible for overseeing NOAA's strategic planning programs, mandated by GPRA. It monitors and tracks accomplishment of goals and objectives stated in the NOAA strategic plan. PPI ensures that NOAA stays aligned with the stated mission and legislative mandates. PPI is responsible for managing the NOAA-wide planning cycle and for producing its outputs. These include the annual updates to the NOAA Strategic Plan and release of the Annual Guidance Memorandum (AGM), which articulates yearly investment priorities. PPI designs planning guidance for NOAA programs, oversees their planning processes, and monitors and evaluates program implementation.



FACILITIES

The Facilities 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. NOAA's capital assets, totaling more than 400 owned facilities are valued at nearly two billion dollars. As the NOAA-owned facilities continue to age, investments in maintenance, repairs and modernization must remain a priority. The Facilities Program provides responsibility for policy development and guidance, long-term facility master planning, construction, execution and management of the total project life-cycle for facility construction and modernization projects--including environmental/safety projects.

OFFICE OF MARINE & AVIATION OPERATIONS (OMAO)

Marine Operations



Launch of HENRY B. BIGELOW (FSV 2), July 8, 2005



NOAA divers surveying whaling shipwrecks at Pearl and Hermes Atoll in NW Hawaiian Islands.

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. OMAO also is responsible for NOAA's fleet safety, diving, and Teacher-at-Sea program. NOAA Corps officers, crews, and scientists with at-sea duty are trained and certified through OMAO. NOAA's vessels support nautical charting, fisheries research, marine environmental assessments, coastal-ocean circulation studies, and oceanographic and atmospheric research. The 20 active ships will perform approximately 4,650 operating days in FY 2007 in support of NOAA programs. In addition, FSV3 will be delivered to NOAA in FY 2007, and will prepare for operations in FY 2008. The vessels operate on both the East and West Coasts. 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. Corps officers support the fleet and NOAA Line Offices. Marine Services funds the majority of the NOAA Corps payroll. 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



**NOAA's Hurricane Hunter,
Gulfstream IV (G-IV)**



**NOAA's Hurricane Hunter, P-3 with
weather radar underneath**

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 provides centralized management of 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. In FY 2007, Aircraft Services will provide approximately 1,975 flight hours in support of NOAA missions. NOAA aircraft are fitted with specialized instrumentation for airborne research, airborne data collection, and observation. Both WP-3D Hurricane Hunter aircraft 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. In the FY 2006 Hurricane Supplemental, NOAA received \$9,000,000 to acquire and modify a third P-3. The mission of the third P-3 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. The 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 Citation II, will continue to 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 2007 Budget Summary

NOAA requests a total of \$406,127,000 and 2,008 FTE for NOAA Program Support. The total includes \$3,115,000 for Adjustments to Base, \$21,037,000 for Program Increases, and \$108,989,000 in Terminations.

ADJUSTMENTS TO BASE:

NOAA requests a net increase of \$6,535,000 and 0 FTE to fund adjustments to base across all accounts in Program Support activities. With this increase program totals will fund the estimated FY 2007 Federal pay raise of 2.2 percent and annualize the FY 2006 pay raise of 3.1 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.

Corporate Services

NOAA requests an adjustment to base for a net increase of \$1,695,000 and 0 FTE, including increases to cover costs for NOAA wide services and agency management, offset by a decrease of \$80,000 to partially fund a NOAA Corps Officer position in OMAO that benefits the Office of Program Planning and Integration.

Facilities

NOAA requests an adjustment to base transferring \$1,000,000 from WFO Construction funding to support NOAA Facility Planning requirements.

OMAO

NOAA requests a net increase of \$3,840,000 and 0 FTE for ATBs in OMAO which includes increases for pay raises, expenses, fuel and data acquisition, Fleet Planning and Maintenance and for Aircraft Services. OMAO also requests a transfer of \$1,120,000 from various Line Offices in order to centrally fund and manage NOAA Corps Officers.

This request will centrally fund and manage 16 NOAA Corps Officers to support the goals and cross-cutting priorities identified in the NOAA Strategic Plan and to support several staff offices. Program managers have identified the need for NOAA Corps officers to be detailed to their programs. These officers bring diverse field and staff experience to programs. Through the regular rotation process, an officer develops

experience in more than one Line or Staff Office and at various locations within that organization. Program managers also need the responsiveness and flexibility inherent in a Commissioned Corps system. Officers can be assigned, on very short notice, to a different geographical location or program to meet the needs of the agency.

With these increases, program totals will fund the estimated FY 2007 Federal pay raise of 2.2% and annualize the FY 2006 pay raise of 3.1%. The FY 2007 base level will provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Services Administration.

Program Support – ORF PROGRAM CHANGE HIGHLIGHTS FOR FY 2007:

NOAA requests a net increase of \$35,888,000 and 9 FTE for a total program of \$364,102,000 in FY 2007 to support continued and enhanced operations of NOAA’s mission support personnel and activities. Detail numeric breakouts are located in Chapter 7, *Special Exhibits* and more detailed descriptions are found in the NOAA FY 2007 Technical Budget.

Corporate Services

\$191,926,000

NOAA request an increase of \$13,746,000 and 2 FTE for the Corporate Services. This increase of \$2,737,000 and 2 FTE will support the USAO with dedicated, on-site legal support for NOAA’s activities in the Pacific Island Region. This request also supports an increase of \$2,050,000 and 0 FTE for the Office of the Chief Information Officer. NOAA also requests an increase of \$8,959,000 and 0 FTE to maintain current service levels of direct administrative, technical, human resources and financial support to NOAA Staff Offices to the line offices, and to provide funding for the transfer of the guard services contracts from the DOC Working Capital Fund to direct NOAA funding.

Education

\$19,312,000

NOAA requests an increase of \$4,100,000 and 0 FTE for the Office of Education, to support the Hollings and Nancy Foster Scholarship Programs. This funding will continue to improve coordination of NOAA’s higher education activities directed at strengthening the pool of candidates for a future NOAA workforce. This funding will also enhance NOAA’s higher education activities and promote development of a highly trained, technologically capable workforce. For FY 2007, NOAA is requesting these programs as dedicated line items instead of an across the board reduction to all NOAA programs.

The FY 2007 request for the education program includes \$1,000,000 to support JASON. The JASON Foundation for Education and the Institute for Exploration / Immersion Institute works toward the development of 4th through 9th grade multi-disciplinary, oceans related products in support of the NOAA Education Plan and priorities identified by the NOAA Education Council.

Facilities

\$23,009,000

NOAA request an increase of \$9,395,000 and 0 FTE, for a total of \$18,963,000, to support NOAA's Facilities Management and Modernization. This request provides crucial funding for new planned facility repair and maintenance projects to address facility conditions affecting either employee safety or mission-operational readiness. Currently there is a \$50M backlog of high priority repair and modernization projects. This request begins to address critical repairs, maintenance and modernization projects, including sewer, power, heating and ventilation upgrades. Funding will also support the development and implementation of an annual integrated facility inspection program to assess facility conditions at NOAA-owned facilities, coordinated capital investment planning and execution for NOAA construction projects, and program direction and oversight for NOAA's major construction program.

NOAA requests an increase of \$1,687,000 and 0 FTE, for a total of \$4,046,000, for NOAA's Environmental Compliance, Health & Safety Program. This request provides funding to ensure a safe and environmentally compliant work environment as required by Federal, state and local laws, and address the backlog of environmental cleanup projects. Funds will be used to address deficiencies in maintaining hazardous material storage tanks; inspecting and abating all asbestos and lead-based paint materials; providing facility safety inspections, field location program support, employee and facility safety equipment, and workplace employee training.

OMAO

\$129,855,000

Marine Operations and Maintenance

NOAA requests an increase of \$800,000 and 0 FTE for Maritime Crew Safety and Rotation. This funding will enhance safety aboard NOAA vessels. Compliance with Safety of Life at Sea (SOLAS) conventions will prevent NOAA ships from being potentially detained in foreign ports because of lack of complete certifications and will enable NOAA vessels to meet the intent of industry standards and regulations. From FY



2004 to FY 2007, NOAA will experience an approximate 33% increase in the number of ships and a 39% increase in the number of seagoing positions. By providing effective staffing rotation on five (5) of NOAA's 21 ships, NOAA will be able to reduce the high attrition rate for wage mariners from 25% to 20%.

NOAA requests \$4,500,000 and 7 FTE for Operation of New NOAA Vessels. This request will address the additional operational needs of vessels added to NOAA's fleet over the last two years. The additional funding will support operations on HI'IALAKAI, OSCAR DYSON, McARTHUR II, THOMAS JEFFERSON, and HENRY B. BIGELOW and will support Fisheries Survey Vessel 3 (FSV3).

NOAA requests \$2,992,000 and 0 FTE for Maintenance of NOAA's New Vessels. Of this funding, \$2,893,000 will address the additional maintenance needs of NOAA's new vessels: HI'IALAKAI, OSCAR DYSON, McARTHUR II, THOMAS JEFFERSON, and HENRY B. BIGELOW. An additional \$99,000 will fund first-year maintenance of NOAA's third vessel in a four-vessel construction contract, FSV3. These ships have been added to the NOAA fleet over the last two years to increase the capabilities of the fleet and to replace aging vessels at the end of their useful life. The maintenance, repairs, and spare parts cannot be absorbed in NOAA's current budget. Stocking the vessels with spare parts will prevent disruptions in scientific cruises due to early returns to homeport or detours to other piers for unexpected repairs.

Aviation Operations

NOAA requests \$680,000 and 0 FTE for G-IV Instrumentation Support. This request will fund ongoing ORF support to the one-time G-IV instrumentation upgrade (PAC). These funds will enable NOAA to operate and maintain the instrumentation on the G-IV needed to process and transmit new hurricane data from the aircraft for assimilation into the new Hurricane Weather Forecast (HWRF) model. The increase is necessary to maintain the newly acquired sensors (provided in the FY 2006 supplemental) that provide the new data and to support the analysis, quality control, and assimilation of these data into the HWRF model.